



COMISIÓN PERMANENTE DE HONOR Y JUSTICIA

ASUNTO: SE RINDE INFORME Y DICTAMEN

DR. LUIS ENRIQUE PALAFOX MAESTRE
PRESIDENTE DEL CONSEJO UNIVERSITARIO
Presente.

Siendo las 10 horas con 32 minutos del día 30 de octubre de 2025, se reunieron de manera virtual —por la plataforma Google Meet— quienes integran la COMISIÓN PERMANENTE DE HONOR Y JUSTICIA del Honorable Consejo Universitario de la Universidad Autónoma de Baja California, en acatamiento al citatorio girado por la M. I. EDITH MONTIEL AYALA, Secretaria de dicho cuerpo colegiado.

RESULTANDO:

Que por acuerdo del Pleno del H. Consejo Universitario, tomado en su sesión ordinaria del 9 de octubre de 2025, se encomendó a esta Comisión, acorde con lo establecido en el artículo 62 del *Estatuto General*, emitir dictamen respecto a la **propuesta para otorgar el grado de Doctora Honoris Causa a la Dra. Olivia Graeve, que presenta el Rector, por solicitud del Consejo Técnico de la Facultad de Ciencias Químicas e Ingeniería**. Revisado el proyecto en coordinación con quienes participaron en la sesión — que forman parte de esta Comisión— e integrantes de la unidad académica proponente, así como de la Unidad de Transparencia y Acceso a la Información Pública, se formulan las presentes:

CONSIDERACIONES:

1. De conformidad con los artículos 1, inciso a, 4 y 5 del *Reglamento del Reconocimiento al Mérito Universitario*, la Universidad Autónoma de Baja California podrá conferir el grado de Doctor Honoris Causa a las y los profesores o investigadores mexicanos o extranjeros con méritos excepcionales, por sus contribuciones a la pedagogía, a las artes, a las letras o a las ciencias, o a quienes hayan realizado una labor de extraordinario valor para el mejoramiento de las condiciones de vida o del bienestar de la humanidad; el Rector es el único facultado para proponer al Consejo Universitario el otorgamiento de esta distinción.
2. Una vez concedido el uso de la voz al Mtro. Roberto Alejandro Reyes Martínez, director de la Facultad de Ciencias Químicas e Ingeniería, expuso ante esta Comisión la trayectoria académica y profesional de la **Dra. Olivia Graeve**, así como su contribución al campo del diseño y procesamiento de materiales para entornos extremos, destacando los siguientes logros:



- a) La Dra. Olivia Graeve nació en Tijuana, Baja California. Es egresada del Colegio La Paz y del Southwestern College, institución desde la cual ingresó a la Universidad de California, San Diego (UCSD), donde obtuvo el grado de ingeniera estructural, en 1995. En 2001 recibió el grado de doctora en Ciencias e Ingeniería de Materiales por la Universidad de California, Davis, consolidando una formación científica de alcance internacional.
- b) Su carrera académica se ha distinguido por la excelencia —en investigación— y el liderazgo —en ingeniería de materiales—. Actualmente se desempeña como Elias Masry Endowed Professor in Engineering (UCSD, Jacobs School of Engineering, desde 2024), directora del Programa en Ciencia e Ingeniería de Materiales (UCSD, desde 2022), directora del Centro CaliBaja para Materiales y Sistemas Resilientes (UCSD, desde 2016) y profesora del Departamento de Ingeniería Mecánica y Aeroespacial (UCSD, desde 2015).
- c) Su área de especialización es el diseño y procesamiento de materiales para entornos extremos, los cuales abarcan condiciones de temperatura, presión y radiación elevadas. El laboratorio al que está adscrita —donde busca revolucionar los métodos de manufactura y caracterización de sistemas bajo condiciones extremas— es referente internacional en el desarrollo de materiales avanzados para aplicaciones aeroespaciales, energéticas, nucleares, biomédicas y ambientales.
- d) La Dra. Graeve ha participado en proyectos financiados por diversas agencias federales de Estados Unidos, tales como National Science Foundation, Department of Defense, NASA, Department of Energy, y múltiples empresas privadas, por lo que ha generado desarrollos científicos con alto impacto tecnológico y social.
- e) Es autora de más de 100 publicaciones científicas en revistas de alto prestigio, entre las que se encuentran *Chemistry of Materials*, *Journal of the American Ceramic Society*, *Langmuir*, *ACS Applied Materials & Interfaces*, *Biomaterials*, *The Journal of Physical Chemistry*, *Journal of Materials Research*, *Nanotechnology*, *Optical Materials*, por mencionar algunas. Su producción científica la posiciona como una de las investigadoras mexicanas con mayor reconocimiento internacional en el campo de los materiales avanzados.
- f) Su compromiso con la innovación también se refleja en el ámbito de la propiedad intelectual: ha participado en cuatro patentes, una de ellas como autora principal, por lo que destaca su contribución a la transferencia tecnológica y a la aplicación práctica de los resultados de investigación.
- g) En la formación de recursos humanos, la Dra. Graeve ha dirigido o codirigido 15 tesis doctorales, 23 de maestría y 177 de licenciatura, además de asesorar a 5 posdoctorantes y 26 estudiantes en estancias de investigación; ha participado en 71 comités de tesis y actualmente supervisa a 17 estudiantes de posgrado y 13 de licenciatura. En conjunto, suma 347 personas formadas directamente bajo su tutoría, evidencia de su labor como formadora de nuevas generaciones científicas.
- h) Su actividad académica se ha extendido a la divulgación del conocimiento, con más de 39 conferencias plenarias, 95 magistrales y 100 seminarios internacionales, así como 114 presentaciones orales y 66 carteles en congresos especializados. Su participación también ha impulsado la presentación de trabajos de sus estudiantes en foros internacionales, lo que ha fomentado su proyección profesional.



- i) En el ámbito de la organización científica, ha presidido y codirigido más de 50 congresos y simposios internacionales, además de que ha sido integrante de comités en diferentes organismos, como la American Ceramic Society, Material Research Society, Society of Hispanic Professional Engineers, la Sociedad Mexicana de Materiales, entre otros, por lo que ha contribuido activamente a la articulación de redes científicas internacionales.
- j) Entre los reconocimientos más destacados que ha recibido, se encuentran: Premio Alfredo G. de los Santos Jr. al Liderazgo Distinguido (2025), Premio Embajador Global de la Sociedad Americana de Cerámica (2024), Premio Presidencial a la Excelencia en la Mentoría de Ciencia, Matemáticas e Ingeniería (2020), e inclusión en la lista de las 100 Mujeres más Poderosas de México, de la revista *Forbes* (2017). También fue distinguida en el Paseo de la Fama de Tijuana (2014), con el Premio Jaime Oaxaca, por la Sociedad de Ingenieros Profesionales Hispanos (2011), y como Educadora Hispana del Año (2006).
- k) En su labor de vinculación y servicio, ha sido integrante de consejos y comités de alto nivel, como el Consejo Consultivo Internacional de la UABC, el Comité Nacional de Mecánica Teórica y Aplicada de Estados Unidos (Academias Nacionales), el Consejo Asesor de la Facultad de Ingeniería de la Universidad de Reno, Nevada, y el Comité de Revisión Externa del Centro de Investigación en Materiales Avanzados (Cimav).
- l) Una de sus contribuciones más notables es la creación y dirección del Programa Enlace, iniciativa binacional establecida en 2013 que promueve la participación de estudiantes de educación media y superior de México y Estados Unidos en proyectos de investigación en la UCSD. Este programa —que fomenta la colaboración científica transfronteriza y promueve la inclusión de mujeres en ciencia y tecnología— ha beneficiado a más de 800 estudiantes.
- m) En el ámbito del liderazgo social y la equidad de género, ha participado en más de 30 conferencias y foros internacionales sobre mujeres en la ciencia, liderazgo femenino y oportunidades en STEM, lo que evidencia su labor como promotora activa del empoderamiento de la mujer en las áreas de ingeniería y ciencias aplicadas.
- n) La Dra. Graeve representa un modelo de excelencia académica, compromiso social y liderazgo internacional. Su labor ha contribuido a la creación de puentes entre México y Estados Unidos en materia científica y educativa, así como al fortalecimiento del papel de las mujeres en la ciencia.
- o) Los logros referidos comprueban su sobresaliente trayectoria académica, su liderazgo en la investigación científica de materiales, su compromiso con la educación y la igualdad de género, y su impacto binacional en la formación de nuevas generaciones de ingenieras e ingenieros.

Por tanto, la Comisión Permanente de Honor y Justicia emite el siguiente:

DICTAMEN:

ÚNICO. Se otorgue el grado de Doctora Honoris Causa a la Dra. Olivia Graeve, propuesta que presenta el Rector, por solicitud del Consejo Técnico de la Facultad de Ciencias Químicas e Ingeniería.

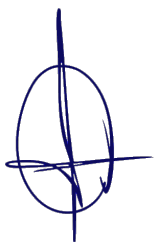


ATENTAMENTE

Mexicali, Baja California, 30 de octubre de 2025

"POR LA REALIZACIÓN PLENA DEL SER"

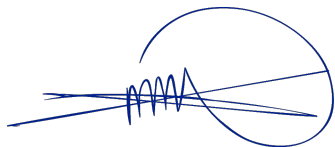
INTEGRANTES DE LA COMISIÓN PERMANENTE DE HONOR Y JUSTICIA



MARIO ALBERTO CURIEL ÁLVAREZ
Director del Instituto de Ingeniería



NATALIE MILLÁN AGUIÑAGA
Directora de la Facultad de Ciencias Marinas



ALEJANDRO JOSÉ PEIMBERT DUARTE
Director de la Facultad de Arquitectura y
Diseño



DIANA LIZBETH MÉNDEZ MEDINA
Directora del Instituto de Investigaciones
Históricas



DANIEL GONZÁLEZ MENDOZA
Director del Instituto de Ciencias Agrícolas



ARACELI CELINA JUSTO LÓPEZ
Directora de la Facultad de Ingeniería



LUIS WALTER DAESSLÉ HEUSER
Director del Instituto de Investigaciones
Oceanológicas

DAVID BAUTISTA TOLEDO
Director del Instituto de Investigaciones
Culturales-Museo

AIDA POSADAS BRIBIESCA
Profesora de la Facultad de Ciencias de la
Ingeniería y Tecnología

JULIETA LÓPEZ ZAMORA
Profesora de la Facultad de Pedagogía e
Innovación Educativa

TATIANA ESTEFANÍA GALVÁN DE LA
FUENTE
Profesora de la Facultad de Idiomas
Ensenada

DEMIAN EDUARDO CARMONA VILLAFANÍA
Profesor de la Facultad de Artes Mexicali

DALIA ORTIGOZA VERGARA
Alumna de la Facultad de Deportes
Ensenada

Elias Masry Endowed Professor in Engineering

CURRICULUM VITAE

URL: <http://graeve.ucsd.edu/>



SYNOPSIS

Prof. Olivia A. Graeve joined the University of California San Diego in 2012 and is currently the Elias Masry Endowed Professor of Engineering in the Department of Mechanical and Aerospace Engineering, Director of the *CaliBaja Center for Resilient Materials and Systems*, Director of the Materials Science and Engineering Program, and Affiliated Faculty in the Department of NanoEngineering. Previously, she was an Associate Professor at Alfred University (2008-2012) and an Assistant Professor at the University of Nevada, Reno (2002-2008). She holds a Ph.D. in Materials Science and Engineering (2001) from the University of California, Davis, and a Bachelor of Science degree in Structural Engineering (1995) from the University of California San Diego. Her area of research focuses on the design and processing of new materials for extreme environments, including extremes of temperature, pressure, and radiation.

Professor Graeve has received research grants and contracts from federal agencies such as the National Science Foundation, the Department of Defense, the National Aeronautics and Space Administration, and the Department of Energy, as well as from industrial partners. Her publications include both research and pedagogy and curriculum development contributions, with publications that have appeared in *Chemistry of Materials*, the *Journal of the American Ceramic Society*, *Langmuir*, *ACS Applied Materials & Interfaces*, *Biomaterials*, the *Journal of Physical Chemistry*, the *Journal of Materials Research*, *Scientific Reports*, *Nanotechnology*, the *Journal of Applied Physics*, and *Optical Materials*, among others. She has contributed to the development of human resources both as a research advisor and as an instructor, teaching courses in the general areas of structure and bonding, the mechanical behavior of materials, ceramics processing, and electronic properties of materials. She has served on numerous committees of her primary societies (American Ceramic Society, Materials Research Society, Society of Hispanic Professional Engineers, and Sociedad Mexicana de Materiales, A.C.) in many different capacities and actively participates in organizing national and international conferences, as well as serving on various review boards and advisory panels.

Professor Graeve has been involved in many activities related to the recruitment and retention of women and underrepresented minority students in science and engineering and has received several prestigious awards including the National Science Foundation CAREER award, the 2006 Hispanic Educator of the Year award by the Society of Hispanic Professional Engineers, the 2010 Karl Schwartzwalder Professional Achievement in Ceramic Engineering Award by the American Ceramic Society, the 2012 B.J. Harrington Lectureship by McGill University, the 2011 Society of Hispanic Professional Engineers “Jaime Oaxaca” Award (the highest honor given by this society for outstanding service to the Hispanic engineering community), the UC San Diego University Diversity Award (2014), the Outstanding Engineering Educator by the San Diego Chapter of the California Society of Professional Engineers (2015), the Hispanic Engineer National Achievement Educator Award (2017), the SHPE Innovator Award (2017), the SHPE San Diego Service Award (2018), the UC San Diego Faculty Research Lectureship (2019), and the Cigarroa Lectureship by the American Association of Hispanics in Higher Education. She has been inducted into the Tijuana Walk of Fame (2014), the Mexican Academy of Engineering (2016), the Mexican Academy of Sciences (2019), the Academy of Sciences of Latin America (2022), has been named Fellow of the American Ceramic Society (2017), UC San Diego Revelle College (2018), and the American Association for the Advancement of Science (2021). In addition, Forbes Magazine named her one of the 100 Most Powerful Women of Mexico (2017). In 2020, she was honored with the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring.

POSITIONS HELD

2024 – present ♦ Elias Masry Endowed Professor in Engineering ♦ Jacobs School of Engineering
2022 – present ♦ Director ♦ UC San Diego Program in Materials Science and Engineering
(<https://matsci.ucsd.edu/>)
2015 – present ♦ Director ♦ UC San Diego *CaliBaja Center for Resilient Materials and Systems*
(<https://resilientmaterials.ucsd.edu/>)
2015 – present ♦ Professor ♦ UC San Diego Department of Mechanical and Aerospace Engineering
2024 – 2025 ♦ Chair ♦ UC San Diego Academic Senate
(<https://senate.ucsd.edu/about-the-senate/senate-leadership/division-chair/>)
2023 – 2024 ♦ Vice-chair ♦ UC San Diego Academic Senate
2022 – 2024 ♦ Jacobs Faculty Scholar ♦ UC San Diego Jacobs School of Engineering
2022 ♦ Visiting Professor ♦ Forschungszentrum Jülich (Jülich, Germany)
2015 – 2021 ♦ Faculty Director ♦ UC San Diego *IDEA Engineering Student Center*
2012 – 2015 ♦ Associate Professor ♦ UC San Diego Department of Mechanical and Aerospace Engineering
2012 – 2015 ♦ Adjunct Professor (courtesy appointment) ♦ Alfred University
2013 – 2014 ♦ Visiting Professor ♦ Universidad Nacional Autónoma de México (Ensenada, México)
2008 – 2013 ♦ Adjunct Professor (courtesy appointment) ♦ University of Nevada, Reno
2008 – 2012 ♦ Associate Professor ♦ Alfred University
2002 – 2008 ♦ Assistant Professor ♦ University of Nevada, Reno
2001 – 2002 ♦ Lecturer ♦ San Jose State University
1999 – 2001 ♦ Lecturer and Associate Provost for Academic Affairs ♦ National Hispanic University
1995 – 1999 ♦ Graduate Teaching and Research Assistant ♦ University of California, Davis
1993 – 1995 ♦ Undergraduate Research Assistant ♦ University of California, San Diego
1991 – 1992 ♦ Tutor, AVID Program ♦ Sweetwater High School, Chula Vista, CA

EDUCATION

University of California, Davis

Graduation Date: March 2001

Degree: Ph.D. in Materials Science and Engineering

Minor: Solid State Science and Thermodynamics

Advisor: Dr. Zuhair A. Munir

Dissertation: The Effect of an Electric Field on the Microstructural Development of Combustion Synthesized Ceramic Composites (<https://hdl.handle.net/2027/uc1.x61797>)

University of California San Diego

Graduation Date: June 1995

Degree: B.S. in Structural Engineering

Minor: Philosophy

RESEARCH EXPERIENCE

CURRENT RESEARCH

- Fundamental studies of microemulsions and solvothermal processes for the preparation of ceramic and metallic nanoparticles of unique morphologies.
- The effect of crystallite size and particle size on the sintering behavior of nanopowders: interface behavior, agglomeration effects, morphological effects.
- Luminescence response of doped oxide ceramics for triboluminescent sensor applications, γ -ray detection applications, and *in vitro* probing of deterioration of scaffolds and bone.
- Behavior of metal-based nanofluids for thermal energy dissipation.
- Consolidation and mechanical behavior of amorphous-metal / nanocrystalline-ceramic composites *via* spark plasma sintering.

- Development of hexaboride materials for space propulsion, electro-optics, hydrogen storage applications, and neutron detection applications.
- Processing of carbide powders and fibers for high-temperature sensor and aerospace applications.

DOCTORAL RESEARCH

- Microstructural development of electric field-assisted combustion synthesized ceramic and intermetallic composites, with a special emphasis on the effect of the electric field on the particle size of the products. Research included the study of TiC-TiNi ceramic/metal composites and TaC nanocrystalline ceramics.
- Effect of reactant starting density on the combustion wave velocity of ceramic composites, as well as computer modeling studies of the combustion process.
- Scientific contributions were published in the *Journal of Materials Research*, the *Journal of Alloys and Compounds*, and the *Journal of Computational Materials Science*.

UNDERGRADUATE RESEARCH

University of California San Diego, September 1993 – June 1995

- Funded by Sandia (Livermore) National Laboratories to study a novel technique for the synthesis of complex luminescent oxides for field-emission display applications. Materials under study included YAG:Tm³⁺, YAG:Tb³⁺, YAG:Eu³⁺, and YSO:Ce³⁺.
- Investigated, in cooperation with a postdoctoral researcher, the production of luminescent thin-films by pulsed laser deposition and by laser ablation.
- Performed differential thermal analysis studies on the crystallization kinetics of a barium-aluminum-silicon ceramic compounds synthesized from zeolite precursors.
- Scientific contributions were published in the *Journal of the American Ceramic Society*, the *Journal of the Society for Information Displays*, the *Journal of Luminescence*, *Thin Solid Films*, the *Journal of Non-Crystalline Solids*, and the *Journal of Vacuum Science and Technology A*.

TEACHING EXPERIENCE

CURRENT TEACHING

University of California, San Diego

- MAE 20 – Elements of Materials Science
Course web site: <http://graeve.ucsd.edu/MAE20.html>
- MAE 160 – Mechanical Behavior of Materials
- MAE 251 – Structure and Analysis of Solids
Course web site: <http://graeve.ucsd.edu/MAE251.html>
- MAE 253 – Advanced Ceramics
- NANO 156 – Nanomaterials

PREVIOUS TEACHING

Alfred University, August 2008 – December 2012

- CEMS 216 – Bonding and Structure of Materials
- CEMS 344 – Electronic, Magnetic, and Optical Properties of Materials
- CEMS 438 – Nanotechnology
- CEMS 543 – Analytical Transmission Electron Microscopy

University of Nevada – Reno, July 2002 – June 2008

- MSE 415/615 – Materials Characterization
- MSE 440/640 – Nanomaterials Synthesis
- MSE 450 – Techniques of Process Design, Economics and Safety
- MSE 461/661 – Physical Metallurgy II
- MSE 472 – Introduction to Ceramics

- MSE 482 – Senior Design
- MSE 702G – Electron Microscopy
- MSE 738 – Advanced Ceramic Materials

LECTURER

San Jose State University, June 2001 – June 2002

- Co-principal investigator in a curriculum development grant funded by the National Science Foundation to develop a new teaching framework for the “Introduction to Materials Engineering” course.
- Principal investigator for a grant to involve one undergraduate student in a research project. The student built a new piece of equipment for the “Introduction to Materials Engineering” laboratory and won second place in a national undergraduate research competition, organized by the Society of Hispanic Professional Engineers.
- Advisor to one student for her senior thesis on the modeling of combustion synthesized tantalum carbide ceramics.
- Webmaster for the “Introduction to Materials Engineering” and “Introduction to Engineering” courses.

COURSES TAUGHT

- MatE25 – Introduction to Materials Engineering
- MatE25 Laboratory – Introduction to Materials Engineering Laboratory
- ENGR10 – Introduction to Engineering

LECTURER and ASSOCIATE PROVOST FOR ACADEMIC AFFAIRS

The National Hispanic University, July 1999 – May 2001

- Responsible for development and maintenance of university schedule of classes and university catalog.
- Responsible for evaluation of teaching effectiveness of part-time faculty, which included approximately 50 instructors.
- Principal investigator on a grant to promote mathematics and science achievement among minority high school students from the local school district. This project was funded by the National Security Agency.

COURSES TAUGHT

- MAT 312 – Educational Statistics
- GEO 100 – Introduction to Earth Science
- MAT 108 – Number Systems
- MAT 100 – College Algebra
- PHY 120 – Physics with Laboratory
- CS 108 – JAVA Programming
- CS 106 – C++ Programming
- ANT 100 – Introduction to Anthropology

TEACHING ASSISTANT

University of California, Davis, January 1998 – June 1998

In cooperation with the faculty, prepared the syllabus, homework assignments, and examinations for ENGR 45 - Introduction to Materials Science and Engineering. Participation as a teaching assistant was in connection to the Program in College Teaching at UC Davis, which also included workshops and other activities aimed at preparing graduate students for future positions as academic faculty members.

LANGUAGES

Spanish (Native language)
 English (Native language)
 Portuguese (Intermediate proficiency)

PROFESSIONAL AFFILIATIONS

American Ceramic Society
Materials Research Society
Society of Hispanic Professional Engineers
Sociedad Mexicana de Materiales
American Association for the Advancement of Science
Mexican Academy of Sciences
Mexican Academy of Engineering
Academy of Sciences of Latin America

AWARDS and HONORS

- AAHHE Alfredo G. de los Santos Jr. Distinguished Leadership Award (2025)
- Global Ambassador Award, American Ceramic Society (2024)
- Arthur L. Friedberg Ceramic Engineering Tutorial and Lecture Award, American Ceramic Society (2024)
- Forjadora del Año, award from *Madrugadores de Tijuana* [Tijuana "Person of the Year"] (2023)
- Member, Academy of Sciences of Latin America (2022)
- Fellow, American Association for the Advancement of Science (2021)
- Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring (2020)
- Member, Mexican Academy of Sciences (2019)
- Fellow, HACU Inaugural *Academia de Liderazgo* / Leadership Academy (2019)
- UC San Diego Chancellor's Associates Community Service Award (2019)
- Cigarroa Lecturer, AAHHE National Conference (February 2019)
- UC San Diego Faculty Research Lecturer Award (2019)
- Fellow, UC San Diego Revelle College Faculty (2018)
- SHPE San Diego Service Award (2018)
- SHPE Innovator Award (2017)
- Hispanic Engineer National Achievement (HENAAC) Education Award (2017)
- Recognized as one of the 100 Most Powerful Women of Mexico by Forbes Magazine (2017)
- Fellow, American Ceramic Society (2017)
- Member, Mexican Academy of Engineering (2016)
- George and Dot Bishop Advanced Materials Lecturer, Clemson University (April 2016)
- Outstanding Engineering Educator, San Diego Chapter of the California Society of Professional Engineers (2015)
- Counselor, *Instituto de los Mexicanos en el Exterior* (2015-2016)
- UC San Diego University Diversity Award (2014)
- Tijuana Walk of Fame (2014)
- International member (Level II) of the Sistema Nacional de Investigadores, Consejo Nacional de Ciencia y Tecnología, México (January 2013 - present)
- B.J. Harrington Lecturer, McGill University (September 2012)
- "Jaime Oaxaca" Award, Society of Hispanic Professional Engineers (2011)
- Karl Schwartzwalder Professional Achievement in Ceramic Engineering (PACE) Award, American Ceramic Society (2010)
- Best Paper Award, Society of Hispanic Professional Engineers Annual Meeting (2009)
- CAREER Award, National Science Foundation (2007)
- Hispanic Educator of the Year, Society of Hispanic Professional Engineers (2006)
- Faculty Member of the Year, National Hispanic University (2000)
- 2nd Place Winner, National Symposium of the Society of Mexican American Engineers and Scientists Graduate Student Technical Paper Competition (1998)

- 1st Place Winner, National Technical and Career Conference Graduate Student Technical Paper Competition, Society of Hispanic Professional Engineers (1997)
- Hispanic Engineer National Achievement (HENAAC) Graduate Student Leadership Award (1997)
- Research Mentorship Program Fellowship, University of California, Davis (1996-1997)
- TOPS Research Fellowship, University of California, Davis (1995-1996)

SCIENTIFIC PUBLICATIONS

BOOKS and BOOK CHAPTERS

O.A. Graeve and J.P. Kelly, "High Temperature Materials Processing," in: High Temperature Materials and Mechanisms, edited by Y. Bar-Cohen (CRC Press / Taylor and Francis Group, New York, 2014). ISBN: 9781466566453

J.P. Kelly and O.A. Graeve, "Effect of Powder Characteristics on Nanosintering," in: Sintering Mechanisms of Conventional Nanodensification and Field Assisted Processes, edited by R.H.R. Castro and K. van Benthem (Springer Science, New York, 2013), pp. 57-95. ISBN: 978-3-642-31008-9.R.D.

Braun, D.S. Wiley, H.W. Brandhorst Jr., D.C. Byers, D. Chenette, I. Chopra, F.D. Drake, O.A. Graeve, M.G. Jones, R.A. Moore, E. Phillip Muntz, L.R. Young, Fostering Visions for the Future: A Review of the NASA Institute of Advanced Concepts, (The National Academies, Washington, D.C, 2009). ISBN: 978-0-309-14051-5.

O.A. Graeve, "Zirconia," in: Ceramic and Glass Materials: Structure, Properties and Processing, edited by J.F. Shackelford and R.H. Doremus (Springer Science, New York, USA, 2008), pp. 169-197. ISBN-10: 1441944605, ISBN-13: 978-1441944603.

JOURNAL EDITORSHIPS and SPECIAL ISSUES

Editor: Materials Letters; Elsevier (March 2014 – December 2022).

Editor (area of Chemical Physics): Scientific Reports; Nature Publishing Group (October 2014 – June 2021).

Proceedings Editor: J.L. Rodríguez-López, C. Gutiérrez-Wing, O.A. Graeve, A.G. Palestino-Escobedo, and M. Muñoz-Navia, *Materials Research Society Symposium Proceedings*, vol. 1817 (2016). DOI: <http://dx.doi.org/10.1557/opl.2016.41>

Proceedings Editor: C. Gutiérrez-Wing, J.L. Rodríguez-López, O.A. Graeve, and M. Muñoz-Navia, *Materials Research Society Symposium Proceedings*, vol. 1479 (2013). DOI: <http://dx.doi.org/10.1557/opl.2013.169>

Proceedings Editor: C. Gutierrez-Wing, J.L. Rodriguez López, J.J. Boeckl, O.A. Graeve, and P. Soukiassian, *Materials Research Society Symposium Proceedings*, vol. 1371 (2012). DOI: <http://dx.doi.org/10.1557/opl.2012.548>

Journal Guest Editor: F. Gordaninejad, O.A. Graeve, A. Fuchs, and D. York, *Journal of Intelligent Material Systems and Structures*, Vol. 18, No. 12, December 2007.

Journal Guest Editor: F. Gordaninejad, O.A. Graeve, A. Fuchs, and D. York, *International Journal of Modern Physics B*, Vol. 21, Issue 28/29, November 2007.

Proceedings Editor: F. Gordaninejad, O.A. Graeve, B.F. Spencer, and D. York, Proceedings of the Third International Workshop on Advanced Smart Materials and Smart Structures Technology, (Techno-Press, Inc., Daejeon, South Korea, 2007). ISBN: 9812771158.

Proceedings Editor: F. Gordaninejad, O.A. Graeve, A. Fuchs, and D. York, Proceedings of the 10th International Conference on Electrorheological Fluids and Magnetorheological Suspensions, (World Scientific Publishing Company, Inc., New Jersey, USA, 2007). ISBN: 9812771190.

JOURNAL PUBLICATIONS

K. Carrera, V. Huerta, V. Orozco, J. Matutes, A. Urbieto, P. Fernández, F. Martínez, O.A. Graeve, and M. Herrera, "Formation of oxygen vacancies in Cr³⁺-doped hydroxyapatite nanofibers and their role in generating paramagnetism," *Biomedical Materials & Devices*, **3**, 529-544 (2025).

Manuscript: <https://doi.org/10.1007/s44174-024-00191-3>

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University of California San Diego

Thesis Title:

A Fundamental Study of the Electrical Resistivity of Hexaboride Particles and their Integration Into Nanofiber Composites

Maritza Sanchez Graduation Date: Institution: Thesis Title:	Ph.D. Materials Science and Engineering June 2023 University of California San Diego A Study on Faceted Particle Formation of Perovskites and Oxidation Behavior of Carbides
Seongcheol Choi Graduation Date: Institution: Thesis Title:	Ph.D. Materials Science and Engineering August 2021 University of California San Diego Behaviors of Silica Nanoparticle Deposition and Gold Coating on Polystyrene Particles
Tianqi Ren Graduation Date: Institution: Thesis Title:	Ph.D. Materials Science and Engineering June 2021 University of California San Diego Exploring the Morphological Control and Formation Mechanisms of Ultra-high Temperature Ceramic Particles: A Study on Tantalum Carbide
Hamed Hosseini-Toudeshki Graduation Date: Institution: Thesis Title:	Ph.D. Mechanical Engineering December 2020 University of California San Diego Superelasticity and Shape Memory Behavior in LaNbO ₄ Functional Ceramic
Arash Yazdani Graduation Date: Institution: Thesis Title:	Ph.D. Materials Science and Engineering August 2020 University of California San Diego Structural Analysis and Mechanical Properties of Amorphous Steel Composites
Robyn Ridley Graduation Date: Institution: Thesis Title:	Ph.D. Materials Science and Engineering August 2020 University of California San Diego A Fundamental Study of Ternary Microemulsion Systems for Nanoparticle Synthesis
Shuang Qiao Graduation Date: Institution: Thesis Title:	Ph.D. Materials Science and Engineering December 2019 University of California San Diego Electrical Conductivity of Stabilized Mesoporous Ceramic Fluid Suspensions with Varying pH Values
Keyur K. Karandikar Graduation Date: Institution: Thesis Title:	Ph.D. Mechanical Engineering March 2018 University of California San Diego Particle Size/Grain Size Correlation and Mechanical Properties of Spark Plasma Sintered 8Y-ZrO ₂ , MgAl ₂ O ₄ , and Al ₂ O ₃ Based Composites
James T. Cahill Graduation Date: Institution: Thesis Title:	Ph.D. Materials Science and Engineering December 2016 University of California San Diego A Study on the Phase Stability and Diffusion Behavior of Alkaline-Earth Hexaborides

Hoorshad Fathi-Kelly

Graduation Date:

Institution:

Thesis Title:

Ph.D. Materials Science and Engineering

May 2014

Alfred University

Reverse Micelle Size and Stability during Electrolyte Encapsulation and Implications for the Synthesis of Nanomaterials

James P. Kelly

Graduation Date:

Institution:

Thesis Title:

Ph.D. Ceramic Engineering

May 2013

Alfred University

The Scaled-Up Synthesis of Nanostructured Ultra-High-Temperature Ceramics and Resistance Sintering of Tantalum Carbide Nanopowders

Raghunath Kanakala

Graduation Date:

Institution:

Thesis Title:

Ph.D. Materials Science and Engineering

December 2008

University of Nevada, Reno

Exploring the Synthesis of Hexaborides: The Basis of a New Chemistry for the Preparation of Electro-Optical Materials

Kaustav Sinha

Graduation Date:

Institution:

Thesis Title:

Ph.D. Materials Science and Engineering

December 2008

University of Nevada, Reno

Particle Engineering for the Formulation of Smart Functional Fluids – Novel Synthesis, Processing and Comparative Analysis of Magnetic Nanoparticles and Fluids

FORMER MASTER'S STUDENTS**Jin Zhou**

Graduation Date:

Institution:

Thesis Title:

M.S. Materials Science and Engineering

June 2022

University of California San Diego

Characterization of Barium Titanate and Strontium Titanate Nanoparticles Synthesized by Hydrothermal and Molten-salt Methods

Xiang Li

Graduation Date:

Institution:

Thesis Title:

M.S. Materials Science and Engineering

June 2022

University of California San Diego

The Preparation and Characterization of a New Garnet $\text{CaEr}_2\text{Mg}_2\text{Si}_3\text{O}_{12}$ Phosphor Matrix for White LEDs**Travis Lawrence**

Graduation Date:

Institution:

Thesis Title:

M.S. Mechanical Engineering

June 2022

University of California San Diego

Development of Structural Amorphous Metal Fibers

Nada Qari

Graduation Date:

Institution:

Thesis Title:

M.S. Materials Science and Engineering

August 2019

University of California San Diego

The Effect of Crystallinity on the Corrosion Behavior of SAM2×5 Amorphous Steel *In Situ* Composite**Carson Cheung**

Graduation Date:

Institution:

Thesis Title:

M.S. Materials Science and Engineering

December 2018

University of California San Diego

Fabrication of a Porous Anode with Continuous Linear Pores by Using Unidirectional Carbon Fibers as Sacrificial Templates to Improve the Performance of Solid Oxide Fuel Cells

Uriel Santoro Graduation Date: Institution: Thesis Title:	M.S. Materials Science and Engineering December 2018 University of California San Diego SiC/SiC Fiber-Reinforced Composites: The Effect of Processing, Mechanical Properties, and Phase Transformation
Ryan Johnson Graduation Date: Institution: Thesis Title:	M.S. Materials Science and Engineering March 2018 University of California San Diego Investigating the Potential to Control the Morphology of Hydroxyapatite via Micrometer Scale Molding and Casting Techniques
Boyao Zhang Graduation Date: Institution: Thesis Title:	M.S. Materials Science and Engineering December 2015 University of California San Diego Devitrification Behavior and Interface Microstructure of Ni-based Amorphous Foils During Spark Plasma Sintering
Colby M. Brunet Graduation Date: Institution: Thesis Title:	M.S. Ceramic Engineering August 2012 Alfred University Advanced Processing of Magnesium Oxide Nanocomposites for IR Window Applications
Michael S. Saterlie Graduation Date: Institution: Thesis Title:	M.S. Ceramic Engineering December 2010 Alfred University Synthesis and Thermal Conductivity Enhancement through the Dispersion of Surfactant Stabilized Copper Nanoparticles in Water
Brandon C. Williams Graduation Date: Institution: Thesis Title:	M.S. Ceramic Engineering December 2010 Alfred University A Study in Solution Molarity for the Reverse Micelle Synthesis of Nanocrystalline Oxides
Lum-Ngwegia Ngwa Nforbi Graduation Date: Institution: Thesis Title:	M.S. Materials Science and Engineering December 2010 University of Nevada, Reno Phase Stability Analysis of Lanthanum-Doped Alumina During Synthesis and Sintering
Jesse N. Ruppert Graduation Date: Institution: Thesis Title:	M.S. Materials Science and Engineering December 2009 University of Nevada, Reno Development of Zirconia-Based Mesoporous Materials for Intermediate-Temperature Solid-Oxide Fuel Cells
Amrita Mishra Graduation Date: Institution: Thesis Title:	M.S. Materials Science and Engineering December 2009 University of Nevada, Reno Design and Reversible Hydrogen Storage Capacity Determination of Unique Nanoarrays of TiO ₂ and Carbon Nanotubes

Brett Pearson	M.S. Materials Science and Engineering
Graduation Date:	December 2008
Institution:	University of Nevada, Reno
Thesis Title:	Exploring the Processing Parameters for the Preparation of Luminescent Lutetium Oxyorthosilicate (LSO:Ce) Polycrystalline Ceramics for γ -ray Detection
Raghunath Kanakala	M.S. Materials Science and Engineering
Graduation Date:	August 2008
Institution:	University of Nevada, Reno
Thesis Title:	Spark Plasma Sintering of Structurally Amorphous Metal (SAM7) with Addition of Y_2O_3 Nanoparticles
Abhiram Madadi	M.S. Metallurgical Engineering
Graduation Date:	December 2007
Institution:	University of Nevada, Reno
Thesis Title:	A New Approach for the Synthesis of Tungsten Nanopowders
Andrew Clifton	M.S. Metallurgical Engineering
Graduation Date:	December 2006
Institution:	University of Nevada, Reno
Thesis Title:	Novel Processing of Nanostructured Yttria-Stabilized Zirconia
Kaustav Sinha	M.S. Metallurgical Engineering
Graduation Date:	August 2005
Institution:	University of Nevada, Reno
Thesis Title:	An Approach to Develop Reverse Micelle Large-Scale Synthesis Process for Magnetic Nanopowders
Jessica O. Corral	M.S. Metallurgical Engineering
Graduation Date:	December 2004
Institution:	University of Nevada, Reno
Thesis Title:	Preparation of Rare-Earth (Eu^{3+} , Tb^{3+} , Tm^{3+} , and Yb^{3+}) Doped Y_2O_3 Luminescent Ceramics by the Use of Reverse Micelles
Harpreet Singh	M.S. Metallurgical Engineering
Graduation Date:	December 2004
Institution:	University of Nevada, Reno
Thesis Title:	Reverse Micelle Synthesis and Consolidation of Zirconia Nanopowders
Shailaja Varma	M.S. Metallurgical Engineering
Graduation Date:	August 2004
Institution:	University of Nevada, Reno
Thesis Title:	Synthesis and Characterization of Nanostructured Ceramic Luminescent Materials

THESIS COMMITTEE MEMBER

Tricia Light, Ph.D. in Earth Sciences
 Institution: University of California San Diego
 Graduation Date: December 2023
 Thesis Topic: Pelagic Barite Formation, Dissolution, and Preservation: Contextualizing a Marine Carbon Cycle Proxy

Gottlieb Uahengo, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: June 2023

Thesis Topic: Non-equilibrium Phase Fraction and Light Transmission in Polycrystalline Yttria Stabilized Zirconia Ceramics

Javier Buenrostro, Ph.D. in Structural Engineering

Institution: University of California San Diego

Graduation Date: December 2022

Thesis Topic: Characterization of the Response of Woven Composites and Additively Manufactured Metals Defects Under Intermediate Loading Rates

William James McDonald Connacher, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: December 2022

Thesis Topic: Acoustofluidic Droplet Generation: Physical Understanding and Applications of Jetting and Atomization

Joel Jimenez Rivera, Ph.D. in Chemistry

Institution: University of California San Diego

Graduation Date: August 2022

Thesis Topic: Spectroscopic Studies of the Photoinduced Electron Transfer Reaction of Tryptophan in Azurin

Veronica Eudave, M.S. in Engineering Physics

Institution: University of California San Diego

Graduation Date: August 2022

Thesis Topic: Anode Shape and Structure Effects on Dense Plasma Focus Neutron Yield

Joshua Stephan Pelz, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: June 2022

Thesis Topic: Exploring Process-Structure-Property Relationships via Additive Manufacturing

Elizabeth Marie Bullard, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: June 2022

Thesis Topic: Eastern Pacific Bivalve Shell Calcification in a Warming and Acidifying Ocean

Xingyu Guo, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: June 2022

Thesis Topic: Computational Design of Novel Electrodes for Alkali-ion Batteries

Paulina Diaz Montiel, Ph.D. Engineering Sciences (Structural Engineering)

Institution: University of California San Diego / San Diego State University

Graduation Date: March 2022

Thesis Topic: The Effect of Waviness Defects on the Damage Mechanics of Fiber-Reinforced Composites Under Monotonic and Cyclic Loading

Alex Jason Mantanona, Ph.D. in Chemistry

Institution: University of California San Diego

Graduation Date: March 2022

Thesis Topic: Bridging the Gap Between Spectroscopic and Magnetic Measurements in Organocobalt Complexes

Hui Zheng, Ph.D. in NanoEngineering

Institution: University of California San Diego

Graduation Date: August 2021

Thesis Topic: Defect Effects on Mechanical Properties and Deformation Behavior of Materials: From Quantum Mechanics to Molecular Dynamics Assisted by Machine Learning

Mahdi Amachraa, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: June 2021

Thesis Topic: Theoretical Design and Discovery of Novel Inorganic Phosphors

Audrey Velasco-Hogan, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: June 2021

Thesis Topic: Exploring Structural Biological Materials and Their Structure-Property Relationships in Mineralized and Non-mineralized Systems

Darren Michael Dewitt, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: March 2021

Thesis Topic: Nanoporous, Transparent, and Doped MgAl_2O_4 Spinel—Nanostructural Flexibility by Pressure-assisted Reaction Densification of Metastable Powders

Xing Xing, Ph.D. in Chemical Engineering

Institution: University of California San Diego

Graduation Date: December 2020

Thesis Topic: Novel Materials for Next Generation Lithium Batteries

Andrew J. Wright, Ph.D. in Chemical Engineering

Institution: University of California San Diego

Graduation Date: December 2020

Thesis Topic: Thermomechanical Properties of Medium- and High-entropy Oxides and Their Interaction with Molten Salts

Mingde Qin, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: December 2020

Thesis Topic: Synthesis of Dual-phase High-entropy Ultrahigh Temperature Ceramics and Reactive Sintering of Boride-based High-entropy Ceramics

Richard Tran, Ph.D. in Nanoengineering

Institution: University of California San Diego

Graduation Date: December 2020

Thesis Topic: First Principles Modeling of Planar and Point Defects in Materials

Hyeseung Chung, Ph.D. in Nanoengineering

Institution: University of California San Diego

Graduation Date: August 2020

Thesis Topic: Influence of Synthetic Conditions for Nanoparticle Synthesis in Anionic and Cationic Redox Cathode Material

Morgan E.C. Miller, Ph.D. in Nanoengineering

Institution: University of California San Diego

Graduation Date: August 2020

Thesis Topic: Characterizing the Impact Dynamics of Small Particles: The Aerosol Impact Spectrometer

Alyssa Jean Griffin, Ph.D. in Oceanography
Institution: University of California San Diego
Graduation Date: June 2020
Thesis Topic: Biogenic Carbonate Dissolution in Shallow Marine Environments

Jessica C. Moreton, Ph.D. in Chemistry
Institution: University of California San Diego
Graduation Date: March 2020
Thesis Topic: Characterizing and Controlling the Interface of Metal-Organic Framework and Polymer Components in Mixed-Matrix Membranes

Carlos Eduardo Martínez Núñez, Ph.D. in Physics
Institution: Universidad de Sonora
Graduation Date: September 2019
Thesis Topic: Efecto SERS por Nanopartículas Semiconductoras en Zeolita Sintética F9 y Cloruro de Sodio

Christopher Michael Coaty, Ph.D. in NanoEngineering
Institution: University of California San Diego
Graduation Date: September 2019
Thesis Topic: Conversion Reaction Synthesis: A Versatile Synthesis Pathway to Nanoporous Metals

Carlos Eduardo Martínez Núñez, Ph.D. in Physics
Institution: Universidad de Sonora
Graduation Date: August 2019
Thesis Topic: Efecto SERS por Nanopartículas Semiconductoras en Zeolita Sintética F9 y Cloruro de Sodio

James Paris Wampler, Ph.D. in Physics
Institution: University of California San Diego
Graduation Date: August 2019
Thesis Topic: The Search for Novel Superconductivity in Inhomogeneous Materials using Magnetic Field Modulated Microwave Spectroscopy

Joshua Gild, Ph.D. in Materials Science and Engineering
Institution: University of California San Diego
Graduation Date: August 2019
Thesis Topic: Synthesis and Fabrication of High Entropy Diborides, Fluorite Oxides, and Silicides

Pritesh Parikh, Ph.D. in Nanoengineering
Institution: University of California San Diego
Graduation Date: August 2019
Thesis Topic: Exploring Nanoscale Chemical Distributions for Energy Applications Using Atom Probe Tomography

Katharine G. Lunny, Ph.D. in Chemistry
Institution: University of California San Diego
Graduation Date: August 2019
Thesis Topic: Investigation of Reactive Oxides and Radical Dynamics by Photoelectron-Photofragment Coincidence Spectroscopy

Mahdi Amachraa, M.S. in Materials Science and Engineering
Institution: University of California San Diego
Graduation Date: June 2019
Thesis Topic: A Universal Understanding of Thermal Quenching in Eu^{2+} and Ce^{3+} -Doped Phosphors

Jungmin Ha, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: June 2019

Thesis Topic: Design and Synthesis of Phosphors to Improve Efficiency for Solid State Lighting Applications

Jungwoo Lee, Ph.D. in NanoEngineering

Institution: University of California San Diego

Graduation Date: August 2018

Thesis Topic: Advancing Focused Ion Beam Characterization for Next Generation Lithium-Ion Batteries

Verónica Jazmín Huerta Guerra, M.S. in Nanoscience

Institution: Centro de Investigación Científica y de Educación Superior de Ensenada

Graduation Date: June 2018

Thesis Topic: Recristalización de Nanocintas de Hidroxiapatita Inducida por Campos Eléctricos

Zhenbin Wang, Ph.D. in NanoEngineering

Institution: University of California San Diego

Graduation Date: March 2018

Thesis Topic: Design and Optimization of Phosphors for Solid-State Lighting using First-Principles Calculations

Serdar Yavuz, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: March 2018

Thesis Topic: Graphene/Silicon Schottky Junction Based Solar Cell

Joon Kyo Seo, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: December 2017

Thesis Topic: Electrochemical and Thermodynamic Study of Electrode Materials on Li-ion Batteries and Aqueous Energy Storage and Conversion Applications

Kristine McGrath, M.S. in Mechanical Engineering

Institution: University of California San Diego

Graduation Date: December 2016

Thesis Topic: Fabrication of Anodic Aluminum Oxide Membrane for High Heat Flux Evaporation

Mohamad Ramzi Bin Abdul Majit, M.S. in Engineering Science (Mechanical Engineering)

Institution: University of California San Diego

Graduation Date: August 2016

Thesis Topic: Laminate Manufacture of Self Assembled Curved Surfaces for Small Unmanned Aerial Vehicles (SUAVs)

Hyojung Chloe Yoon, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: August 2016

Thesis Topic: Influence of Synthetic Conditions of Polyol Process on High Power High Energy Materials: Structural and Electrochemical Properties

Dongwon Chun, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: June 2016

Thesis Topic: Rare-earth Free Mn-based Magnetocaloric Alloys for Solid State Refrigeration

Steven Naleway, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: June 2016

Thesis Topic: Harnessing Biology for Bioinspired Structural Materials with Intrinsic and Extrinsic Freeze Casting

Dalia Holanda Chávez García, Ph.D. in Physics of Materials

Institution: Universidad Nacional Autónoma de México

Graduation Date: June 2016

Thesis Topic: Nanomateriales Luminiscentes como Bioetiquetadores de Células de Cáncer de Mama

Tane Remington, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: December 2015

Thesis Topic: Extreme Response in Tension and Compression: Tantalum from Single to Nano Crystals

Tze-Han Chen, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: December 2015

Thesis Topic: Developing “Lunar Cement” Using Raw Lunar Soils

Luz Zavala Sanchez, M.S. in Materials Science and Engineering

Institution: Universidad Nacional Autónoma de México

Graduation Date: December 2015

Thesis Topic: Luminescence Response of Doped Hydroxyapatite

Gabriel Rojas-George, Ph.D. in Materials Science and Engineering

Institution: Centro de Investigación en Materiales Avanzados

Graduation Date: May 2015

Thesis Topic: Nucleación y Crecimiento de Películas Delgadas de BiFeO_3 Dopadas con Ba^{2+} , Co^{2+} , y Ni^{2+} : Efecto Ferroeléctrico y Ferromagnético en Función del Grado de Distorsión R3c

Daniel Rubio Saavedra, M.S. in Chemical Sciences

Institution: Universidad Nacional Autónoma de México

Graduation Date: August 2015

Thesis Topic: Síntesis de Sistemas Binarios de Hexaboruros con Catalizadores Incorporados (R-B6:M) para el Almacenamiento de Hidrógeno

Zhi Ming Chen, Ph.D. in Structural Engineering

Institution: University of California San Diego

Graduation Date: June 2015

Thesis Topic: Experimental and Numerical Investigation of Wide Area Blunt Impact Damage to Composite Aircraft Structures

Oscar E. Jaime-Acuña, Ph.D. in Physics of Materials

Institution: Universidad Nacional Autónoma de México

Graduation Date: December 2014

Thesis Topic: Nanocompuestos Fotocatalíticos a Partir de Zeolitas Sintéticas

Kevin Schmidt, M.S. in Chemical Engineering

Institution: University of Nevada, Reno

Graduation Date: December 2014

Thesis Topic: Computational Modeling of Lanthanum Hexaboride Materials: Intermolecular Potentials and Molecular Dynamics

Nuyeli del Carmen Izaguirre Espinoza, M.S. in Physics of Materials

Institution: Universidad Nacional Autónoma de México

Graduation Date: December 2014

Thesis Topic: Nanopartículas Magnéticas/Luminiscentes para Detección y Tratamiento de Cáncer por Ablación Térmica

Michael M. Porter, Ph.D. in Materials Science and Engineering

Institution: University of California San Diego

Graduation Date: June 2014

Thesis Topic: Bioinspired Design: Magnetic Freeze Casting

Victoria L. Blair, Ph.D. in Ceramic Engineering

Institution: Alfred University

Graduation Date: May 2014

Thesis Topic: Engineering Methods for Improved Photocatalysis of Layered Perovskites

Bu Wang, Ph.D. in Ceramic Engineering

Institution: Alfred University

Graduation Date: May 2012

Thesis Topic: Computer Simulations of Large-scale Defect Clustering and Nano-domain Structure in Solid Oxide Fuel Cell Electrolytes

Jeffrey Grover, M.S. in Materials Science and Engineering

Institution: Alfred University

Graduation Date: December 2011

Thesis Topic: Thermoelectric Characterization of Beta-Gallia Rutile Intergrowths in the Semiconducting System: $(\text{Ga}_{0.75}\text{In}_{0.25})_4(\text{Ti}_y\text{Sn}_{1-y})_5\text{O}_{16}$

Britney Higgins, M.S. in Materials Science and Engineering

Institution: Alfred University

Graduation Date: December 2010

Thesis Topic: Effects of Processing on Density and Microstructure on Trivalent Tungstates

Daniel Dunn, Ph.D. in Ceramic Engineering

Institution: Alfred University

Graduation Date: December 2010

Thesis Topic: The Effect of Fiber Volume Fraction in SiC-SiC Composites

George Keith, M.S. in Ceramic Engineering

Institution: Alfred University

Graduation Date: December 2009

Thesis Topic: Powder Synthesis and Device Fabrication of a Multi-Layered Solid State Light Emitting Material

Cameron Hilton, Ph.D. in Chemistry

Institution: University of Nevada, Reno

Graduation Date: August 2008

Thesis Topic: Biphenyl Complexes of Zirconium and Their Utility in the Synthesis of Polycyclic Aromatic Hydrocarbons

Sivakumar Lanka, Ph.D. in Electrical Engineering

Institution: University of Nevada, Reno

Graduation Date: August 2008

Thesis Topic: Bandwidth Efficient Modulation Techniques for Lightwave Systems

Anjali Talekar, Ph.D. in Materials Science and Engineering

Institution: University of Nevada, Reno

Graduation Date: August 2008

Thesis Topic: High-Temperature Oxidation Kinetics of Nickel-Based Superalloys and HSLA Steels in Pure Oxygen

Suresh C. Divi, Ph.D. in Metallurgical Engineering

Institution: University of Nevada, Reno

Graduation Date: May 2008

Thesis Topic: Electrochemical Study of Rock Bolts for Yucca Mountain (YM) Repository

Adam Gardner, M.S. in Chemical Engineering

Institution: University of Nevada, Reno

Graduation Date: May 2007

Thesis Topic: Molecular Dynamics of AOT/Water/Isooctane Reverse Micelles: Dynamics and Structural Analysis and Effect of Zirconium Ions on the Micellar Structure for ZrO₂ Nanoparticle Production

Alonso Jaques, M.S. in Metallurgical Engineering

Institution: University of Nevada, Reno

Graduation Date: May 2007

Thesis Topic: Linear Multicomponent Diffusion in the Gamma Phase in the Ni-Cr-Mo System

Charles Mebi, Ph.D. in Chemistry

Institution: University of Nevada, Reno

Graduation Date: May 2007

Thesis Topic: Half-Sandwich Ruthenium(II) Complexes of 1,3,5-Triaza-7-Phosphaadamantane: Syntheses, Reactivity, and Catalytic Applications

Nestor Perea, Ph.D. in Physics of Materials

Institution: Universidad Nacional Autónoma de México

Graduation Date: June 2006

Thesis Topic: Physical and Chemical Properties of Sr₂CeO₄ and its Possible Applications in Luminescent Devices

Suresh C. Divi, M.S. in Metallurgical Engineering

Institution: University of Nevada, Reno

Graduation Date: December 2005

Thesis Topic: Heat Capacities Measurement of Pure and Binary Organic Thermal Energy Storage Materials

Ravikant Samathan, M.S. in Mechanical Engineering

Institution: University of Nevada, Reno

Graduation Date: December 2004

Thesis Topic: Sub-Micron Diameter Electrospun Polyacrylonitrile Fibers as Potential Linear Actuators

CURRENT UNDERGRADUATE STUDENTS

Irving Ding, B.S. Mechanical Engineering, University of California San Diego, February 2025 – present

Marc Levy, B.S. Nanoengineering, University of California San Diego, February 2025 – present

Jesús Héctor Pérez González, B.S. Aerospace Engineering, Universidad Nacional Autónoma de México, November 2024 – present

Zachary Shelton, B.S. Mechanical Engineering, University of California San Diego, October 2024 – present

Liliana Becerril Tapia, B.S. Energy Engineering, Instituto Politécnico Nacional, October 2024 – present (REU student)

Gerardo Mercado Hurtado, B.S. Computer Systems Engineering, Instituto Tecnológico del Sur de Guanajuato, October 2024 – present (REU student)

Emilio Jared Espinosa Cruz, B.S. Artificial Intelligence, Instituto Politécnico Nacional, October 2024 – present (REU student)

Eduardo Jiménez Miranda, B.S. Energy Engineering, Instituto Politécnico Nacional, April 2024 – present (REU student)

Edgar Solano Castrejón, B.S. Energy Engineering & Physics, Instituto Politécnico Nacional, April 2024 – present (REU student)

Marshall Hamon, B.S. Mechanical Engineering, University of California San Diego, September 2024 – present

Uzziel Jacob Salas Carreto, B.S. Aerospace Engineering, Universidad Autónoma de Baja California, January – June 2024; September 2024 – present (REU student)

Marcus Velasquez, B.S. Aerospace Engineering, University of California San Diego, October 2023 – present

Zoey He, B.S. Data Science, University of California San Diego, October 2023 – present

Nicolas Stacy-alcantara, B.S. Aerospace Engineering, University of California San Diego, September 2023 – present

Helin Henstridge, B.S. Biophysics, University of California San Diego, September 2023 – June 2024; February 2025 – present

FORMER UNDERGRADUATE STUDENTS

Madeline Rivas Vergara, B.S. Aerospace Engineering, Universidad Autónoma de Baja California, September 2024 – January 2025 (REU student)

Jorge Alberto Bustos Zamora, B.S. Aerospace Engineering, Universidad Autónoma de Baja California, September 2024 – January 2025 (REU student)

Marshall Nakada, B.S. Mechanical Engineering, University of California San Diego, March – June 2024; September 2024 – January 2025

Valeria Arroyo Fernandez, B.S. Chemistry, Universidad de Guadalajara; June – August 2024 (REU student)

Diana Escárrega Carrillo, B.S. Biotechnology, Instituto Tecnológico y de Estudios Superiores de Occidente; June – August 2024 (REU student)

Heriberto Campa Ortega, B.S. Chemistry, Universidad de Sonora; June – August 2024 (REU student)

Gustavo Peña Burboa, B.S. Aerospace Engineering, Universidad Autónoma de Baja California, February – June 2024 (REU student)

Helin Henstridge, B.S. Biophysics, University of California San Diego, September 2023 – June 2024

José Arturo García Cortés, B.S. Nanotechnology Engineering, Universidad Autónoma del Estado de Hidalgo, January – May 2024 (REU student)

Natalia Muñoz, B.S. Chemical Engineering, University of California San Diego; April 2023 – June 2024

Michael Usherenko, B.S. Mechanical Engineering, University of California San Diego; December 2022 – June 2023; September 2023 – June 2024

Luis Angel Rojas Mercado, B.S. Mechanical Engineering, Tecnológico Nacional de México–Campus Celaya; August 2022 – June 2024 (REU student)

Igli Alivoda, B.S. Mechanical Engineering, University of California San Diego; April 2022 – June 2024

Justin Nakamura, B.S. NanoEngineering, University of California San Diego; April 2022 – May 2024

Lidia Vazquez, B.S. Bioengineering, University of California San Diego; January 2022 – June 2024

Kuvam Bhatnagar, B.S. Chemical Engineering, University of California San Diego, May 2023 – May 2024

Clayton Ng, B.S. Chemical Engineering, University of California San Diego; March 2023 – March 2024

Melquizedek Rebolledo, B.S. Mechanical Engineering, University of California San Diego; August 2020 – June 2021; September 2021 – June 2024

Christian Ulises Ramos Linares, B.S. Biochemical Engineering, Instituto Tecnológico Superior de Irapuato, June 2021 – January 2024 (REU student)

John Leitch, B.S. Aerospace Engineering, University of California San Diego, June 2023 – January 2024

Summer Lindauer, B.S. Undeclared, University of California San Diego, October 2023 – January 2024

Kathleen Le, B.S. Structural Engineering, University of California San Diego, October – December 2023

Noel Sebastien Mallari, B.S. Nanoengineering, University of California San Diego, September – November 2023

Tommy Jin, B.S. Mechanical Engineering, University of California San Diego; September 2022 – November 2023

Chaewon Kim, B.S. Mechanical Engineering, University of California San Diego; September 2022 – October 2023

Paulina Ivonne Cortés Díaz, B.S. Mechatronics Engineering, Instituto Tecnológico y de Estudios Superiores de Monterrey, June 2021 – January 2023; May – October 2023 (REU student)

Moisés Humberto Ibarra Miranda, B.S. Nanotechnology, Instituto Tecnológico y de Estudios Superiores de Monterrey; August 2022 – September 2023 (REU student)

Julia Lee, B.S. Mechanical Engineering, University of California San Diego; March – August 2023

Vanessa Corona, B.S. Chemistry, Universidad Autónoma de Baja California; Summer 2023 (REU student)

Andres Cortes Nowack B.S. Chemical Engineering, Universidad Nacional Autónoma de México; Summer 2023 (REU student)

Yau Ching (Oscar) Yun, B.S. Mechanical Engineering, University of California San Diego; April 2022 – June 2023

Yujie Zhou, B.S. Mechanical Engineering, University of California San Diego; April 2022 – June 2023

Chen (Derek) Liu, B.S. Mechanical Engineering, University of California San Diego; April 2022 – June 2023

Jarren Ayars, B.S. Chemical Engineering, University of California San Diego; March – June 2023

Daniel Acosta, B.S. Mechanical Engineering, University of California San Diego; May 2022 – June 2023

Marfred Barrera, B.S. Mechanical Engineering, University of California San Diego; September 2022 – June 2023

Omar Antonio Perez, B.S. Mechanical Engineering, University of California San Diego; April 2022 – June 2023

Emma Fickett, B.S. Mechanical Engineering, University of California San Diego; January – June 2023

Peter Thien Lai, B.S. Mechanical Engineering, University of California San Diego; April 2022 – May 2023

Eason Lai, B.S. Mechanical Engineering, University of California San Diego; April – June 2023; September 2022 – June 2023

Brandon G. Char, B.S. Mechanical Engineering, University of California San Diego; April 2022 – April 2023

Hailey Griffith, B.S. Mechanical Engineering, University of California San Diego; January – April 2023

Brian Fader, B.S. Mechanical Engineering, University of California San Diego; January 2023 – March 2023

Yuhang Huang, B.S. Mechanical Engineering, University of California San Diego; September 2022 – February 2023

Alex Li, B.S. Mechanical Engineering, University of California San Diego; January 2022 – June 2022; September 2022 – January 2023

Jason Liu, B.S. Mechanical Engineering, University of California San Diego; June 2022 – January 2023

Matthew Callahan, B.S. Mechanical Engineering, University of California San Diego; June 2022 – December 2023

Yaqueline Beltrán Rojo, B.S. Nanotechnology, Universidad Politécnica de Sinaloa; September – December 2022 (REU student)

Sankalp Kaushik, B.S. Mechanical Engineering, University of California San Diego; January 2022 – June 2022

Anannaya Vij, B.S. Mechanical Engineering, University of California San Diego; April – June 2022

Eesa Khan, B.S. Mechanical Engineering, University of California San Diego; January – August 2022

Eddy Rodas-Lima, B.S. Mechanical Engineering, University of California San Diego; October 2021 – August 2022

Jason Rodriguez, B.S. Mechanical Engineering, University of California San Diego; January – July 2022

Juan Pablo Sánchez Cabrera, B.S. Medicine, Universidad Autónoma de Baja California; Summer 2022 (REU student)

Aditya Shah, B.S. Mechanical Engineering, University of California San Diego; April – June 2022

Manuel Abitia-León, B.S. Mechanical Engineering, University of California San Diego; January 2022 – June 2022

Rafael Chavez, B.S. Mathematics—Applied Science, University of California San Diego; January – June 2022

Manuel Albarran, B.S. Chemical Engineering, University of California San Diego; January 2021 – May 2022

Claudia Vanessa Dorantes Villegas, B.S. Mechatronics Engineering, Instituto Tecnológico y de Estudios Superiores de Monterrey, June 2021 – May 2022 (REU student)

Ali Kattee, B.S. Mechanical Engineering, University of California San Diego; October 2021 – June 2022

Katada Siraj, B.S. Mechanical Engineering, University of California San Diego; September 2021 – June 2022

Reina Gomez, B.S. Nanoengineering, University of California San Diego; September 2021 – June 2022

Jixuan Dong, B.S. Nanoengineering, University of California San Diego; September 2021 – May 2022

Anna Wilke, B.S. Biological Sciences, University of California San Diego; June 2020 – May 2022

Paul Barraza, B.S. Mechanical Engineering, University of California San Diego; January 2020 – May 2022

Dayana Sandoval Orozco, B.S. Medicine, Universidad Autónoma de Baja California, June 2021 – April 2022 (REU student)

Jamie Doan, B.S. Mechanical Engineering, University of California San Diego; September 2021 – April 2022

Bryan Daniel Sandoval Gaytán, B.S. Mechatronics Engineering, CETyS Universidad, August 2019 – December 2021 (REU student)

Sergio Ojeda, B.S. Nanoengineering, Instituto Tecnológico de Tijuana, June – December 2021 (REU student)

Kylan Zhao, B.S. Mechanical Engineering, University of California San Diego; January 2021 – January 2022

Andrea Estrada, B.S. Bioengineering, Instituto Politécnico Nacional, June – December 2021 (REU student)

Zachary Cadieux, B.S. Mechanical Engineering, University of California San Diego, March – November 2021)

Jessica Munoz, B.S. Mechanical Engineering, San Diego State University, June – September 2021 (REU student)

Jackson Wilke, B.S. Biophysics, Mesa College, June – September 2021 (REU student)

Cassandra Gamino, B.S. Biology, University of California, Riverside, June – September 2021 (REU student)

Aaron Tenner, B.S. Aerospace Engineering, San Diego State University, June – September 2021 (REU student)

Gerardo Ontiveros-Cortes, B.S. Chemistry, University of California San Diego; August 2020 – August 2021

Jorge Macias Gómez, B.S. Computer Science, Universidad Nacional Autónoma de México, Summer 2021 (REU student)

Ashlee Graciano Escobedo, B.S. Environmental Engineering, Instituto Politécnico Nacional, Summer 2021 (REU student)

Andrea Abascal Molina, B.S. Mechatronic Engineering, Instituto Tecnológico y de Estudios Superiores de Monterrey, Summer 2021 (REU student)

Jonatan Emanuel Salinas Avila, B.S. Digital Systems and Robotics Engineering, Instituto Tecnológico y de Estudios Superiores de Monterrey, Summer 2021 (REU student)

Karla León Zúñiga, B.S. Nanotechnology, Universidad Tecnológica de Querétaro, Summer 2021 (REU student)

Antonio César Doñez Miranda, B.S. Chemistry, Universidad Nacional Autónoma de México, Summer 2021 (REU student)

Luyao Zhang, B.S. Mechanical Engineering, University of California San Diego; June 2019 – June 2021

Jimmy Do, B.S. Mechanical Engineering, University of California San Diego; August 2020 – June 2021

Isabella Aureguy, B.S. Chemical Engineering, University of California San Diego; February 2021 – June 2021

Vanessa Gonzalez Núñez, B.S. Aeronautical Engineering, Instituto Tecnológico de Tijuana; October 2019 – April 2021 (REU student)

Hugo Sevilla Gómez Llanos, B.S. Computer Science and Engineering, CETyS Universidad; August 2019 – February 2021 (REU student)

Raúl Rosas, B.S. Biochemical Engineering, Instituto Politécnico Nacional; August 2019 – October 2020 (REU student)

Paola Castro Flores, B.S. Biochemical Engineering, Instituto Politécnico Nacional; August 2019 – October 2020 (REU student)

Dominic Nightingale, B.S. Mechanical Engineering, University of California San Diego; January 2020 – June 2020

Felix Monge, B.S. NanoEngineering, University of California San Diego; January 2018 – June 2020

Jennifer Coates, B.S. Mechanical Engineering, University of California San Diego; September 2019 – June 2020

Christopher Bagon, B.S. NanoEngineering, University of California San Diego; September 2018 – March 2020

Mingcong Tang, B.S. Mechanical Engineering, University of California San Diego; June 2019 – March 2020

Barry Cheung, B.S. Mechanical Engineering, University of California San Diego; January 2019 – January 2020

Jesus Canizales, B.S. Aerospace Engineering, Universidad Autónoma de Baja California, Summer 2019 (REU student)

María Fernanda Rodríguez, B.S. Materials Engineering, Instituto Tecnológico de Tijuana, Summer 2019 (REU student)

Tareq Labeeb, Cypress College, Summer 2019 (REU student)

Natalie Lam, B.S. NanoEngineering, University of California San Diego; January 2019 – June 2019

Sergio Sufy, B.S. Aerospace Engineering, Universidad Autónoma de Baja California, September 2018 – June 2019 (REU student)

Jorge Ontiveros, B.S. NanoEngineering, Instituto Tecnológico de Tijuana, September 2018 – January 2019 (REU student)

Hector Marin-Alcantar, B.S. Aerospace Engineering, University of California San Diego; September 2018 – June 2019

Natasha Lee, B.S. Mechanical Engineering, University of California San Diego; April 2017 – September 2018

Carmen Nayeli Guzmán, B.S. Chemical Engineering, University of California San Diego; July 2018 – September 2018

Carlos Andrés Calderón, Mt. Saint Jacinto Community College, Summer 2018 (REU student)

Erick Alvarado, B.S. NanoEngineering, University of California San Diego, Summer 2018

Aric Bandera, B.S. Aerospace Engineering, Universidad Autonoma de Baja California, August 2017 – July 2018 (REU student)

Jayna Wittenbrink, B.S. Mechanical Engineering, University of California San Diego; April 2018 – June 2018

Diego Miranda, B.S. Aerospace Engineering, University of California San Diego; March 2016 – December 2017

Jason Mayeda, B.S. Mechanical Engineering, University of California San Diego; September 2016 – August 2017

Veronica Sanchez, B.S. Chemical Engineering, University of California San Diego; Summer 2017

Ivan Cuellar, B.A. Business Administration, Centro de Estudios Univ. "16 de Septiembre", Summer 2017 (REU student)

Richard Aranda, B.S. Aerospace Engineering, Universidad Autónoma de Baja California, Summer 2017 (REU student)

Sebastian Lee, B.S. Mechanical Engineering, University of California San Diego; Fall 2016 – Spring 2017

Danijel Plazonic, B.S. Nanoengineering, University of California San Diego; Winter 2016 – Spring 2017

Ved Vakharia, B.S. Mechanical Engineering, University of California San Diego; Winter 2015 – Winter 2017

Luisa Rosa-Silva, B.S. Physics, University of California San Diego; Spring 2016; Fall 2016

Jordan T. Furlong, B.S. Nanoengineering, University of California San Diego; Fall 2015 – Summer 2016

Alan Alvarez, B.S. Bioengineering, Universidad Autónoma de Baja California, Summer 2016 (REU student)

Brianna Fernandez, B.S. Mechatronic Engineering, CETyS Universidad, Summer 2016 (REU student)

Victoria Stanley, B.S. Nanoengineering, University of California San Diego; Fall 2014 – Spring 2016

Walter Garay, B.S. Physics, University of California San Diego; Fall 2015 – Spring 2016

Ernesto de la Paz, B.S. Nanotechnology, Instituto Tecnológico de Tijuana (REU student)

Jiayue Yu, B.S. Chemical Engineering, University of California San Diego; Winter 2015 – Spring 2015

Lauren Lopez, B.S. Chemical Engineering, University of California San Diego; Winter 2015 – Summer 2015

Alejandro Cota, B.S. Mechanical Engineering, University of California, Berkeley, Summer 2015 (REU student)

Christopher Pisano, B.S. Chemical Engineering, University of Illinois, Urbana-Champaign, Summer 2015 (REU student)

Carson Cheung, B.S. Mechanical Engineering, University of California San Diego; Fall 2013 – Winter 2015

César J. Villa, B.S. Mechanical Engineering, University of California San Diego; Spring 2013 – Spring 2015

Joel Bahena, B.S. Nanoengineering, University of California San Diego; Spring 2013 – Spring 2015

Rocio Pena, B.S. Chemical Engineering, University of California San Diego; Spring 2013 – Spring 2015

Aaron Manheim, B.S. Mechanical Engineering, University of California San Diego; Summer 2014 – Spring 2015

Grecia Pena, B.S. Nanoengineering, University of California San Diego; Summer 2014 – Fall 2014

Alvin Chak, B.S. Mechanical Engineering, University of California San Diego; Spring 2014

Jaime Regis, B.S. Mechanical Engineering, University of California San Diego; Winter 2014 – Spring 2014

Alicia Zörner, B.S. Nanotechnology, Friedrich-Alexander-Universität Erlangen- Nürnberg, Spring 2014 – Summer 2014 (REU student)

Benjamin Rangel, B.A. Spanish, Colgate University, Summer 2014 (REU student)

Veronika Albert, B.S. Nanotechnology, Friedrich-Alexander-Universität Erlangen- Nürnberg, Spring 2014 – Summer 2014 (REU student)

Seth M. Fuller, B.S. Ceramic Engineering, Alfred University
 Graduation Date: May 2014
 Senior Thesis: Diffusion Study of Barium, Strontium, and Calcium Metal Ion Hexaborides

Janelle Duenas, B.S. Computer Science and Engineering, University of California San Diego; Spring 2013 – Fall 2014

Paulo J. Colmenares, B.S. Materials Science and Engineering, Alfred University
 Graduation Date: December 2013
 Senior Thesis: Consolidation and Devitrification Behavior of Iron-Based Alloys for Ballistic Applications

Lewis H. Fowler-Gerace, B.S. Physics, Wesleyan University (REU student); Summer 2013

Brittany A. Caldwell, B.S. Ceramic Engineering, Alfred University

Graduation Date: December 2012

Senior Thesis: Chemical Treatments of Magnesium Diboride Powder to Manipulate Particle Size

Braeden M. Clark, B.S. Glass Engineering Science, Alfred University

Graduation Date: May 2012

Senior Thesis: Chemical Treatments of Tantalum Carbide Powder to Manipulate Morphology, Particle Size, and Oxygen Content

Michael Alberga, B.S. Materials Science and Engineering, Alfred University

Graduation Date: May 2012

Senior Thesis: Combustion Synthesis of Doped and Undoped Titania Nanopowders for Use in SOFC and Thermoelectric Applications

Daniel W. Davies, B.S. Materials Science and Engineering, Alfred University

Graduation Date: May 2012

Senior Thesis: Unique Preparation of Boron Nitride for Ultra High Hardness Applications

Kali A. Lambert, B.S. Materials Science and Engineering, Alfred University

Graduation Date: May 2012

Senior Thesis: The Effects of Silica on the Fabrication of Translucent Polycrystalline Lutetium Orthosilicate for γ -Ray Detection

Kenneth E. Noll, B.S. Materials Science and Engineering, Alfred University

Graduation Date: May 2012

Senior Thesis: Characterization of Sintered Zinc Oxide from Combustion and Precipitation Synthesis

Ryan J. Grohsmeyer, B.S. Materials Science and Engineering, Alfred University

Graduation Date: May 2012

Senior Thesis: Characterization of Thermal, Electrical, Microstructural and Mechanical Properties of Tantalum Carbide

Patrick DiCesare, B.S. Ceramic Engineering, Alfred University

Graduation Date: May 2010

Senior Thesis: Spark Plasma Sintering of Highly Corrosion-Resistant Amorphous Metal/Ceramic Composites

Andrew D. Galens, B.S. Ceramic Engineering, Alfred University

Graduation Date: May 2010

Senior Thesis: The Synthesis and Characterization of EuB_6 Nanopowders

Colby M. Brunet, B.S. Ceramic Engineering, Alfred University

Graduation Date: December 2009

Senior Thesis: Synthesis of Nanocrystalline Tantalum Powders

Katelyn C. Glass, B.S. Ceramic Engineering, Alfred University

Graduation Date: December 2009

Senior Thesis: A Comparative Analysis of Particle Size and Crystallite Size in Alumina Nanopowders Prepared by Reverse Micelle Synthesis

Alexander W. Turner, B.S. Materials Science and Engineering, Alfred University

Hunter F. Haddad, B.S. Biomedical Materials Engineering, Alfred University

Robert J. Locker, B.S. Materials Science and Engineering, Alfred University

Kasey L. Hanson, B.S. Ceramic Engineering

Sarai Escalante, B.S. Chemistry, Southwestern College (REU student)

Gabriel Rojas-George, B.S. Materials Science and Engineering, University of Nevada, Reno
Brandon Williams, B.S. Materials Science and Engineering, University of Nevada, Reno
Karla Hernandez, B.S. Biochemistry, University of Nevada, Reno
Michael Saterlie, B.S. Materials Science and Engineering, University of Nevada, Reno
Linda Murillo, B.S. Mechanical Engineering, University of Nevada, Reno
Brett Pearson, B.S. Materials Science and Engineering, University of Nevada, Reno
Yon Sohn, B.S. Materials Science and Engineering, University of Nevada, Reno
Matthew Goodale, B.S. Materials Science and Engineering, University of Nevada, Reno
Daniel Peterson, B.S. Materials Science and Engineering, University of Nevada, Reno
Adriana Velasquez, B.S. Electrical Engineering, University of Nevada, Reno
Michelle McChesney, B.S. Materials Engineering, San Jose State University
Graduation Date: May 2002
Senior Thesis: Modeling Solution for Electric Field-Activated Combustion Synthesis

FORMER HIGH SCHOOL STUDENTS

Héctor Rubén González Casas, Colegio La Paz, Summer 2024
Sofia Sotres Garcia, Prepa Tecnológico de Monterrey, Summer 2023
Alondra Pinales, Centro de Estudios Científicos y Tecnológicos (CECyT 18) N° 18 "Zacatecas", Summer 2023
Mylo Martin, Canyon Crest Academy, Summer 2023
Erick Blanco Nakashima, Prepa CETyS, Summer 2022
Frida Xcaret Vargas Trejo, Prepa Tecnológico de Monterrey, Summer 2022
Liliana Stephania Perales Rodríguez, Prepa Tecnológico de Monterrey, Summer 2022
Luisa Fernanda Gastélum Hernández, Colegio de Bachilleres del Estado de Sonora, Summer 2021
Jackson Wilke, San Diego MET High School, September 2019 – June 2020; April – June 2021
Ryan Daniel Ramírez, Dana Hills High School, Summer 2018
Delphinia Senske, San Diego MET High School, September 2017 – May 2018
Alexander Kritsuk, La Jolla High School, January 2016 – October 2017
Erika Garza, CETyS Bachillerato, Summer 2017
Mauricio Guillen, Southwest High School, Summer 2017
Yamil Martinez, La Paz High School, Summer 2017
Jose Reynoso, High Tech High, Summer 2017
Sara Sabhan, San Diego MET High School, September 2016 – June 2017
Viviana Oliveros, St. Rose of Lima School, November 2016 – January 2017
Kira Cummings, San Diego MET High School, September 2015 – August 2016
Benjamin Snoreck, Andover School, Summer 2015
Andrea Salas, La Paz High School, Summer 2015
Fernanda Arce, La Paz High School, Summer 2015

Martha Olivieri, Instituto Cumbres, Summer 2015

Frida Durazo, San Diego MET High School, June 2014 – August 2015

Cruz Galarza, Southwest High School, Summer 2014

Dariana Arciniega, Southwest High School, Summer 2014

Hector Arias, San Diego Early Middle College, Summer 2014

Madeleine Morales, Bishops High School, Summer 2014

Paulina Stone, La Paz High School, Summer 2014

Erick Duran, La Paz High School, Summer 2014

Valeria Macias, La Paz High School, Summer 2014

Daniel Coronado, Santa Ana High School, Summer 2013

Paulina Ramirez, La Paz High School, Summer 2013

Rosella Parra, La Paz High School, Summer 2013

Gerardo Marquillo, Sweetwater High School, Fall 2013

Andrew King, Canisteo High School, Summer 2011

Odalís Reynaga, Wooster High School, Spring 2007

Issa Beekun, Reed High School, Fall 2006

Carlos Hernandez, Reed High School, Fall 2006

Tyler Aas, Reno High School, Spring 2006

Nazrul Mojumder, Reno High School, Fall 2005

Anna Carr, Wooster High School, Spring 2004

Brent Server, Carson City High School, Spring 2003

INVITED PRESENTATIONS

- **Keynote Lecture:** "Synthesis, Crystallography and Properties of Materials for Extreme Environments," Symposium of Nanoscience and Nanomaterials 2024 (Ensenada, México. Date: May 13-17, 2024).
- "Materiales Aeroespaciales para Aplicaciones Terrestres y Extraterrestres," Segundo Congreso Estatal de Ciencia e Ingeniería en Materiales (Date: April 22-24, 2024).
- **Plenary Lecture:** "Materials for Extreme (and Space) Environments: Crystallography and Properties," 2024 Pan American Ceramics Congress and Ferroelectrics Meeting of Americas (Panama City, Panama. Date: April 7-11, 2024).
- "Building Compassion and Human Bridges Through Research Collaborations," 2024 Pan American Ceramics Congress and Ferroelectrics Meeting of Americas (Panama City, Panama. Date: April 7-11, 2024).
- "Materiales Aeroespaciales para Aplicaciones Terrestres y Extraterrestres," Reunión Interinstitucional Para la Divulgación de la Ciencia en Materiales (Date: March 22, 2024).
- "Estableciendo Puentes de Colaboración entre la Juventud de México y Estados Unidos: El Programa de Verano de Investigación ENLACE," Martes de la Academia de Ingeniería de México (Date: December 5, 2023).

- "Building Compassion and Human Bridges Through Research Collaborations," 2023 Annual MRSEC Education Directors Meeting (La Jolla, CA. Date: November 13, 2023).
- **Keynote Lecture:** "Building Compassion and Human Bridges Through Research Collaborations," 2023 Career Pathways Conference (San Diego, CA. Date: October 12, 2023).
- "Crystallography, Phase Stability and Luminescence Behavior of Eu-doped $\text{Ca}_{4-x}\text{Sr}_x\text{LaO}(\text{BO}_3)_3$ Compounds," Materials Science and Technology Technical Meeting and Exhibition (Columbus, OH. Date: October 1-4, 2023).
- "Processing of High Entropy Metal Carbides: A New Class of Ultrahigh Temperature, Irradiation Resistant Ceramics," Materials Science and Technology Technical Meeting and Exhibition (Columbus, OH. Date: October 1-4, 2023).
- "Copper Oxide Nanoparticles as a Metal Ion Source for Enhanced Catalytic Stability of Laccase," Materials Science and Technology Technical Meeting and Exhibition (Columbus, OH. Date: October 1-4, 2023).
- "Transition Metals as Unique Modifiers for the Control of Morphology in Ultra-high Temperature Ceramics," 31st International Materials Research Congress (Cancún, México. Date: August 14-19, 2023).
- "Crystallography, Phase Stability and Luminescence Behavior of Eu-doped $\text{Ca}_{4-x}\text{Sr}_x\text{LaO}(\text{BO}_3)_3$ Compounds," 31st International Materials Research Congress (Cancún, México. Date: August 14-19, 2023).
- "Reflections on the Challenges, Opportunities, Resources and Best Practices Regarding International Education in Mexico and Latin America," HACU International Symposium (Guadalajara, México. Date: June 23, 2023).
- **Plenary Lecture:** "Materiales en Ambientes Extremos: Diseño y Aplicaciones Extraterrestres," IX Congreso Internacional de Investigación Tijuana (Tijuana, México. Date: April 26-28, 2023).
- "Synthesis and Crystallography of High Entropy Metal Carbides: A New Class of Ultrahigh Temperature and Irradiation Resistant Ceramics," TMS 2023 Annual Meeting & Exhibition (San Diego, CA. Date: March 19-23, 2023).
- **Keynote Lecture:** "Materiales en Ambientes Extremos: Diseño y Aplicaciones Extraterrestres," Semana Tecnológica 2022 (Aguascalientes, México. Date: October 26, 2022).
- "Materials for Space Environments: Extremes of Temperature, Pressure and Radiation," International Workshop on Advanced Engineering Materials (Panama City, Panama. Date: October 25, 2022).
- **Plenary Lecture:** "ENLACE 2023: Una Experiencia de Investigación Excepcional," VIII International Engineering, Science and Technology Conference (Panama City, Panama. Date: October 21, 2022).
- "Building Compassion and Human Bridges Through Research Collaborations," MS&T22 Technical Meeting and Exhibition (Pittsburgh, PA. Date: October 9-12, 2022).
- **Plenary Lecture:** "Materials for Space Environments: Extremes of Temperature, Pressure and Radiation," MSE Congress 2022 (Darmstadt, Germany. Date: September 4-9, 2022).
- "Supercompatibility in Ceramic Micropillars of LaNbO_4 ," XXX International Materials Research Congress (Cancún, México. Date: August 14-19, 2022).
- "Eu-doped $\text{Ca}_{4-x}\text{Sr}_x\text{LaO}(\text{BO}_3)_3$ Compounds for Efficient White-light Illumination," XXX International Materials Research Congress (Cancún, México. Date: August 14-19, 2022).
- "Supercompatibility in Ceramic Micropillars of LaNbO_4 ," Pan American Ceramics Congress and Ferroelectrics Meeting of Americas (Panama City, Panama. Date: July 26, 2022).

- "Bi-national Education: Challenges and Opportunities," Cumbre de la Ingeniería Panamericana (Mexico City, México. Date: June 10, 2022).
- "Morphologically Controlled Composites: Emerging Materials for Extreme Environments," Virtual Conference: Materials in the Anthropocene (Date: October 27-29, 2021).
- "Materials for Space Environments: What Will it Take to Colonize Other Planets?," II Meeting of the Nanoscience Division of the Mexican Physics Society (Date: October 25, 2021).
- **Plenary Lecture:** "Materiales Aeroespaciales para Aplicaciones Terrestres y Extraterrestres," Congreso Multidisciplinario 2021, Instituto Tecnológico de Zacapoaxtla (Date: October 21, 2021).
- "Nanomateriales en Ambientes Extremos: Diseño y Aplicaciones Extraterrestres," LXVI Congreso Nacional de Física de la Sociedad Mexicana de Física (Date: October 3-8, 2021).
- "Materials in Space: What is Needed to Colonize Other Planets?," International Workshop of the Research Unit FOR 3010 (Date: September 27-28, 2021).
- "Hall-Petch Effect in Binary and Ternary Alumina / Zirconia / Spinel Composites," XXIX International Materials Research Congress (Date: August 15-20, 2021).
- "Fabrication of Continuous Linear Pores in an SOFC Anode Using Unidirectional Carbon Fibers as Sacrificial Templates," XXIX International Materials Research Congress (Date: August 15-20, 2021).
- **Plenary Lecture:** "Materiales Aeroespaciales: Para Aplicaciones Terrestres y Extraterrestres," VII Congreso Internacional de Investigación Tijuana (Date: May 12, 2021).
- **Plenary Lecture:** "Materials in Space . . . What is Needed to Colonize Other Planets?," IX Simposio Anual de Estudiantes Asociados a la Ciencia e Ingeniería de Materiales [9th Annual Symposium of Students in Materials Science & Engineering] (Date: May 5, 2021).
- **Keynote Lecture:** "El Capital Humano en Ingeniería en la Industria Nacional de la Nueva Modernidad," Congreso Internacional de Ingeniería y Políticas Públicas (Date: November 23-25, 2020).
- **Keynote Lecture:** "La Vinculación Como Eje Rector Para Formar Alianzas Con Actores Estratégicos," Congreso Colegiado Para el Intercambio de Experiencias con Directivos Para la Creación de Una Comunidad Virtual de Aprendizaje Profesional en Educación Secundaria (Date: October 28, 2020).
- "Morphologically Controlled Composites: Emerging Materials for Extreme Environments," III National Workshop on Spark Plasma Sintering (Kraków, Poland. Date: October 23, 2020).
- **Keynote Lecture:** "Oportunidades Binacionales: El Docente como Difusor de Programas de Investigación," Congreso Colegiado para el Intercambio de Experiencias con Docentes para la Creación de una Comunidad Virtual de Aprendizaje Profesional en Educación Secundaria (Date: October 21, 2020).
- "Materials for Space Environments: What Will It Take To Colonize Other Planets?," XIII International Conference on Surface Materials and Vacuum (Date: October 19-23, 2020).
- "Emprendimiento Para Futuras Mujeres Ingenieras," 7ma Edición del Programa de Capacitación para Emprendedores, Instituto Politécnico Nacional (Date: October 9, 2020).
- "Control de Morfología y Superficies en Materiales Cerámicos: Fundamentos y Aplicaciones," XLV Semana de Química Internacional (Chihuahua, México. Date: October 5-9, 2020).
- "A Precise DSC-based Methodology to Pinpoint *In Situ* Crystallinity Percent in Amorphous Systems," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).
- "Smart Ceramics and Their Applications," IV Semana Académica, Instituto Tecnológico de Tijuana (Tijuana, México. Date: November 6, 2019).

- "Morphologically Controlled Composites: Emerging Materials for Extreme Environments," Cabo Talks (Los Cabos, México. Date: September 5-8, 2019).
- "Superelastic Response and Shape Memory Behavior in Niobate Materials," XXVIII International Materials Research Congress (Cancún, México. Date: August 18-23, 2019).
- "The UC-Mexico Initiative," XXVIII International Materials Research Congress (Cancún, México. Date: August 18-23, 2019).
- "Fuentes de Poder en Estado Sólido Para Dispositivos Biomédicos Miniatura: Ultimos Resultados y Estado de la Industria," MedSummit '19 (Rosarito, México. Date: August 7, 2019).
- "Morphologically Controlled Composites: Emerging Materials for Extreme Environments," High Temperature Ceramics for Extreme Environments Workshop (Columbus, OH. Date: June 18-19, 2019).
- "Materials in Space . . . What is Needed to Colonize Other Planets," 2nd CaliBaja Symposium and Workshop (La Jolla, CA. Date: May 3, 2019).
- "Design of Novel Corrosion Resistant Materials: An Emerging Technology for Extreme Environments," XI Simposion Internacional Investigación Química en la Frontera (Tijuana, México. Date: November 14, 2018).
- "The CaliBaja Education Consortium," 2018 International Research Conference (Davis, CA. Date: September 17-18, 2018).
- "Designing the Structure and Properties of Ultra-high Temperature Ceramics with Solid Solution Chemistry: The Example of Tantalum Carbide," XXVII International Materials Research Congress (Cancún, México. Date: August 19-24, 2018).
- "Crystallography of Divalent Hexaborides: Synchrotron, Raman, and atomic-resolution microscopy studies," 1st CaliBaja Symposium and Workshop: Advances and Collaborations in Microscopy (Tijuana, México. Date: February 15-16, 2018).
- "Phase Stability and Nano-domain Formation in Alkaline-earth Hexaborides," International Conference on Sintering 2017 (San Diego, CA. Date: November 12-16, 2017).
- "Mesoporous Materials for Desulfurization Technologies: Fabrication and Enzyme Immobilization," MS&T17 (Pittsburgh, PA. Date: October 8-12, 2017).
- **Keynote Lecture:** "Control de Morfología y Superficies en Materiales Cerámicos: Fundamentos y Aplicaciones," 1st International Conference on Engineering and Technology Sciences (Tijuana, México. Date: September 20-22, 2017).
- "Crystallography of Divalent Hexaborides: Synchrotron, Raman, and atomic-resolution microscopy studies," XXVI International Materials Research Congress (Cancún, México. Date: August 20-25, 2017).
- "Design and Manufacturing of High-hardness Composites: Emerging Materials for Extreme Environments," XXVI International Materials Research Congress (Cancún, México. Date: August 20-25, 2017).
- "How to Control the Shape of Matter (and Other Curiosities of Nature)," Cross-Border Innovation Summit (La Jolla, CA. Date: June 9, 2017).
- "Iron-based Amorphous Metals for Impact and Corrosion Resistance Applications: The Effect of Pressure and Current on Devitrification Kinetics," 2017 TMS Annual Meeting & Exhibition (San Diego, CA. Date: February 26 - March 2, 2017).
- **Keynote Lecture:** "Materiales Aeroespaciales: Investigación y Aplicación," II Semana Academica de Ingeniería Aeroespacial (Tijuana, Mexico. Date: October 10-14, 2016).

- "Phase Formation in Divalent Hexaborides: Prospects for Hydrogen Storage Technologies," XXV International Materials Research Congress (Cancún, México. Date: August 14-19, 2016).
- "Designing Advanced Composites via Spark Plasma Sintering," SHPE 2015 (Baltimore, MD. Date: November 11-15, 2015).
- "Designing *In Situ* and *Ex Situ* Bulk Metallic Glass Matrix Composites via Spark Plasma Sintering in the Super Cooled Liquid State," Materials Science and Technology 2015 Conference & Exposition (Columbus, OH. Date: October 4-8, 2015).
- "Metal Hexaborides and Their Utilization for Solid State Hydrogen Storage," Materials Science and Technology 2015 Conference & Exposition (Columbus, OH. Date: October 4-8, 2015).
- "Mechanisms of Pore Formation During Spark Plasma Sintering of Ultra-high Hardness Metallic and Ceramic Materials," 11th Pacific Rim Conference on Ceramic Societies (Jeju, Korea. Date: August 30 – September 4, 2015).
- "Metal Hexaboride Diffusion and Hydrogen Storage Prospects," XXIV International Materials Research Congress (Cancún, México. Date: August 16-20, 2015).
- "Designing Fe-based Bulk Metallic Glass Matrix Composites via Spark Plasma Sintering," XXIV International Materials Research Congress (Cancún, México. Date: August 16-20, 2015).
- **Plenary Lecture:** "Control de Morfología y Superficies en Nanopulvos para Aplicaciones Electromagnéticas," Semana Académica 2014 de la Ingeniería en Nanotecnología, Ingeniería Química e Ingeniería Ambiental, Instituto Tecnológico de Tijuana (Tijuana, México. Date: November 20, 2014).
- "Recent Advances in Powder Synthesis and Microstructure Evolution of Metal and Ceramic Composite Materials," HyMaP 2014 (Busan, Korea. Date: November 10-13, 2014).
- "Recruiting and Retaining Faculty of Color," 21st Annual Institute on Teaching and Mentoring (Atlanta, GA. Date: October 30 – November 2, 2014).
- "Densification Behavior and Interfaces of Ultra-high Temperature Carbide Materials for Extreme Environment Applications," Materials Science and Technology 2014 Conference & Exposition (Pittsburgh, PA. Date: October 12-16, 2014).
- **Keynote Lecture:** "Recent Advances in Nano-scale Metallic and Ceramic Powder Sintering and Microstructure Evolution," International Congress on Applications of Nanotechnology (Mexico City, México. Date: September 30 – October 2, 2014).
- "Spark Plasma Sintering of Structurally Amorphous Metals: Control Parameters and Compositing Effects," XXIII International Materials Research Congress (Cancún, México. Date: August 17-21, 2014).
- "Correlation Between Particle Size and Sintering Behavior of Nanopowders," 3rd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 10-14, 2014).
- **Keynote Lecture:** "Límites y Comportamientos Básicos Afines a la Síntesis de Nanopulvos por Procesos Coloidales," XL Aniversario de la Facultad de Ciencias Químicas e Ingeniería, Universidad Autónoma de Baja California (Tijuana, México. Date: March 10, 2014).
- "Scalable Manufacturing of Unique Hexaboride Nanomaterials for Advanced Energy Generation and Gas Storage Applications," TMS 2014 Annual Meeting & Exhibition (San Diego, CA. Date: February 16-20, 2014).
- "Increasing College Graduation Rates Among Hispanic Students in STEM," Society of Hispanic Professional Engineers 2013 (Indianapolis, IN. Date: October 30 – November 3, 2013).
- "Hispanics in Engineering," UC ADVANCE Paid Roundtable: "The Role of Contributions to Diversity in Faculty Hiring and Academic Review" (La Jolla, CA. Date: October 25, 2013).

- "The Thermoelectric Behavior of Dense Non-stoichiometric Oxides Prepared by Spark Plasma Sintering," Society of Hispanic Professional Engineers 2013 (Indianapolis, IN. Date: October 30 – November 3, 2013).
- "Molecular Dynamics Simulations of Ion Transport in Hexaborides," Society of Hispanic Professional Engineers 2013 (Indianapolis, IN. Date: October 30 – November 3, 2013).
- "Assembly Strategies for the Formation of Stable Reverse Micellar Systems: Implications for the Synthesis of Dispersed Nanoparticles," Materials Science and Technology 2013 Conference & Exposition (Quebec, Canada. Date: October 27-31, 2013).
- "Phase Stability and Boundary Structure of Unique Iron-based Amorphous Metal Composites: Processing and Modeling," 10th Pacific Rim Conference on Ceramic and Glass Technology (San Diego, CA. Date: June 2-7, 2013).
- "Latinas in Engineering: Challenges and Strategies for Recruitment, Retention and Career Development," UC Davis ADVANCE Year 1 Retreat (Davis, CA. Date: April 26, 2013).
- "How to Control the Shape of Matter (and Other Curiosities of Nature)," UCSD Jacobs School of Engineering Research Expo (La Jolla, CA. Date: April 18, 2013).
- "Limits of Precipitation and Combustion Processes for the Synthesis of Nanopowders of Unique Morphologies," 2nd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 4-8, 2013).
- "Límites y Comportamientos Básicos Afines a la Síntesis de Nanopolvos de Morfologías Singulares," IV Congreso Nacional de Ciencia e Ingeniería en Materiales 2013 (Pachuca, México. Date: February 18-22, 2013).
- "Densification Behavior and Interfaces of Tantalum Carbide Nanopowders Prepared by a Solvothermal Process and Consolidated by Spark Plasma Sintering," 3rd International Solvothermal and Hydrothermal Association Conference (Austin, TX. Date: January 13-17, 2013).
- "Exploring Fundamental Responses and Limits of Precipitation Processes for the Synthesis of Nanopowders of Unique Morphologies," Society of Hispanic Professional Engineers 2012 (Fort Worth, TX. Date: November 14-18, 2012).
- "The Role of Interfaces and Surface Structure During Spark Plasma Sintering of Nanopowders," XXI International Materials Research Congress (Cancún, México. Date: August 13-16, 2012).
- "Mentorship and Reciprocity," SHPE NILA 2012 Graduate Leadership Institute (Denver, CO. Date: August 4, 2012).
- "Getting What You Came For - Strategic Planning for Your Graduate Degree Success and Career," SHPE NILA 2012 Graduate Leadership Institute (Denver, CO. Date: August 4, 2012).
- "Las Nanociencias: Una Visión Hacia el Futuro," VI Encuentro Internacional en Nanotecnología (Lagos de Moreno, México. Date: July 11, 2012).
- "The Effect of Electrolyte Concentration and Ionic Charge on the Stability of Reverse Micellar Solutions for the Synthesis of Nanopowders," VI Encuentro Internacional en Nanotecnología (Lagos de Moreno, México. Date: July 11, 2012).
- "Women of Color in STEM," 2012 Joint Annual Meeting Broadening Participation Research (Washington, DC. Date: June 13, 2012).
- "Fast Processing of Advanced Ceramics for Sensor and Thermoelectric Applications: The Role of Powder Morphology During Spark Plasma Sintering of Nanopowders," 36th International Conference & Exposition on Advanced Ceramics & Composites (Daytona Beach, FL. Date: January 24, 2012).

- "Fundamental Aspects of Reverse Micelle Stability for Controlled Synthesis of Nanoparticles," First Meeting of the American Initiative on Metal Clusters and Nanoalloys (San Antonio, TX. Date: November 16-18, 2011).
- "Fast Synthesis Techniques for the Preparation of Electronic Ceramics," Society of Hispanic Professional Engineers 2011 (Anaheim, CA. Date: October 29, 2011).
- "The Effect of Dispersion and Particle Size on the Consolidation Behavior of Nanopowders during Spark Plasma Sintering," Materials Science & Technology 2011 Conference & Exposition (Columbus, OH. Date: October 16-20, 2011).
- "Breaking the Cycle of Hispanic Under-Education," Diversity Dialogue Speaker Series, National Science Foundation (Arlington, VA. Date: September 14, 2011).
- "The Effect of Crystallite Size and Particle Size on the Consolidation Behavior of Nanopowders during Current-Assisted Sintering," International Workshop on Field Assisted Sintering Technology (State College, PA. Date: August 24-25, 2011).
- "A Pathway to the Scaled-Up Manufacturing of Nanostructured Refractory Ceramics for Ultra-High Temperature Applications," XX International Materials Research Congress (Cancún, México. Date: August 15-18, 2011).
- "Processing of Nanostructured Refractory Ceramics for Ultra-High Temperature Applications," The 9th International Meeting of Pacific Rim Ceramic Societies (Cairns, Australia. Date: July 10-14, 2011).
- "Fundamental Aspects of Reverse Micelle Stability for Controlled Synthesis of Nanoparticles," 8th International Topical Meeting on Nanostructured Materials and Nanotechnology (Tuxtla Gutiérrez, México. Date: May 23-25, 2011).
- "Template Synthesis of Mesoporous Scandia-Stabilized Zirconia Powders for Solid-Oxide Fuel Cell Applications," XVIII International Materials Research Congress (Cancún, México. Date: August 16-21, 2009).
- "Exploring Powder Particle Size/Grain Size Correlations During Spark Plasma Sintering of Oxide Nanoparticles Prepared by Reverse Micelle Synthesis," 8th Pacific Rim Conference on Ceramic and Glass Technology (Vancouver, Canada. Date: June 4, 2009).
- "New Synthesis and Sintering Methods in Materials Research," Society for the Advancement of Chicanos and Native Americans in Science 2008 (Salt Lake City, UT. Date: October 9-11, 2008).
- "Precipitation Processes for the Synthesis of Nanostructured Powders," XVII International Materials Research Congress (Cancún, México. Date: August 19, 2008).
- "Precipitation Processes for the Synthesis of Nanostructured Powders," National Society of Hispanic Physicists Annual Meeting (Washington, DC. Date: February 20-24, 2008).
- "Precipitation Processes for the Synthesis of Nanostructured Oxides and Borides," Nanotech 2007 (Monterrey, Mexico. Date: November 12, 2007).
- "Spark Plasma Sintering of Fe-Based Structural Amorphous Metals (SAM) with Y₂O₃ Nanoparticle Additions," Materials Science and Technology 2007 Conference and Exhibit, MS&T 2007 (Detroit, Michigan. Date: September 18, 2007).
- "Synthesis of Carbide Nanopowders Via Solvothermal Reduction," XV International Materials Research Congress (Cancún, México. Date: August 22, 2006).
- "Development of Project-Based Introduction to Materials Engineering Modules," V International Workshop on Materials Education (Córdoba, Argentina. Date: April 20, 2006).
- "Large Scale Synthesis of Magnetic Nanopowders," 30th International Conference & Exposition on Advanced Ceramics and Composites (Cocoa Beach, FL. Date: January 26, 2006).

- "Reverse Micelle Synthesis of Magnetic Nanopowders," Nanotech 2005 (Ensenada, México. Date: September 19, 2005).
- "Synthesis and Consolidation of Nanopowders Via a Unique Reverse Micelle Synthesis Process and Spark Plasma Sintering," 6th International Meeting of Pacific Rim Ceramic Societies (Maui, HI. Date: September 14, 2005).
- "Reverse Micelle Synthesis of Ceramic Nanopowders," High-Performance Corrosion Resistant Materials Meeting / DARPA / DOE (Oahu, HI. Date: January 11, 2005).
- "Development of a Minor Program in Nanotechnology," Plenary Lecture at the IV International Workshop on Materials Education (Chihuahua, México. Date: July 6, 2004).
- "Reverse Micelle Synthesis and Consolidation of Zirconia Nanopowders," XIII International Materials Research Congress (Cancún, México. Date: August 24, 2004).

CONFERENCE PRESENTATIONS

- E.J. Espinosa-Cruz, A.A. Ramírez-Acosta, A. Stubbers, G.B. Thompson, O.A. Graeve, M.S. García-Vázquez, "Comparison of Deep Conditional Generative Models for Scanning Electron Microscopy Image Reconstruction," Optics and Photonics for Information Processing XIX (San Diego, CA. Date: August 3-7, 2025).
- E. Solano-Castrejón, A.A. Ramírez-Acosta, A. Stubbers, G.B. Thompson, O.A. Graeve, M.S. García-Vázquez, "CNN-based and Optical Flow-based Image Interpolation for TaC Ceramics," Optics and Photonics for Information Processing XIX (San Diego, CA. Date: August 3-7, 2025).
- S.S. Estrada, D. Ji, and O.A. Graeve, "Transition Metal Doping: A Route to Morphology Control in Hafnium Carbide Powders," ACS Spring 2025 (San Diego, CA. Date: March 23-27, 2025).
- F.J. Suarez, R. Vazquez-Duhalt, and O.A. Graeve, "Immobilization of Laccases on CuO and ZnO Nanoparticles: Catalytic Properties and Water Bioremediation Study," ACS Spring 2025 (San Diego, CA. Date: March 23-27, 2025).
- S. Ortega, N. Stacey-Alcantara, and O.A. Graeve, "Controlled Morphology of TaC Nanoparticles via Transition Metal Doping," ACS Spring 2025 (San Diego, CA. Date: March 23-27, 2025).
- A. Stubbers, S. Hossain, J.P. Santiago, O.A. Graeve, C.R. Weinberger, and G. Thompson, "Connecting Microscale-to-Macroscale Fracture Toughness from Single Grain Transition Metal Carbide Testing," 49th International Conference and Exposition on Advanced Ceramics and Composites (Daytona Beach, FL. Date: January 29, 2025).
- O.A. Graeve, "Efficient Luminescent Materials for White Light Illumination: Status and Future Prospects," 3er Congreso Internacional Objetivos de Desarrollo Sostenible: Avances, Metas y Perspectivas a Mitad del Camino (Hermosillo, México. Date: October 17, 2024).
- R. Morton, A. Hirales, V. Vasquez, O. Graeve, "Lithium Dopant and Surface Effects on the Band Gap of Calcium Hexaboride (CaB₆) Using DFT Methods," Materials Science and Technology Technical Meeting and Exhibition (Columbus, OH. Date: October 1-4, 2023).
- V.R. Vasquez, R. Morton, A. Hirales, and O. Graeve, "Surface effects on the electronic properties of calcium hexaboride (CaB₆): A DFT first-principles study," 31st International Materials Research Congress (Cancún, México. Date: August 14-19, 2023).
- J. Metera, E. Zhou, J.E. Garay, and O.A. Graeve, "Morphology control in BiFeO₃: A spark plasma sintering study," XVIII Conference & Exhibition of the European Ceramic Society (Lyon, France. Date: July 2-6, 2023).

- A. Hiraes, R. Morton, V.R. Vasquez, and O.A. Graeve, "Band gap tailoring in doped alkaline-earth hexaborides: Advanced materials for neutron detection applications," XVIII Conference & Exhibition of the European Ceramic Society (Lyon, France. Date: July 2-6, 2023).
- S. Ortega, J. Dong, J. Doan, K. Siraj, and O.A. Graeve, "Tailored morphology of TaC nanoparticles by introduction of transition metal dopants," TMS 2023 Annual Meeting & Exhibition (San Diego, CA. Date: March 19-23, 2023).
- S. Estrada, R. Chavez, and O.A. Graeve, "Morphology control of doped hafnium carbide powders," TMS 2023 Annual Meeting & Exhibition (San Diego, CA. Date: March 19-23, 2023).
- S. Tamakloe, M. Amachraa, J. Brgoch, S.P. Ong, and O.A. Graeve, "Eu-doped $\text{Ca}_{4-x-y}(\text{Sr},\text{Ba})_x\text{Eu}_y\text{LaO}(\text{BO}_3)_3$ compounds for efficient white-light illumination," TMS 2023 Annual Meeting & Exhibition (San Diego, CA. Date: March 19-23, 2023).
- A. Hiraes, J. Nakamura, and O.A. Graeve, "Design and synthesis of alkaline-earth doped hexaborides with sodium and potassium dopants," TMS 2023 Annual Meeting & Exhibition (San Diego, CA. Date: March 19-23, 2023).
- J. Metera, A. Wilke, and O.A. Graeve, "Novel method of BiFeO_3 purification by acid washing determined from ICP-MS analyses," TMS 2023 Annual Meeting & Exhibition (San Diego, CA. Date: March 19-23, 2023).
- F.J. Suarez, E. Khan, R. Vazquez-Duhalt, and O.A. Graeve, "Immobilization of laccases on ZnO and CuO nanoparticles and the effect of copper ions on their stability and catalytic activity," TMS 2023 Annual Meeting & Exhibition (San Diego, CA. Date: March 19-23, 2023).
- C.I. Martínez-Cruz and O.A. Graeve, "Freeze casting of LaNbO_4 shape memory ceramics," TMS 2023 Annual Meeting & Exhibition (San Diego, CA. Date: March 19-23, 2023).
- A. Hiraes, V.R. Vasquez, and O.A. Graeve, "Advanced materials for neutron detection applications: Design and synthesis of alkaline-earth doped hexaborides," TMS 2023 Annual Meeting & Exhibition (San Diego, CA. Date: March 19-23, 2023).
- S. Estrada and O.A. Graeve, "Diseño de materiales para aplicaciones de ultra alta temperatura en el sector aeroespacial: control de la morfología del polvo en carburos," World Space Week 2022 (Tijuana, México. Date: October 7, 2022).
- V. Vakharia, L. Zhang, E. Rodas-Lima, C. Park, E. Torresani, E. Olevsky, and O.A. Graeve, "Processing of High Entropy Metal Carbides: A New Class of Ultrahigh Temperature, Irradiation Resistant Ceramics," Pan American Ceramics Congress and Ferroelectrics Meeting of Americas (Panama City, Panama. Date: July 25, 2022).
- O.A. Graeve, V. Vakharia, and L. Zhang, "Synthesis and Crystallography of High Entropy Metal Carbides: A New Class of Ultrahigh Temperature and Irradiation Resistant Ceramics," ECI Ultra-high Temperature Ceramics: Materials for Extreme Environment Applications V (Snowbird, UT. Date: June 5-8, 2022).
- J. Metera, A. Wilke, and O.A. Graeve, "Particle Formation Mechanism of Bismuth Ferrite Particles: Materials by Design for Antiferromagnetic and Ferroelectric Applications," American Chemical Society Spring 2022 (San Diego, CA. Date: March 20-24, 2022).
- F. Martínez, K. Juárez-Moreno, M. Herrera, and O.A. Graeve, "In vitro Pre-osteoblast Cell Differentiation by Luminescent Hydroxyapatite," TMS 2022 Annual Meeting & Exhibition (Anaheim, CA. Date: February 27-March 3, 2022).
- F.J. Suárez, R. Vázquez-Duhalt, and O.A. Graeve, "Immobilization of Laccase on CuO Nanoparticles: Stability, Catalytic Activity, and Cu Ion Exchange," TMS 2022 Annual Meeting & Exhibition (Anaheim, CA. Date: February 27-March 3, 2022).

- A. Hiraes and O.A. Graeve, "Crystal Structure of Alkaline-doped Calcium and Strontium Hexaborides," TMS 2022 Annual Meeting & Exhibition (Anaheim, CA. Date: February 27-March 3, 2022).
- V.S. Vakharia, L. Zhang, S. Sufy, and O.A. Graeve, "Solvothermal Synthesis of High Entropy Metal Carbides: A New Class of Ultrahigh Temperature, Irradiation Resistant Ceramics," 14th Pacific Rim Conference on Ceramic and Glass Technology," (Vancouver, Canada. Date: December 12-17, 2021).
- A. Hiraes and O.A. Graeve, "Analysis of Crystal Structure in Strontium and Calcium Hexaborides with Lithium Dopancies," Materials Science and Technology 2021 (Columbus, OH. Date: October 17-21, 2021).
- O.A. Graeve, E. Novitskaya, K. Karandikar, K. Cummings, M. Mecartney, "Hall-Petch Effect in Binary and Ternary Alumina / Zirconia / Spinel Composites," 1st Conference on FAST/SPS: From Research to Industry (Poznan, Poland. Date: October 25-26, 2021).
- E.M. Bullard, M. Abi Ghanem, A. Yazdani, F. Allein, I. Torres, T. Ren, O.A. Graeve, N. Boechler, and K. Roy, "Functional Consequences of Changing Shell Mineralogy in Response to Anthropogenic Climate Change in a Foundational Marine Bivalve," 2021 ESA Annual Meeting (Date: August 2-5, 2021).
- L. Trahan, G. Miranda, and O.A. Graeve, "Reflecting on 20 Years of Centralized Engineering Student Diversity Initiatives (Experience)," 2021 ASEE Annual Conference (Date: July 26-29, 2021).
- J.M. Metera and O.A. Graeve, "Morphologically Cubic BiFeO₃ for Improved Electrical Properties," EMA 2021 (Date: January 19-21, 2021).
- J.A. Hernández Marquez, F. Romo García, M. Herrera Zaldivar, O. Graeve, P.G. Mani González, "Analysis and Characterization of Al_xO_y Obtained Through Homemade Thermal-ALD and Plasma Enhanced-ALD," XIII International Conference on Surfaces, Materials and Vacuum (Date: October 19-22, 2020).
- M. Blair-Loy, V. Mayorova, R. Hegazy, O.A. Graeve, and P.C. Cosman, "Steering Women Out of Engineering: Gendered Occupational Recommendations from Career Assessment Tools," ASA 2020 Annual Meeting (San Francisco, CA. Date: August 8-11, 2020).
- A. Yazdani, D. Dewitt, W. Huang, G.W.H. Höhne, S.T. Misture, J.E. Garay, D. Kisailus, and O. Graeve, "Mechanical Deformation of Iron-based *In Situ* Metallic Glass Matrix Composites," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).
- N.F. Qari, A. Yazdani, D. Dewitt, J.E. Garay, and O. Graeve, "Corrosion Behavior of SAM2×5 Amorphous Steel / Crystalline *In Situ* Composite," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).
- C.I. Vargas-Consuelos, F. Monge, A. Yazdani, and O. Graeve, "A Differential Scanning Calorimetry Study of the Combustion Synthesis of Metal Hexaborides," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).
- J. Campbell, C. Ruestes, T. Pascal, and O. Graeve, "Molecular Dynamics Simulations of Iron-based Metallic Glasses During Spark Plasma Sintering," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).
- S. Choi and O. Graeve, "Fabrication of Uniform-sized Hemispherical Mesopores on Gold-coated Silver Nanocubes for Enzyme Immobilization," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).
- J. Metera and O. Graeve, "Cubic Sub-micron BiFeO₃ Powders for Improved Electrical Properties," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).
- R.E. Ridley, J.P. Kelly, H. Fathi-Kelly, and O. Graeve, "Modified Gouy-Chapman-Stern Model of the Aqueous Na-AOT Reverse Micelle Sub-structure with the Addition of Salts," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).

- R.E. Ridley, E. Alvarado, V.R. Vasquez, and O. Graeve, "Investigating Short-chain Alcohol Based Microemulsions as Viable Nanoparticle Synthesis Systems: Do Reverse Micelles Form in Ethanol/AOT/n-Heptane Systems?," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).
- F. Martinez, E. Novitskaya, M. Herrera, K. Juárez-Moreno, and O. Graeve, "Biocompatibility Study of Luminescent Hydroxyapatite," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).
- T. Ren, R. Tran, S. Lee, A. Bandera, M. Herrera, X.-G. Li, S. Ong, O. Graeve, "Morphological Control of Tantalum Carbide through Surface Doping," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).
- A. Yazdani, D. Dewitt, Z. Li, H. Quan, W. Huang, G.W.H. Höhne, S.T. Mixture, J.E. Garay, D. Kisailus, M.A. Meyers, and O.A. Graeve, "Structural Evolution and Mechanical Evaluation of In Situ Amorphous Steel Matrix Composites," 2019 MRS Fall Meeting & Exhibit (Boston, MA. Date: December 1-6, 2019).
- O.E. Jaime-Acuña, S.T. Mixture, D. Edwards, V.R. Vasquez, O. Raymond-Herrera, and O.A. Graeve, "Current Effects on Atomic Displacements and Phonon Dissipation in Hexaboride Materials: A Raman Spectroscopy Study," 2do Congreso Internacional de Ciencias de la Ingeniería y Tecnología (Tijuana, México. Date: September 25-27, 2019).
- R. Ridley, E. Alvarado, V.R. Vasquez, and O.A. Graeve, "Investigating Short-Chain Alcohol Based Microemulsions as Viable Nanoparticle Synthesis Systems: Do Reverse Micelles Form in Ethanol/AOT/n-Heptane Systems?," XXVIII International Materials Research Congress (Cancún, México. Date: August 18-23, 2019).
- E. Bullard, I. Torres, O.A. Graeve, and K. Roy, "Temporal Trends in Shell Calcification in Marine Bivalves: Paleontological Baselines for Understanding Species-Specific Responses in a Changing Ocean," 11th North American Paleontological Convention (Riverside, CA. Date: June 23-27, 2019).
- J. McKittrick, J. Ha, Z. Wang, W.B. Im, S.P. Ong, and O.A. Graeve, "Review of Phosphor Identification and Synthesis Methods," 12th International Conference on Ceramic Materials and Components for Energy and Environmental Applications (Suntec City, Singapore. Date: July 22-27, 2018).
- O.A. Graeve, "Design of Novel Corrosion Resistant Materials: An Emerging Technology for Extreme Environments," MegaRust 2018 (San Diego, CA. Date: May 22-24, 2018).
- F. Martinez-Pallares, M. Herrera, and O.A. Graeve, "In Vitro Studies of RE Doped Hydroxyapatite," IV Symposium of Nanoscience and Nanomaterials (Ensenada, México. Date: April 23-27, 2018).
- M. Sanchez and O.A. Graeve, "Synthesis of Cubic Microstructures of Perovskite Materials," IV Symposium of Nanoscience and Nanomaterials (Ensenada, México. Date: April 23-27, 2018).
- J. Ha, E. Novitskaya, G. Hirata, C. Zhou, R. Ridley, O.A. Graeve, Z. Wang, S.P. Ong, and J. McKittrick, "A Method to Improve Quantum Efficiency of Phosphors in the Submicron Size Regime Using a Flux for Solid State Lighting Applications," 233rd ECS Meeting (Seattle, WA. Date: May 13-17, 2018).
- J. McKittrick, J. Ha, Z. Wang, O. Graeve, and S.P. Ong, "Phosphor composition prediction and synthesis using a combined experimental and computational approach," 42nd International Conference and Expo on Advanced Ceramics and Composites (Daytona Beach, FL. Date: January 21-26, 2018).
- K.K. Ohtaki, K.K. Karandikar, O.A. Graeve, C. Trautmann, M. Tomut, M. Patel, and M.L. Mecartney, "Radiation Damage in a Multiphase Ceramic (YSZ, Al₂O₃ and MgAl₂O₄) Irradiated With 946 MeV Au Ions," 42nd International Conference and Expo on Advanced Ceramics and Composites (Daytona Beach, FL. Date: January 21-26, 2018).
- O.A. Graeve, "Engineering 101," Transfer Motivational Conference (La Jolla, CA. Date: September 30, 2017).

- O.A. Graeve, "Call to Action-Latino Faculty & Navigating the Faculty Application Process," SHPE Region 2 Leadership Development Conference (La Jolla, CA. Date: April 20-23, 2017).
- S. Seo and O.A. Graeve, "Synthesis and Interface Boundary Characteristics of Gold/Cobalt Janus Nanoparticles," 2017 TMS Annual Meeting & Exhibition (San Diego, CA. Date: February 26 - March 2, 2017).
- T. Ren and O.A. Graeve, "Tailored Carbide Powder Morphologies: Synthesis and Mechanisms of Formation," 2017 TMS Annual Meeting & Exhibition (San Diego, CA. Date: February 26 - March 2, 2017).
- S. Qiao, E. Novitskaya, F. Sanchez, R. Vazquez-Duhalt, and O.A. Graeve, "Thermal and Electrical Conductivities of Mesoporous Nanofluids and Applications for Enzyme Catalysis," 2017 TMS Annual Meeting & Exhibition (San Diego, CA. Date: February 26 - March 2, 2017).
- S. Choi, R. Vazquez-Duhalt, O.A. Graeve, "Fabrication of Mesoporous Gold-coated Polystyrene Particles for Enzyme Immobilization," 2017 TMS Annual Meeting & Exhibition (San Diego, CA. Date: February 26 - March 2, 2017).
- K.K. Karandikar, A.W. Travis, K. Ohtaki, M.M. McCartney, and O.A. Graeve, "Correlation Between Particle Size and Grain Size Distribution in Single/Multiphase Ceramic Oxide Surrogate Materials," 2017 TMS Annual Meeting & Exhibition (San Diego, CA. Date: February 26 - March 2, 2017).
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- K. Ohtaki, M. Patel, K. Karandikar, O.A. Graeve, M. Crespillo, Y. Zheng, and M.L. McCartney, "Radiation Damage in Multiphase Ceramics," Materials Science and Technology 2016 Conference & Exposition (Salt Lake City, UT. Date: October 23-27, 2016).
- T. Ren and O.A. Graeve, "Tailored Carbide Powder Morphologies: Synthesis and Mechanisms of Formation," Materials Science and Technology 2016 Conference & Exposition (Salt Lake City, UT. Date: October 23-27, 2016).

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- C. Ayala, M.B. Frank, L. Guibert, K. Karandikar, C.H. Liu, S.H. Siu, O.A. Graeve, and J.M. McKittrick, “Magnetic Freeze Casting with Surface Magnetized Hydroxyapatite for Bioinspired Bone Implants,” Biomedical Engineering Society Annual Meeting (Minneapolis, MI. Date: October 5-8, 2016).
- J. Ha, J.K. Han, C. Zhou, E. Novitskaya, G. Hirata, O.A. Graeve, and J. McKittrick, “Synthesis and Luminescent Characterization of Core-Shell Nanophosphors,” PRiME 2016, (Honolulu, HI. Date: October 2-7, 2016).
- V.R. Vasquez, K. Schmidt, O. Jaime, J.T. Cahill, D. Edwards, S.T. Mixture, and O.A. Graeve, “Studies of Hydrogen Interaction with Metal Hexaboride Surfaces: Insights from DFT, CPMD and Experimental Results,” XXV International Materials Research Congress (Cancún, México. Date: August 14-19, 2016).
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- R.E. Ridley, H. Fathi-Kelly, J.P. Kelly, V.R. Vasquez, and O.A. Graeve, “Structure and Stability of Reverse Micelles with Salt Additions: Experimental and Modeling Insights,” ACS 251st National Meeting (San Diego, CA. Date: March 13-17, 2016).
- J.T. Cahill, M. Alberga, S. Mixture, D. Edwards, V.R. Vasquez, and O.A. Graeve, “Phase Formation in Mixed Divalent Hexaborides,” ACS 251st National Meeting (San Diego, CA. Date: March 13-17, 2016).
- C.I. Vargas-Consuelos, M.A. Camacho-López, and O.A. Graeve, “Formation and Reaction Mechanisms of Molybdenum Complex Species in Acid Solutions as Precursors of Hexagonal Molybdenum Trioxide,” ACS 251st National Meeting (San Diego, CA. Date: March 13-17, 2016).
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- V.R. Vasquez, K.M. Schmidt, and O.A. Graeve, “Ca, Ba, and Sr Hexaborides Pair Potentials from DFT and MD,” XXIV International Materials Research Congress (Cancún, México. Date: August 16-20, 2015).
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- J.T. Cahill and O.A. Graeve, “Preparation of Hexaboride Nanocubes by Combustion Synthesis,” Jacobs Energy Forum (La Jolla, CA. Date: May 7, 2014).
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- O.A. Graeve, “How to Interview for a Research / Academic Position,” SHPE Region 2 Leadership Development Conference (La Jolla, CA. Date: April 19, 2014).

- J.A. Inzana, D. Olvera, S.M. Fuller, O.A. Graeve, E.M. Schwarz, S.L. Kates, and H.A. Awad, “Design and Characterization of 3D Printed Collagen-Calcium Phosphate Composites for Bone Defect Repair,” 60th Annual Meeting of the Orthopaedic Research Society (New Orleans, LA. Date: March 15-18, 2014).
- R. Navarro, V.R. Vasquez, and O.A. Graeve, “Molecular Dynamics Simulations of Reverse Micellar Solutions with Solvation Salts,” 3rd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 10-14, 2014).
- J.P. Kelly, H. Fathi-Kelly, L.E. Jones, and O.A. Graeve, “Bulk Iron-based Amorphous Alloys and Composites with Enhanced Density,” 3rd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 10-14, 2014).
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- S. Somov, S. Ghosh, O.A. Graeve, J.P. Kelly, and M. Alberga, “Novel Composite Interconnect for SOFC,” 37th International Conference and Expo on Advanced Ceramics and Composites (Daytona Beach, FL. Date: January 27-February 1, 2013).

- J.P. Kelly and O.A. Graeve, “Tantalum Carbide Nanocomposites: Spark Plasma Sintering Behavior and Microstructural Character with the Addition of ZrC and WC,” 37th Annual Conference on Composites, Materials, and Structures (Cocoa Beach, FL. Date: January 28-31, 2013).
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- O.A. Graeve, M.S. Saterlie, P.J. Colmenares, S.T. Misture, H. Fathi, and L.E. Jones, “Phase Stability and Boundary Structure of Unique Nanoparticle-Reinforced Iron-Based Amorphous Metal Composites: Processing and Modeling,” Materials Research Society Fall 2012 Meeting (Boston, MA. Date: November 25-30, 2012).
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- V.R. Vasquez, B. Williams, and O.A. Graeve, “Modeling of Ionic Solutions in the Reverse Micelle System AOT/Water/Isooctane using Molecular Dynamics,” Society of Hispanic Professional Engineers 2012 (Fort Worth, TX. Date: November 14-18, 2012).
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- D. Davies, J.P. Kelly, and O.A. Graeve, “Unique Preparation of Boron Nitride Materials for Ultra-high Hardness Applications,” Materials Science & Technology 2012 Conference & Exposition (Pittsburgh, PA. Date: October 7-11, 2012).
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- K. Scott, M. Saterlie, O.A. Graeve, S. Misture, and D. Edwards, “Layered Ceramics for High-temperature Thermoelectric Generators,” Materials Challenges in Alternative & Renewable Energy (MCARE) 2012 (Clearwater, FL. Date: February 26 – March 1, 2012).
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- O.A. Graeve, “Synthesis and Characterization of Y₂O₃:Yb,Tm Blue Nanophosphors,” XII International Materials Research Congress (Cancún, México. Date: August 18, 2003).

SEMINARS

- Preparatoria Federal Lázaro Cardenas (Tijuana, México. Date: March 19, 2025).
- Centro de Nanociencias y Nanotecnología-Universidad Nacional Autónoma de México (Ensenada, México. Date: February 19, 2025).
- General Atomics (La Jolla, CA. Date: August 15, 2024).
- Duke University (Date: June 27, 2024).
- Universidad de Guadalajara (Guadalajara, México. Date: November 10, 2023).
- Instituto Politécnico Nacional (México City, México. Date: October 27, 2023).
- Aerospace Corporation (El Segundo, CA. Date: November 30, 2022).
- Universidad Autónoma de Sinaloa (Los Mochis, México. Date: April 7, 2022).
- Technische Universiteit Eindhoven (Eindhoven, Netherlands. Date: March 17, 2022).

- Forschungszentrum Jülich (Jülich, Germany. Date: February 15, 2022).
- Carnegie Mellon University (Date: February 11, 2022).
- UC Space Sci-Tech Virtual Seminar (Date: October 19, 2021).
- MateriAlZ Virtual Seminar (Date: September 17, 2021).
- ASML Veldhoven (Date: June 30, 2021).
- San Diego Chamber of Commerce (San Diego, CA. Date: February 15, 2021).
- San Diego ASM (San Diego, CA. Date: February 11, 2021).
- NASA Glenn Research Center (Cleveland, OH. Date: January 28, 2021).
- Cornell University (Ithaca, NY. Date: December 4, 2020).
- Colegio Ibero (Tijuana, México. Date: October 30, 2020).
- Rancho del Rey Middle School (Chula Vista, CA. Date: October 21, 2020).
- Colegio La Paz (Tijuana, México. Date: February 7, 2020).
- Instituto México (Tijuana, México. Date: February 7, 2020).
- Mission Bay High School (San Diego, CA. Date: January 29, 2020).
- University of California, Santa Cruz (Santa Cruz, CA. Date: January 23, 2020).
- Universidad Autónoma de Ciudad Juárez (Cd. Juárez, México. Date: January 17, 2020).
- Universidad Politécnica de Sinaloa (Mazatlán, México. Date: January 16, 2020).
- University of California, Irvine (Irvine, CA. Date: November 14, 2019).
- San Diego State University (San Diego, CA. Date: October 24, 2019).
- Howard University (Washington, DC. Date: June 27, 2019).
- U.S. Naval Research Laboratory (Washington, DC. Date: June 26, 2019).
- Universidad Nacional Autónoma de México (Ensenada, México. Date: February 1, 2019).
- Colegio Ibero (Tijuana, México. Date: January 30, 2019).
- Instituto México (Tijuana, México. Date: January 15, 2019).
- Instituto Tecnológico y de Estudios Superiores de Monterrey (Monterrey, México. Date: March 2, 2018).
- Lawrence Livermore National Laboratory (Livermore, CA. Date: February 9, 2018).
- University of California, San Diego, Department of NanoEngineering (La Jolla, CA. Date: January 17, 2018).
- Instituto Tecnológico de Tijuana (Tijuana, México. Date: October 24, 2017).
- Universidad Autónoma de Baja California, Facultad de Pedagogía e Innovación Educativa (Mexicali, México. Date: September 29, 2017).
- Army Research Laboratory (Adelphi, MD. Date: September 20, 2017).
- Universidad Autónoma de Ciudad Juárez (Ciudad Juárez, México. Date: May 12, 2017).
- Universidad Tecnológica de Ciudad Juárez (Ciudad Juárez, México. Date: May 12, 2017).

- Universidad Tecnológica de Tijuana (Tijuana, México. Date: April 20, 2016).
- Universidad Autónoma de Baja California, Escuela de Ciencias de la Ingeniería y Tecnología (Tijuana, México. Date: April 20, 2016).
- Clemson University, Department of Materials Science and Engineering (Clemson, SC. Date: April 8, 2016).
- Universidad Nacional Autónoma de México, Centro de Nanociencia y Nanotecnología (Ensenada, México. Date: March 31, 2016).
- University of California, San Diego, Department of Mechanical and Aerospace Engineering (La Jolla, CA. Date: November 12, 2015).
- Skyworks Corp. (Mexicali, México. Date: July 24, 2015).
- Texas A&M University, Department of Chemistry (College Station, TX. Date: April 28, 2015).
- University of Nevada, Reno, Department of Chemical and Materials Engineering (Reno, NV. Date: April 13, 2015).
- Universidad Nacional Autónoma de México, Centro de Nanociencia y Nanotecnología (Ensenada, México. Date: March 24, 2015).
- University of California, San Diego, Department of Physics (La Jolla, CA. Date: November 26, 2014).
- Yeungnam University, School of Materials Science and Engineering (Gyeongsan, Korea. Date: November 12, 2014).
- University of Louisville, Department of Mechanical Engineering (Louisville, KY. Date: April 28, 2014).
- Universidad Autónoma de Baja California, Facultad de Ciencias Químicas (Tijuana, México. Date: February 27, 2014).
- University of California, Los Angeles, Department of Materials Science and Engineering (Los Angeles, CA. Date: February 21, 2014).
- Universidad Nacional Autónoma de México (Ensenada, México. Date: November 15, 2013).
- Universidad Autónoma de San Luis Potosí (San Luis Potosí, México. Date: September 4, 2013).
- Mexican Consulate in Sacramento (Sacramento, CA. Date: August 22, 2013).
- Air Force Research Laboratory (Dayton, OH. Date: March 14, 2013).
- University of Alabama, Department of Metallurgical and Materials Engineering (Tuscaloosa, AL. Date: March 12, 2013).
- Lawrence Livermore National Laboratory, National Ignition Facility (Livermore, CA. Date: February 25, 2013).
- Instituto Politécnico Nacional, Escuela Superior de Ingeniería Química e Industrias Extractivas (México DF. Date: February 18, 2013).
- University of Nevada, Las Vegas, Department of Mechanical Engineering (Las Vegas, NV. Date: February 7, 2013).
- McGill University, Department of Mining and Materials Engineering (Montreal, Canada. Date: September 28, 2012).
- Centro de Investigaciones en Optica, A.C. (León, México. Date: July 12, 2012).
- University of Nevada, Reno, Department of Chemical and Materials Engineering (Reno, NV. Date: June 1, 2012).

- University of California, Riverside, Department of Mechanical Engineering (Riverside, CA. Date: May 18, 2012).
- Universidad Nacional Autónoma de México, Centro de Nanociencia y Nanotecnología (Ensenada, México. Date: May 4, 2012).
- University of Wisconsin, Madison, Department of Materials Science and Engineering (Madison, WI. Date: April 20, 2012).
- University at Buffalo, Department of Chemistry (Buffalo, NY. Date: March 7, 2012).
- University of California, San Diego, Department of NanoEngineering (La Jolla, CA. Date: March 30, 2012).
- University of California, Davis, Department of Chemical Engineering and Materials Science (Davis, CA. Date: October 25, 2011).
- Universidad Autónoma de Chiapas, Laboratorio de Nuevos Materiales (Tuxtla Gutiérrez, México. Date: May 22, 2011).
- University of New Mexico, Department of Chemical and Nuclear Engineering (Albuquerque, NM. Date: May 3, 2011).
- Rutgers University, Department of Materials Science and Engineering (New Brunswick, NJ. Date: March 8, 2011).
- Georgia Institute of Technology, School of Materials Science and Engineering (Atlanta, GA. Date: February 14, 2011).
- University of Nevada–Reno, Department of Mechanical Engineering (Reno, NV. Date: February 4, 2011).
- Cornell University, Department of Mechanical and Aerospace Engineering (Ithaca, NY. Date: January 28, 2011).
- Columbia University, Department of Applied Physics and Applied Mathematics (New York, NY. Date: October 8, 2010).
- San Diego State University, College of Engineering (San Diego, CA. Date: September 24, 2010).
- University of Texas at San Antonio, Department of Physics and Astronomy (San Antonio, TX. Date: May 6, 2010).
- Rochester Institute of Technology, Department of Chemistry (Rochester, NY. Date: April 6, 2010).
- University of Southern California, Department of Mechanical and Aerospace Engineering (Los Angeles, CA. Date: March 10, 2010).
- Stony Brook University, Department of Materials Science and Engineering (Stony Brook, NY. Date: November 13, 2009).
- University of Rochester, Department of Chemical Engineering (Rochester, NY. Date: September 30, 2009).
- University of Arizona, Department of Materials Science and Engineering (Tucson, AZ. Date: March 23, 2009).
- Missouri University of Science and Technology, Department of Materials Science and Engineering (Rolla, MO. Date: January 28, 2009).
- Corning, Inc. (Corning, NY. Date: November 7, 2008).

- Universidad Nacional Autónoma de México, Instituto de Física Graduate Seminar (México, DF. Date: June 11, 2008).
- Clemson University, School of Materials Science and Engineering Graduate Seminar (Clemson, SC. Date: October 30, 2007).
- Universidad Politécnica de Catalunya, Department of Materials Science (Barcelona, Spain. Date: March 22, 2007).
- Universidad del País Vasco, Department of Inorganic Chemistry (Bilbao, Spain. Date: March 19, 2007).
- University of California–Riverside, Department of Mechanical Engineering (Riverside, CA. Date: October 6, 2006).
- University of California–Irvine, Department of Chemical Engineering and Materials Science (Irvine, CA. Date: November 4, 2005).
- Universidad Nacional Autónoma de México, Centro de Física Aplicada y Tecnología Avanzada (Querétaro, México. Date: January 21, 2005).
- Instituto Politécnico Nacional, Escuela Superior de Ingeniería Química é Industrias Extractivas (México, DF. Date: November 10, 2003).
- Universidad Nacional Autónoma de México, Instituto de Física (México, DF. Date: November 11, 2003).
- Universidad Nacional Autónoma de México, Centro de Ciencias de la Materia Condensada (Ensenada, México. Date: April 11, 2003).
- Instituto Tecnológico de Tijuana, Chemical Engineering Program (Tijuana, México. Date: October 11, 2002).

POSTERS

- S. Tamakloe, M. Barrera, R. Gomez, and O.A. Graeve, “Inorganic Phosphors for Enhanced LED Performance: A Case Study of $\text{Ca}_{4-0.05-x}\text{Sr}_x\text{Eu}_{0.05}\text{LaB}_3\text{O}_{10}$ ($x = 0, 0.5, \dots 2$),” ACS Spring 2025 (San Diego, CA. Date: March 23-27, 2025).
- V.H. Ramos Sanchez, K.I. Mora-Dominguez, C.I. Vargas Consuelos, O.A. Graeve, J.M. Salinas Gutierrez, V.H. Collins Martinez, “Comparing synthetic methods for ceria-based materials for solar fuel production,” 24th World Hydrogen Energy Conference (Cancún, México. Date: June 23-27, 2024).
- K.I. Carrera Gutiérrez, O. Graeve, M. Herrera Zaldivar, “Magnetic and Luminescent Nano-hydroxyapatite Doped with Cr^{3+} ,” 31st International Materials Research Congress (Cancún, México. Date: August 13-18, 2023).
- I. Tomac, W. Ma, O.A. Graeve, K. Velázquez Ibarra, J.C. Miranda Martínez, M.F. Suárez Naves, T.A. Rivera Meza, “Assessment of Polycyclic Aromatic Hydrocarbons (PAHs) Content in Post-wildfire Soil and Risk to Human Health,” AGU Fall Meeting (Chicago, IL. Date: December 12-16, 2022).
- J.A. Mendoza-Espinoza, O.Y. Alcántar-Ramírez, M.C. Fragoso-Serrano, L.J. Pérez-Flores, and O.A. Graeve, “Synthesis and Characterization of Conjugated Gold Nanoparticles Using *Annona squamosa* L. and *Crhsophyllum*,” XXX International Materials Research Congress (Cancún, México. Date: August 14-19, 2022).
- M. Sanchez, K.A. Acord, O.A. Graeve, and L. Rueschhoff, “Oxidation of TaC-HfC Blends Densified by SPS,” Solid State Studies in Ceramics Gordon Research Conference (South Hadley, MA. Date: August 7-12, 2022).

- M. Sanchez, K.A. Acord, O.A. Graeve, and L. Rueschhoff, "Oxidation of TaC-HfC Blends Densified by SPS," ECI Ultra-high Temperature Ceramics: Materials for Extreme Environment Applications V (Snowbird, UT. Date: June 5-8, 2022).
- H. Hosseini-Toudeshki, S. Herrera, D. Kisailus, and O. Graeve, "Pseudoelastic Response and Shape Memory Behavior in Ceramic Materials," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).
- M. Sanchez and O. Graeve, "Ordered Arrangements of BaTiO₃ Powders of Cubic Morphologies," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).
- V. Vakharia and O. Graeve, "Synthesis of High Entropy Metal Carbides by a Solvothermal Process," TMS 149th Annual Meeting & Exhibition (San Diego, CA. Date: February 23-27, 2020).
- E.M. Bullard, I. Torres, T. Ren, G. Kwan, O.A. Graeve, M. Tresguerres, and K. Roy, "Temporal Trends in Shell Calcification of a Foundational Bivalve: Combining Baselines and Short-term Experiments to Understand Species' Responses in a Changing Ocean," Ocean Sciences Meeting 2020 (San Diego, CA. Date: February 16-21, 2020).
- E. Gaona-Carranza, K. Juárez-Moreno, F. Martínez-Pallares, and O.A. Graeve, "Biocompatibility In Vitro Evaluation of Europium-doped Nanohydroxyapatite Scaffolds," International Conference on Nanotechnology Tec.Nano 2018 (Monterrey, México. Date: November 28-30, 2018).
- O.E. Jaime-Acuña, C.I. Vargas-Consuelos, J. Gild, J. Luo, S.T. Mixture, D. Edwards, V.R. Vasquez, O. Raymond-Herrera, and O.A. Graeve, "Current Effects on Atomic Displacements and Phonon Dissipation in Hexaboride Materials: A Raman Spectroscopy Study, XI International Conference on Surfaces, Materials and Vacuum (Riviera Maya, México. Date: September 24-28, 2018).
- J. Campbell and O.A. Graeve, "Diffusion Studies of Structurally Amorphous Metal Foils Using Molecular Dynamics Simulation," LAMMPS Workshop and Symposium (Albuquerque, NM. Date: August 1-3, 2017).
- F.Y. Su, P. Shyu, Y.T. Tracy Ling, E. Novitskaya, K. Seo, S. Lambert, K. Zarate, O.A. Graeve, I. Jasiuk, and J. McKittrick, "Comparison of Deproteinization Methods for Porcine Femur Cortical Bone," 2017 TMS Annual Meeting & Exhibition (San Diego, CA. Date: February 26 - March 2, 2017).
- M.B. Frank, C. Ayala, L. Guibert, K. Karandikar, C.-H. Liu, S.H. Siu, O.A. Graeve, and J.M. McKittrick, "Surface Magnetized Hydroxyapatite for Multi-axis Strengthened Bone Implants with Magnetic Freeze Casting," 2017 TMS Annual Meeting & Exhibition (San Diego, CA. Date: February 26 - March 2, 2017).
- S. Choi and O.A. Graeve, "Fabrication of Mesoporous Gold-coated Polystyrene Particles for Enzyme Immobilization," ACS 251st National Meeting (San Diego, CA. Date: March 13-17, 2016).
- F. Su, E.A. Bushong, T.J. Deerinck, K. Seo, S. Herrera, O.A. Graeve, D. Kisailus, V. Lubarda, and J.M. McKittrick, "Spines of the Porcupine Fish: Structure, Composition, and Mechanical Properties," 6th International Conference on Mechanics of Biomaterials and Tissues (Waikoloa, HI. Date: December 6-10, 2015).
- D. Rubio Saavedra, O. Graeve, A. López Suárez, J.A. Chavez-Carvayar, E. Luna Martínez, and S.A. Gamboa, "Synthesis and Characterization of Hexaborides Activated with Nanoparticles for Storing Hydrogen Electrochemically," XXIV International Materials Research Congress (Cancún, México. Date: August 16-20, 2015).
- L.A. Zavala Sánchez, M. Herrera Zaldivar, and O.A. Graeve, "Cathodoluminescence as a Technique for the Determination of Dopant Distribution in Europium-doped Hydroxyapatite," 2015 MRS Spring Meeting & Exhibit (San Francisco, CA. Date: April 6-10, 2015).

- K. Phillips, A. Travis, K. Karandikar, O.A. Graeve, and M. Mecartney, "Multiphase Ceramics for Enhanced Mechanical Properties of Nuclear Fuel," Materials Science and Technology 2014 Conference & Exposition (Pittsburgh, PA. Date: October 12-16, 2014).
- G. Rojas-George, O.A. Graeve, L. Fuentes, and A. Rejes-Rojas, "Rhombohedral Degree of Distortion and Magnetic Properties of Ba-doped BiFeO₃," XXIII International Materials Research Congress (Cancún, México. Date: August 17-21, 2014).
- T.Q. Phan, J.P. Kelly, A.M. Hodge, O.A. Graeve, V.E. Eliasson, and M.E. Kassner, "Micromechanical Behavior of Fe-Based Amorphous Alloys," DTRA 2014 Basic Research Technical Review (Springfield, VA. Date: July 28, 2014).
- J.P. Kelly and O.A. Graeve, "Spark Plasma Sintering of Structurally Amorphous Metals: Critical Parameters and Compositing Effects," DTRA 2014 Basic Research Technical Review (Springfield, VA. Date: July 28, 2014).
- K. Phillips, K. Karandikar, A. Travis, O. Graeve, M. Mecartney, "Challenges in the Synthesis of Nanocrystalline, Multiphase Ceramics for Inert Matrix Nuclear Fuel," Gordon Research Conference Solid State Studies in Ceramics (South Hadley, MA. Date: July 20-25, 2014).
- T. Ren and O.A. Graeve, "Solvothermal Process for the Preparation of Doped Ultra-high Temperature Carbide Ceramics," 3rd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 10-14, 2014).
- S. Qiao and O.A. Graeve, "Synthesis of Magnesium Powders of Unique Morphologies," 3rd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 10-14, 2014).
- S. Choi, R. Vazquez-Duhalt, and O.A. Graeve, "Fabrication of Mono-sized Hemispherical Mesopores on Gold-coated Polystyrene Particle Surfaces," 3rd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 10-14, 2014).
- L. Zavala, M. Herrera Zaldivar, G. Hirata Flores, and O.A. Graeve, "Synthesis and Determination of Luminescent Properties of Doped Hydroxyapatites," 3rd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 10-14, 2014).
- K. Seo and O.A. Graeve, "Morphological Characteristics of Gold/Cobalt Janus Nanoparticles Prepared Using Various Substrates," 3rd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 10-14, 2014).
- K. Karandikar and O.A. Graeve, "Analysis of Grain Size and Particle Size in Ceramic Powders," 3rd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 10-14, 2014).
- J.T. Cahill and O.A. Graeve, "Preparation of Hexaboride Nanocubes for Hydrogen Storage Applications," 3rd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 10-14, 2014).
- H. Fathi-Kelly, J.P. Kelly, and O.A. Graeve, "Fundamental Analysis of Reverse Micelle Stability for Controlled Synthesis of Nanoparticles," 3rd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 10-14, 2014).
- B. Zhang and O.A. Graeve, "Devitrification Behavior of Amorphous Metal Foils During Spark Plasma Sintering," 3rd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 10-14, 2014).
- J.A. Inzana, D. Olvera, S. Fuller, O.A. Graeve, E.M. Schwarz, S.L. Kates, and H.A. Awad, "Design & Characterization of 3D Printed Collagen-Calcium Phosphate Composites for Bone Defect Repair," TERMIS-AM 2013 Annual Conference and Exposition (Atlanta, GA. Date: November 10-13, 2013).

- J.A. Inzana, D. Olvera, S. Fuller, O.A. Graeve, E.M. Schwarz, S.L. Kates, and H.A. Awad, "Characterization of 3D Printed Collagen-Calcium Phosphate Composites for Bone Defect Repair," 8th Combined Meeting of Orthopaedic Research Societies (Venice, Italy. Date: October 13-16, 2013).
- M. Alberga, T. Jin, O.A. Graeve, S. Misture and D. Edwards, "Thermoelectric Properties of Beta-Gallia Rutile Intergrowths," Materials Research Society Fall 2012 Meeting (Boston, MA. Date: November 25-30, 2012).
- M. Alberga, S. Somov, S. Ghosh, J.P. Kelly, and O.A. Graeve, "Novel Composite Interconnect for SOFC," 14th Energy Storage Technology Conference (Rochester, NY. Date: November 14, 2012).
- K. Hadidi, M. Redjdal, E.H. Jordan, O.A. Graeve, and C.M. Brunet, "Uniform Melt State Process (UniMelt™) for the Production of Metastable Nanomaterials," Materials Science & Technology 2012 Conference & Exposition (Pittsburgh, PA. Date: October 7-11, 2012).
- A.D. Lujan, S.D.D.L. Torre, and O.A. Graeve, "Hydroxyapatite Powder Synthesis Prepared by Hydrothermal Method and Consolidation by Spark Plasma Sintering (SPS)," XXI International Materials Research Congress (Cancún, México. Date: August 13-16, 2012).
- H. Fathi, L.E. Jones, and O.A. Graeve, "Modeling and Design of Fe-Based Alloys with Higher Tungsten Content," DTRA 2012 Basic Research Technical Review (Springfield, VA. Date: July 25, 2012).
- M.S. Saterlie, S. Haghighat, A.M. Hodge, and O.A. Graeve, "Processing and Characterization of Iron-Based Amorphous Alloys with Tungsten Nanoparticles," DTRA 2012 Basic Research Technical Review (Springfield, VA. Date: July 25, 2012).
- S. Somov, S. Ghosh, M. Alberga, J.P. Kelly, and O.A. Graeve, "Composite Ceramic Materials for SOFC Components," 4th International Congress on Ceramics (Chicago, IL. Date: July 15-19, 2012).
- M. Alberga, J.P. Kelly, and O.A. Graeve, "Combustion Synthesis of Niobium Doped Titania Powders for Solid Oxide Fuel Cell Interconnect Technology," Discovery: An Undergraduate Showcase (Albany, NY. Date: February 29, 2012).
- J.P. Kelly, M. Alberga, K. Noll, and O.A. Graeve, "Controlled Synthesis of Semiconductor Materials for Energy Applications *via* Combustion and Precipitation Syntheses," Advanced Energy 2011 (Buffalo, NY. Date: October 12-13, 2011).
- O.A. Graeve, "CAREER: Scaled-Up Manufacturing of Nanostructured Refractory Ceramics for High-Temperature Applications," National Science Foundation CMMI Grantees Conference (Atlanta, GA. Date: January 11-14, 2011).
- J.P. Kelly, B.M. Clark, and O.A. Graeve, "Exploring the Preparation of Nanostructured Carbide, Boride, and Nitride Ceramic Powders Using Scalable Solvothermal Reactions," 3rd International Congress on Ceramics (Osaka, Japan. Date: November 16, 2010).
- B. Higgins, D. Edwards, and O.A. Graeve, "Processing of Nano-sized $\text{Al}_2(\text{WO}_3)_4$ for Electrical Characterization Studies," Materials Science & Technology 2010 Conference & Exposition (Houston, TX. Date: October 19, 2010).
- O.A. Graeve, R. Kanakala, and G. Rojas-George, "Unique Preparation of Hexaboride Nanocubes for Hydrogen Storage Applications," 11th International Conference on Advanced Materials (Rio de Janeiro, Brazil. Date: September 21, 2009).
- O.A. Graeve, "CAREER: Scaled-Up Manufacturing of Nanostructured Refractory Ceramics for High-Temperature Applications," National Science Foundation CMMI Grantees Conference (Honolulu, HI. Date: July 20-23, 2009).
- R. Kanakala, G. Rojas-George, and O.A. Graeve, "Novel Synthesis of Nanostructured LaB_6 Powders for Hydrogen Storage Applications," US-China Workshop on Nanostructured Materials for Global Energy and Environmental Challenges (Evanston, IL. Date: September 22-24, 2008).

- J. Ruppert and O.A. Graeve, "Development of Mesoporous Scandia-Stabilized Zirconia Powders for Solid-Oxide Fuel Cell Applications," International Conference on Electronic Materials 2008 (Sydney, Australia. Date: July 28 – August 1, 2008).
- S.H. Gleixner, E. Douglas, and O. Graeve, "Engineering Project Laboratory Modules for an Introduction to Materials Course," 2008 ASEE Annual Conference & Exposition (Pittsburgh, PA. Date: June 22-25, 2008).
- O.A. Graeve, R. Kanakala, and G. Rojas-George, "Synthesis of Nanostructured LaB₆ Powders for Micro- and Nanosatellite Propulsion Applications," 2008 NanoMaterials for Defense Conference (Arlington, VA. Date: April 21-24, 2008).
- O.A. Graeve, "CAREER: Scaled-Up Manufacturing of Nanostructured Refractory Ceramics for High-Temperature Applications," National Science Foundation CMMI Grantees Conference (Knoxville, TN. Date: January 7-10, 2008).
- V.R. Vasquez, A. Gardner, and O.A. Graeve, "Use of Reverse Micellar Systems for ZrO₂ Nanoparticles Synthesis: Dynamic and Equilibrium Studies of the Reverse Micelle Structures Using Molecular Dynamics," Eleventh International Conference on Properties and Phase Equilibria for Product and Process Design (PPEPPD 2007) (Crete, Greece. Date: May 20-25, 2007).
- S.H. Gleixner, E. Douglas, and O. Graeve, "PRIME Modules: Teaching Introduction to Materials Engineering in the Context of Modern Technologies," 2007 ASEE Annual Conference & Exposition (Honolulu, HI. Date: June 25, 2007).
- S.H. Gleixner, E. Douglas, and O. Graeve, "Project-Based Introductory to Materials Engineering Modules on Biomaterials, Solid Oxide Fuel Cells, Non-Volatile Memory, and Fiber Reinforced Plastics," 2006 ASEE Annual Conference & Exposition (Chicago, IL. Date: June 18-21, 2006).
- H. Singh and O.A. Graeve, "Synthesis and Consolidation of Zirconia Nanopowders by the Use of Reverse Micelles," Materials Research Society 2005 Spring Meeting (San Francisco, CA. Date: March 30, 2005).
- E. Lopez, J. Corral, R. Vasquez, O. Rebolledo, O.A. Graeve, and D. Brown, "Analysis of Infrared Spectra of Ethanol and Diethyl Ether Trapped in Ytria Powders Doped with Rare Earth Ions," American Chemical Society Annual Meeting (San Diego, CA. Date: March 14, 2005).
- S.H. Gleixner, E. Douglas, O. Graeve, H. Lackritz, L. Demsetz, and A. Moll, "Development of Project-Based Introductory to Materials Engineering Modules," 2005 ASEE Annual Conference & Exposition (Portland, OR. Date: June 12-15, 2005).

STUDENT PRESENTATIONS and COMPETITIONS

ORAL PRESENTATIONS

- L. Vazquez, F. Martinez-Pallares, and O.A. Graeve, "Europium-doped hydroxyapatite for bone healing applications," 36th Annual Undergraduate Research Conference (La Jolla, CA. Date: April 22, 2023).
- R. Gomez, S. Tamakloe, and O.A. Graeve, "Combustion Synthesis of Eu-doped Ca_(4-x)(Sr,Ba)_xLaB₃O₁₀ Oxyborate Phosphor," The 35th Undergraduate Research Conference (La Jolla, CA. Date: May 14, 2022).
- A. Wilke, J. Metera, and O.A. Graeve, "Bismuth Ferrite Particle Formation Mechanism Using Advanced Morphology Control," The 35th Undergraduate Research Conference (La Jolla, CA. Date: May 14, 2022).
- G. Ontiveros Cortés, K. Zhao, A. Hirales Ahuatzin, E. Novitskaya, and O.A. Graeve, "Thermal Conductivity of Water-based Alumina Nanofluids," UC San Diego's Summer Research Conference (La Jolla, CA. Date: August 12-13, 2021).

- F. Monge, C.I. Vargas-Consuelos, and O.A. Graeve, "A Salt-Assisted Solution Combustion Synthesis of Lanthanum Hexaboride Powders of Cubic Morphologies," 32nd Annual UC San Diego Undergraduate Research Conference (La Jolla, CA. Date: May 18, 2019).
- N. Lam, E. Novitskaya, and O.A. Graeve, "Fine Tuning Light Emission of Doped ZnO," 32nd Annual UC San Diego Undergraduate Research Conference (La Jolla, CA. Date: May 18, 2019).
- C. Bagon, A. Yazdani, and O.A. Graeve, "Experimental Investigation on the Thermal Conductivity of Stabilized Al₂O₃-Water Nanofluids," 32nd Annual UC San Diego Undergraduate Research Conference (La Jolla, CA. Date: May 18, 2019).
- E. Alvarado, R.E. Ridley, V.R. Vasquez, and O.A. Graeve, "Reverse Micelle Formation in AOT/etOH/n-heptane System," UC San Diego Undergraduate Research Conference (La Jolla, CA. Date: August 16-17, 2018).
- F. Monge, I. Vargas, and O.A. Graeve, "A Solution Chemistry Process for the Synthesis of Metal Hexaboride Powders of Unique Morphologies," UC San Diego Undergraduate Research Conference (La Jolla, CA. Date: August 16-17, 2018).
- C.N. Guzman, F. Martinez-Pallarez, and O.A. Graeve, "Thermal Stability and Luminescent Properties of Rare Earth-doped Hydroxyapatite," UC San Diego Undergraduate Research Conference (La Jolla, CA. Date: August 16-17, 2018).
- R.D. Ramírez, I. Muñoz, C.I. Vargas-Consuelos, F. Monge, and O.A. Graeve, "Combustion Synthesis of Unique Hexaboride Powders of Cubic Morphologies," ENLACE 2018 Closing Ceremony and Symposium (La Jolla, CA. Date: August 10, 2018).
- F. Monge, I. Vargas, and O.A. Graeve, "A Solution Chemistry Process for the Synthesis of Calcium Hexaboride Powders of Unique Morphologies," UC San Diego Undergraduate Research Conference (La Jolla, CA. Date: May 5, 2018).
- D. Miranda, C.I. Vargas-Consuelos, and O.A. Graeve, "Lanthanum Hexaboride Conducting Wire," 2016 Summer Research Conference (La Jolla, CA. Date: August 11, 2016).
- V. Vakharia, E. Novitskaya, A. Sapre, R. Mukthavaram, M. Makale, and O.A. Graeve, "Size Optimization of YAG:Pr Nanoparticles for Biomedical Applications," 2016 UC San Diego Undergraduate Research Conference (La Jolla, CA. Date: April 23, 2016).
- A. Cota, E. Novitskaya, A. Sapre, R. Mukthavaram, M. Makale, and O.A. Graeve, "Size Optimization of YAG:Pr Nanoparticles Produced by Sol-gel Synthesis for Biomedical Applications," 2015 UCSD Summer Research Conference (La Jolla, CA. Date: August 13, 2015).
- L. Lopez, S. Qiao, and O.A. Graeve, "Soft Template Synthesis of Mesoporous Niobium Doped TiO₂," 2015 UCSD Summer Research Conference (La Jolla, CA. Date: August 13, 2015).
- R. Pena and O.A. Graeve, "Al₂O₃ and Al Nanofluid Characterization for Heat Transfer Applications," 28th Annual Undergraduate Research Conference (La Jolla, CA. Date: April 25, 2015).
- J.A. Bahena, J.T. Cahill, and O.A. Graeve, "Preparation of Hexaboride Nanocubes for Hydrogen Storage Applications," Society of Hispanic Professional Engineers 2014 (Detroit, MI. Date: November 5-9, 2014).
- C.J. Villa, K. Seo, and O.A. Graeve, "Phase Stability and Morphology of LaNbO₄ Nanopowders: A Combustion Synthesis Study," Society of Hispanic Professional Engineers 2014 (Detroit, MI. Date: November 5-9, 2014).
- G. Pena, S. Qiao, and O.A. Graeve, "Synthesis of Titanium Powders with Unique Morphologies," 2014 UCSD Summer Research Conference (La Jolla, CA. Date: August 14, 2014).

- C. Villa, K. Seo, and O.A. Graeve, "Phase Stability and Morphology of LaNbO_4 Nanopowders: A Combustion Synthesis Study," 2014 UCSD Summer Research Conference (La Jolla, CA. Date: August 14, 2014).
- J. Bahena, J.T. Cahill, and O.A. Graeve, "Preparation of Hexaboride Nanocubes by Combustion Synthesis," 2014 UCSD Summer Research Conference (La Jolla, CA. Date: August 14, 2014).
- J.T. Cahill and O.A. Graeve, "Preparation of Hexaboride Nanocubes for Hydrogen Storage Applications," Jacobs Energy Forum (La Jolla, CA. Date: May 7, 2014).
- J.A. Bahena, J.T. Cahill, and O.A. Graeve, "Carbon Steel Bonded Tungsten Carbide: Milling and Spark Plasma Sintering," UCSD Undergraduate Research Conference (La Jolla, CA. Date: April 26, 2014).
- C.J. Villa, K. Seo, and O.A. Graeve, "Phase Stability and Morphology of LaNbO_4 Nanopowders: A Combustion Synthesis Study," UCSD Undergraduate Research Conference (La Jolla, CA. Date: April 26, 2014).
- R.M. Pena, J.P. Kelly, and O.A. Graeve, "Alumina Nanofluid Characterization for Heat Transfer Applications: A Dynamic Light Scattering Study," Society of Hispanic Professional Engineers 2013 (Indianapolis, IN. Date: October 30 – November 3, 2013). **Ms. Pena won fourth place.**
- J.A. Bahena, J.P. Kelly, M. McKee, Y. Liu, and O.A. Graeve, "Carbon Steel Bonded Tungsten Carbide: Milling and Spark Plasma Sintering," Society of Hispanic Professional Engineers 2013 (Indianapolis, IN. Date: October 30 – November 3, 2013).
- C.J. Villa, K. Seo, and O.A. Graeve, "Phase Stability and Morphology of LaNbO_3 Nanopowders: A Combustion Synthesis Study," Society of Hispanic Professional Engineers 2013 (Indianapolis, IN. Date: October 30 – November 3, 2013).
- P.J. Colmenares, M.S. Saterlie, and O.A. Graeve, "Consolidation and Devitrification Behavior of Iron-based Alloys for Ballistic Applications," Society of Hispanic Professional Engineers 2012 (Fort Worth, TX. Date: November 14-17, 2012).
- S. Escalante, C. Brunet, and O.A. Graeve, "Precipitation Synthesis of Nanocrystalline MgO Powders," Society of Hispanic Professional Engineers 2010 (Cincinnati, Ohio. Date: October 28, 2010).
- O.A. Graeve and K. Sinha, "Dynamic Light Scattering Study of Reverse Micellar Solutions for the Synthesis of Magnetic Nanoparticles," Annual GSA Research Meeting of the University of Nevada – Reno 2008 (Reno, NV. Date: April 18, 2008). **Mr. Sinha won third place and \$300 scholarship.**
- B. Pearson, O.A. Graeve, and J. Tinsley, "Synthesis and Densification of $\text{Lu}_2\text{SiO}_5\text{:Ce}$ for Gamma-Ray Detection Applications," Society of Hispanic Professional Engineers 2007 (Philadelphia, Pennsylvania. Date: November 2, 2007).
- B. Williams, A. Clifton, and O.A. Graeve, "Reverse Micelle Synthesis and Characterization of Yttria-Stabilized Zirconia Nanoparticles," Society of Hispanic Professional Engineers 2007 (Philadelphia, Pennsylvania. Date: November 1, 2007).
- R. Kanakala, O.A. Graeve, L. Kaufman, B. Pearson, K. Sinha, and J.C. Farmer, "Characterization of Consolidated Iron-Based Structural Amorphous Metals (SAM7) with Y_2O_3 Nanoparticle Additions," Society of Hispanic Professional Engineers 2007 (Philadelphia, Pennsylvania. Date: November 2, 2007).
- K. Sinha, B. Pearson, S.R. Casolco, J.E. Garay, and O.A. Graeve, "Synthesis and Consolidation of $\text{Ba}_{(1-x)}\text{Eu}_x\text{Al}_2\text{Si}_2\text{O}_8$: Development of an Integrated Process for Luminescent Smart Ceramic Materials," Society of Hispanic Professional Engineers 2007 (Philadelphia, Pennsylvania. Date: November 2, 2007).
- G. Rojas-George, B. Williams, D. Peterson, K. Hernandez, and O.A. Graeve, "Reverse Micelle Synthesis and Characterization of $\text{Y}_2\text{O}_3\text{:Tm,Yb}$ Nanocrystalline Powders," Society of Hispanic Professional Engineers 2007 (Philadelphia, Pennsylvania. Date: November 1, 2007). **Ms. Hernandez won third place and a \$500 scholarship.**

- B. Pearson, O.A. Graeve, and L. Murillo, "Sintered Optical Materials for Shock Physics Applications," Society of Hispanic Professional Engineers 2007 (Philadelphia, Pennsylvania. Date: November 1, 2007).
- B. Williams, G. Rojas-George, and O.A. Graeve, "Synthesis and Characterization of $Y_2O_3:Eu$ Nanocrystalline Powders," National Technical and Career Conference 2007 (Denver, CO. Date: January 11, 2007). **Mr. Williams won first place and a \$1,000 scholarship.**
- K. Hernández, B. Pearson, K. Sinha, and O.A. Graeve, "Synthesis and Characterization of Luminescent Barium Aluminum Silicate Powders," National Technical and Career Conference 2007 (Denver, CO. Date: January 11, 2007).
- K. Sinha and O.A. Graeve, "Development of Smart Magnetic Fluids for Nano/Micro Applications," National Technical and Career Conference 2007 (Denver, CO. Date: January 12, 2007). **Mr. Sinha won second place and a \$750 scholarship.**
- K. Sinha and O.A. Graeve, "Synthesis of Iron Oxide Nanoparticles for Biomedical Applications," Society of Hispanic Professional Engineers 2005 National Technical and Career Conference (Dallas, TX. Date: January 6, 2005).
- J.O. Corral and O.A. Graeve, "Preparation of Rare-Earth Doped Y_2O_3 Luminescent Ceramics by the Use of Reverse Micelles," Society of Hispanic Professional Engineers 2005 National Technical and Career Conference (Dallas, TX. Date: January 6, 2005).
- J.O. Corral and O.A. Graeve, "Preparation of Rare-Earth (Eu^{3+} , Tm^{3+} , Yb^{3+} and Tb^{3+}) Doped Y_2O_3 Luminescent Ceramics," MAES (Mexican American Engineers and Scientists Society) Symposium (Austin, TX. Date: October 28, 2004). **Ms. Corral won second place and a \$2,000 scholarship.**
- J.O. Corral and O.A. Graeve, "Synthesis of Ti_3SiC_2 Nanocrystalline Ductile Ceramic by High Energy Ball Milling," Society of Hispanic Professional Engineers 2004 National Technical and Career Conference (Chicago, IL. Date: January 8, 2004).
- J.O. Corral and O.A. Graeve, "Synthesis of a Ductile Ti_3SiC_2 Ceramic by High-Energy Ball Milling," Mexican American Engineers and Scientists Society Symposium (Phoenix, AZ. Date: October 30, 2003). **Ms. Corral won second place and a \$2,000 scholarship.**

POSTERS

- C.I. Martinez-Cruz and O.A. Graeve, "LaNbO₄-V₂O₅ phase stability," Research Expo 2024 (La Jolla, CA. Date: April 17, 2024).
- V.S. Vakharia, O. Perez, C. Kim, J. Liu, L. Zhang, E. Rodas-Lima, C. Park, E. Torresani, E. Olevsky, and O.A. Graeve, "Processing of High Entropy Metal Carbides: A New Class of Ultrahigh Temperature, Irradiation Resistant Ceramics," Research Expo 2023 (La Jolla, CA. Date: April 26, 2023).
- S. Ortega, M. Callahan, and O.A. Graeve, "Effects of Metal Dopants on Morphology of TaC Nanoparticles," Research Expo 2023 (La Jolla, CA. Date: April 26, 2023).
- S. Estrada, R. Chavez, and O.A. Graeve, "Morphology Control of Doped Hafnium Carbide Powders," Research Expo 2023 (La Jolla, CA. Date: April 26, 2023).
- J. Metera, A. Wilke, and O.A. Graeve, "Novel Method of BiFeO₃ Purification by Acid Washing Through Timed and Concentration ICP-MS Studies," Research Expo 2023 (La Jolla, CA. Date: April 26, 2023).
- F.J. Suarez, R. Vazquez-Duhalt, and O.A. Graeve, "Immobilization of Laccases on CuO and ZnO Nanoparticles: Catalytic Properties and Activity Recovery," Research Expo 2023 (La Jolla, CA. Date: April 26, 2023).
- C.I. Martinez-Cruz and O.A. Graeve, "Freeze Casting of LaNbO₄ Bulk Shape Memory Ceramics," Research Expo 2023 (La Jolla, CA. Date: April 26, 2023).

- A. Hiraes, V.R. Vasquez, and O.A. Graeve, “Advanced Materials for Neutron Detection Applications: Design and Synthesis of Alkaline-Earth Doped Hexaborides,” Research Expo 2023 (La Jolla, CA. Date: April 26, 2023).
- J. Metera, A. Wilke, and O.A. Graeve, “Particle Formation Mechanism of Bismuth Ferrite: Materials by Design for Antiferromagnetic and Ferroelectric Applications,” Research Expo 2022 (La Jolla, CA. Date: April 14, 2022).
- A. Hiraes, V.R. Vasquez, and O.A. Graeve, “Structural and Compositional Analysis of Calcium and Strontium Hexaborides With Lithium Addition,” Research Expo 2022 (La Jolla, CA. Date: April 14, 2022).
- F. Martinez, K. Juárez-Moreno, M. Herrera, and O.A. Graeve, “*In Vitro* Osteoblast Cell Differentiation by Rare-Earth Doped Hydroxyapatite,” Research Expo 2022 (La Jolla, CA. Date: April 14, 2022).
- S. Ortega, J. Dong, J. Doan, K. Siraj, and O.A. Graeve, “Tailored Morphology of TaC Nanoparticles by Introduction of Transition Metal Dopants,” Research Expo 2022 (La Jolla, CA. Date: April 14, 2022).
- F.J. Suarez, S. Ojeda-Santillán, R. Vazquez-Duhalt, and O.A. Graeve, “Immobilization and Catalytic Properties of Laccase on CuO Nanoparticles,” Research Expo 2022 (La Jolla, CA. Date: April 14, 2022).
- S. Estrada, R. Chavez, and O.A. Graeve, “Morphology Control of Doped Hafnium Carbide Powders,” Research Expo 2022 (La Jolla, CA. Date: April 14, 2022).
- G. Ontiveros Cortes, K. Zhao, A. Hiraes Ahuatzin, E. Novitskaya, and O.A. Graeve, "Thermal Conductivity of Water-based Alumina Nanofluids," Online Undergraduate Research Symposium (Date: May 26, 2021).
- V.S. Vakharia, L. Zhang, S. Sufy, and O.A. Graeve, “Solvothermal Synthesis of High Entropy Metal Carbides: A New Class of Ultrahigh Temperature, Irradiation Resistant Ceramics,” Research Expo 2021 (La Jolla, CA. Date: May 19, 2021).
- J. Metera, A. Wilke, and O.A. Graeve, “Particle Formation Mechanism of Bismuth Ferrite Particles: Materials by Design for Antiferromagnetic and Ferroelectric Applications,” Research Expo 2021 (La Jolla, CA. Date: May 19, 2021).
- M. Sanchez and O.A. Graeve, “Synthesis of Perovskite Materials with Cubic Particle Morphologies for Ordered Arrangements,” Research Expo 2021 (La Jolla, CA. Date: May 19, 2021).
- F. Martinez, M. Herrera, E. Novitskaya, and O.A. Graeve, “Solubility Study of Luminescent Hydroxyapatite Scaffolds for Prospective Bone Healing Applications,” Research Expo 2021 (La Jolla, CA. Date: May 19, 2021).
- F. Javier Suarez, R. Vazquez-Duhalt, and O.A. Graeve, “Enhancing Catalytic Properties of Laccase by its Immobilization of Copper (II) Oxide Nanoparticles,” Research Expo 2021 (La Jolla, CA. Date: May 19, 2021).
- H. Chen and O.A. Graeve, “Combustion Synthesis and Sol-gel Reaction of Novel Efficient Red-emitting Phosphors,” Research Expo 2021 (La Jolla, CA. Date: May 19, 2021).
- M. Sanchez, "Development of Cubic Morphologies of Perovskite Materials for Enhanced Creep Resistance," ASML PhD Symposium (San Diego, CA. Date: April 29, 2021).
- A Yazdani, D. Dewitt, S.T. Misture, J.E. Garay, and O.A. Graeve, "SAM2X5: Stronger than the Strongest Steel," Research Expo 2019 (La Jolla, CA. Date: April 18, 2019).
- F. Martínez, E. Gaona, M. Herrera-Zaldivar, K. Juárez-Moreno, and O.A. Graeve, "Differentiation Assay of Osteoblast Cells in Luminescent Hydroxyapatite," Research Expo 2019 (La Jolla, CA. Date: April 18, 2019).

- H. Hosseini-Toudeshki, K. Seo, J. Gild, J. Luo, S.A. Herrera, D. Kisailus, and O.A. Graeve, "Superelastic Response and Shape Memory Behavior in Ceramic Materials," Research Expo 2019 (La Jolla, CA. Date: April 18, 2019).
- C.I. Vargas Consuelos, F. Monge, A. Yazdani, and O.A. Graeve, "DSC Studies of the Combustion Synthesis of LaB_6 and CeB_6 : The Effect of KCl and LiCl Addition," Research Expo 2019 (La Jolla, CA. Date: April 18, 2019).
- I. Torres and O.A. Graeve, "Bioinspired Stimuli-Responsive Coloration Through the Cephalopod Lens: A Literature Review," Research Expo 2019 (La Jolla, CA. Date: April 18, 2019).
- J. Campbell, C. Ruestes, and O.A. Graeve, "Diffusion Studies of Structurally Amorphous Metal Foils Using Molecular Dynamics Simulations: Diffusion Coefficients and Connection to Macro-properties," Research Expo 2019 (La Jolla, CA. Date: April 18, 2019).
- M. Sánchez and O.A. Graeve, "Synthesis Methods of BaTiO_3 with Cubic Morphology: A Literature Review," Research Expo 2019 (La Jolla, CA. Date: April 18, 2019).
- R.E. Ridley, E. Alvarado, V.R. Vasquez, and O.A. Graeve, "Phase Stability and Miscibility in Alcohol Microemulsions: Do Reverse Micelles Form in Ethanol/AOT/*n*-Heptane Systems?," Research Expo 2019 (La Jolla, CA. Date: April 18, 2019).
- V. Vakharia and O.A. Graeve, "Solvothermal Synthesis Approach of High Entropy Metal Carbides: A New Class of Ultrahigh Temperature, Irradiation Resistant Ceramics," Research Expo 2019 (La Jolla, CA. Date: April 18, 2019).
- C.A. Calderón, M.E. Aguilar, A. Yazdani, and O.A. Graeve, "The Effect of Nanoparticle Concentration on the Thermal Conductivity of Alumina Nanofluids," ENLACE 2018 Closing Ceremony and Symposium (La Jolla, CA. Date: August 10, 2018).
- S. Choi, R. Vazquez-Duhalt, and O.A. Graeve, "Fabrication of Uniform-sized Mesopores on Gold-coated Polystyrene Particles," Research Expo 2018 (La Jolla, CA. Date: April 19, 2018).
- M. Sanchez and O.A. Graeve, "Synthesis of Cubic Microstructures of Perovskite Materials," Research Expo 2018 (La Jolla, CA. Date: April 19, 2018).
- R. Ridley and O.A. Graeve, "Advances in Ionic Polymer Metal Composites (IPMCs): A Literature Review," Research Expo 2018 (La Jolla, CA. Date: April 19, 2018).
- A. Yazdani, D. Dewitt, J.E. Garay, and O.A. Graeve, "SAM 2x5: Stronger than the Strongest Steel," Research Expo 2018 (La Jolla, CA. Date: April 19, 2018).
- F. Martinez, K. Juárez-Moreno, and O.A. Graeve, "In Vitro Evaluation of Luminescent Rare-earth Doped Hydroxyapatite Scaffolds," Research Expo 2018 (La Jolla, CA. Date: April 19, 2018).
- J. Campbell, C. Ruestes, and O.A. Graeve, "Diffusion Studies of Structurally Amorphous Metal Foils Using Molecular Dynamics Simulation: Initial Simulation Framework Validation," Research Expo 2018 (La Jolla, CA. Date: April 19, 2018).
- H. Hosseini-Toudeshki, S. Herrera, D. Kisailus, and O.A. Graeve, "Super-elastic Response and Shape Memory Behavior in Ceramic Materials," Research Expo 2018 (La Jolla, CA. Date: April 19, 2018).
- C.I. Vargas-Consuelos and O.A. Graeve, "Cubic Hollow Nanostructures: A New Trend to Design Functional Materials," Research Expo 2018 (La Jolla, CA. Date: April 19, 2018).
- T. Ren and O.A. Graeve, "Exploring the Fundamental Behavior of Tailored Nanoscale Carbide Morphologies: Materials by Design for Ultra-high Temperature Applications," Research Expo 2018 (La Jolla, CA. Date: April 19, 2018).
- K. Seo and O.A. Graeve, "Synthesis and Interface Boundary Characteristics of Gold/Cobalt Janus Nanoparticles," Research Expo 2018 (La Jolla, CA. Date: April 19, 2018).

- S. Qiao, E. Novitskaya, F. Sanchez, M. Herrera Zaldivar, R. Vazquez-Duhalt, and O.A. Graeve, "Electrical Conductivity of Stabilized Mesoporous Ceramic Fluid Suspensions with Varying pH Values," Research Expo 2018 (La Jolla, CA. Date: April 19, 2018).
- R. Ridley, V.R. Vasquez, and O.A. Graeve, "Fluidic Interactions in AOT/n-Heptane Systems: The Effect of Short-Chain Alcohols," ASME 2018 Mechanical Engineering Education Leadership Summit (San Diego, CA. Date: March 14-17, 2018).
- T. Ren and O.A. Graeve, "Exploring the Fundamental Behavior of Tailored Nanoscale Carbide Morphologies: Materials by Design for Ultra-high Temperature Applications," Research Expo 2018 (La Jolla, CA. Date: April 20, 2017).
- R.E. Ridley and O.A. Graeve, "Effects of Ethanol on AOT/n-heptane Reverse Micelle Systems," Research Expo 2018 (La Jolla, CA. Date: April 20, 2017).
- C.I. Vargas Consuelos, D. Miranda, and O.A. Graeve, "Controlling the Shape and Particle Size of LaB₆ Nanostructures: A Step Towards Developing New Composite Materials," Research Expo 2018 (La Jolla, CA. Date: April 20, 2017).
- S. Qiao, E. Novitskaya, F. Sanchez, R. Vazquez-Duhalt, and O.A. Graeve, "Thermal and Electrical Conductivities of Mesoporous Nanofluids and Applications for Enzyme Catalysis," Research Expo 2018 (La Jolla, CA. Date: April 20, 2017).
- F. Martinez, M. Herrera, and O.A. Graeve, "In Vitro Evaluation of Luminescent Rare-earth Doped Hydroxyapatite Scaffolds," Research Expo 2018 (La Jolla, CA. Date: April 20, 2017).
- S. Choi and O.A. Graeve, "Fabrication of Mesopores on Gold-coated Polystyrene Particles," Research Expo 2018 (La Jolla, CA. Date: April 20, 2017).
- J. Campbell and O.A. Graeve, "Diffusion Studies of Structurally Amorphous Metal Foils Using Molecular Dynamics Simulation," Research Expo 2018 (La Jolla, CA. Date: April 20, 2017).
- U. Perez and O.A. Graeve, "Fabrication and Characterization of Complex SiC/SiC Fiber Composite Processed by Spark Plasma Sintering," Research Expo 2018 (La Jolla, CA. Date: April 20, 2017).
- K. Seo and O.A. Graeve, "Synthesis and Interface Boundary Characteristics of Gold/Cobalt Janus Nanoparticles," Research Expo 2018 (La Jolla, CA. Date: April 20, 2017).
- E. Novitskaya, H. Khalifa, A. Kritsuk, and O.A. Graeve, "Optimization of Complex Silicon Carbide Structures for Nuclear Applications," Postdoc Research Symposium (La Jolla, CA. Date: November 1, 2016).
- K. Karandikar and O.A. Graeve, "Correlation between particle size and grain size distributions in single/multiphase ceramics," CaliBaja Center for Resilient Materials and Systems Research Summit (La Jolla, CA. Date: October 20, 2016).
- E. Novitskaya and O.A. Graeve, "Optimization of complex silicon carbide structures for nuclear applications," CaliBaja Center for Resilient Materials and Systems Research Summit (La Jolla, CA. Date: October 20, 2016).
- T. Ren and O.A. Graeve, "Solvothermal Process for the Preparation of Doped Ultra-High Temperature Ceramics with Unique Morphologies," CaliBaja Center for Resilient Materials and Systems Research Summit (La Jolla, CA. Date: October 20, 2016).
- K. Seo and O.A. Graeve, "Morphological characteristics of gold/cobalt Janus nanoparticles: Interface study in synthesis methods," CaliBaja Center for Resilient Materials and Systems Research Summit (La Jolla, CA. Date: October 20, 2016).
- S. Qiao and O.A. Graeve, "Electrically-conductive mesoporous ceramics for enzyme catalysis," CaliBaja Center for Resilient Materials and Systems Research Summit (La Jolla, CA. Date: October 20, 2016).

- E. Novitskaya, H. Khalifa, A. Kritsuk, and O.A. Graeve, "Optimization of Complex Silicon Carbide Structures for Nuclear Applications," Ceramics for Energy Workshop (La Jolla, CA. Date: June 3, 2016).
- K.K. Karandikar, O.A. Graeve, K. Ohtaki, A. Travis, and M. Mecartney, "Particle Size and Grain Size Distributions in Single/Multiphase Ceramics," Ceramics for Energy Workshop (La Jolla, CA. Date: June 3, 2016).
- J.T. Cahill and O.A. Graeve, "Synthesis of Metal Hexaborides and the Prospect of Controllable Diffusion," Ceramics for Energy Workshop (La Jolla, CA. Date: June 3, 2016).
- S. Choi and O.A. Graeve, "Fabrication of Mesoporous Gold-Coated Polystyrene Particles for Enzyme Immobilization," Ceramics for Energy Workshop (La Jolla, CA. Date: June 3, 2016).
- J. Ha, E. Novitskaya, O.A. Graeve, G.A. Hirata, and J.M. McKittrick, "A Method to Improve Quantum Efficiency of Nanosized Phosphors for Near-UV LEDs," Ceramics for Energy Workshop (La Jolla, CA. Date: June 3, 2016).
- S. Qiao, E. Novitskaya, F. Sanchez, R. Vazquez-Duhalt, and O.A. Graeve, "Electrically-Conductive Mesoporous Ceramics for Enzyme Catalysis," Ceramics for Energy Workshop (La Jolla, CA. Date: June 3, 2016).
- J. Ha, E. Novitskaya, O.A. Graeve, G.A. Hirata, and J.M. McKittrick, "A Method to Improve Quantum Efficiency of Nanosized Phosphors for Near-UV LEDs," UCSD Jacobs School of Engineering 35th Annual Research Expo (La Jolla, CA. Date: April 14, 2016).
- M.B. Frank, S.H. Siu, J. Ng, A. Ismail, I. Torres, T. Haroush, C.-H. Liu, K. Karandikar, S. Naleway, O.A. Graeve, and J.M. McKittrick, "Magnetized Materials for Bioinspired Bone Scaffolds," UCSD Jacobs School of Engineering 35th Annual Research Expo (La Jolla, CA. Date: April 14, 2016).
- K. Seo and O.A. Graeve, "Morphological Characteristics and Interfaces of Gold/Cobalt Janus Nanoparticles," UCSD Jacobs School of Engineering 35th Annual Research Expo (La Jolla, CA. Date: April 14, 2016).
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- K.K. Karandikar, O.A. Graeve, K. Ohtaki, A. Travis, and M. Mecartney, "Particle Size and Grain Size Distributions in Single/Multiphase Ceramics," UCSD Jacobs School of Engineering 35th Annual Research Expo (La Jolla, CA. Date: April 14, 2016).
- T. Ren, V. Stanley, and O.A. Graeve, "Solvothermal Process for the Preparation of Doped Ultra-high Temperature Carbide Ceramics with Unique Morphologies," UCSD Jacobs School of Engineering 35th Annual Research Expo (La Jolla, CA. Date: April 14, 2016).
- S. Qiao, E. Novitskaya, F. Sanchez, R. Vazquez-Duhalt, and O.A. Graeve, "Electrically-Conductive Mesoporous Ceramics for Enzyme Catalysis," UCSD Jacobs School of Engineering 35th Annual Research Expo (La Jolla, CA. Date: April 14, 2016).
- J.T. Cahill and O.A. Graeve, "Synthesis of Metal Hexaborides and the Prospect of Controllable Diffusion," UCSD Jacobs School of Engineering 35th Annual Research Expo (La Jolla, CA. Date: April 14, 2016).
- E. Novitskaya, H. Khalifa, and O.A. Graeve, "Characterization of Complex Silicon Carbide Composite Structures," 3rd Annual Postdoctoral Research Symposium (La Jolla, CA. Date: September 14, 2015).
- J.P. Kelly, M. Alberga, B. Wang, S. Fuller, H. Fathi-Kelly, D. Edwards, O.A. Graeve, "Incorporating Materials Synthesis and Processing History into Development and Property Optimization Models," 8th Annual Postdoc Poster Symposium (Livermore, CA. Date: June 17, 2015).

- J. Ha, Z. Wang, E. Novitskaya, O.A. Graeve, S.P. Ong, and J.M. McKittrick, "Development of Phosphors for Solid-state Lighting," UCSD Jacobs School of Engineering 32nd Annual Research Expo (La Jolla, CA. Date: April 16, 2015).
- K. Karandikar and O.A. Graeve, "Correlation Between Particle Size and Grain Size Distributions in Single/Multiphase Ceramics," UCSD Jacobs School of Engineering 32nd Annual Research Expo (La Jolla, CA. Date: April 16, 2015).
- J.T. Cahill and O.A. Graeve, "Using Tool Steel in Metal-Ceramic Hardmetal Composites," UCSD Jacobs School of Engineering 32nd Annual Research Expo (La Jolla, CA. Date: April 16, 2015).
- B. Zhang and O.A. Graeve, "Devitrification Behavior of Amorphous Metal Foils During Spark Plasma Sintering," UCSD Jacobs School of Engineering 32nd Annual Research Expo (La Jolla, CA. Date: April 16, 2015).
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- K. Seo and O.A. Graeve, "Morphological Characteristics of Gold/Cobalt Janus Nanoparticles," UCSD Jacobs School of Engineering 32nd Annual Research Expo (La Jolla, CA. Date: April 16, 2015).
- T. Ren and O.A. Graeve, "Exploring the Fundamental Behavior of Tailored Nanoscale Carbide Morphologies: Materials by Design for Ultra-high Temperature Applications," UCSD Jacobs School of Engineering 32nd Annual Research Expo (La Jolla, CA. Date: April 16, 2015).
- S. Qiao and O.A. Graeve, "Electrically-conductive Mesoporous Ceramics for Biocatalysis Applications," UCSD Jacobs School of Engineering 32nd Annual Research Expo (La Jolla, CA. Date: April 16, 2015).
- J. Bahena and O.A. Graeve, "Preparation of Hexaboride Nanocubes for Hydrogen Storage Applications," 2015 CAMP Statewide Research Symposium (Irvine, CA. Date: February 6-7, 2015). **Mr. Bahena received honorable mention.**
- C. Villa and O.A. Graeve, "Phase Stability and Morphology of LaNbO₄ Nanopowders: A Combustion Synthesis Study," 2015 CAMP Statewide Research Symposium (Irvine, CA. Date: February 6-7, 2015).
- G. Pena, S. Qiao, and O.A. Graeve, "Synthesis of Titanium Powders with Unique Morphologies," Society of Hispanic Professional Engineers 2014 (Detroit, MI. Date: November 5-9, 2014).
- J.P. Kelly, E. Novitskaya, and O.A. Graeve, "Bulk Metallic Glass Composites – Breaking Design Barriers (Instead of the Glass)," UCSD Postdoctoral Research Symposium (La Jolla, CA. Date: September 26, 2014).
- E. Novitskaya, M. Herrera-Zaldivar, G. Hirata-Flores, and O.A. Graeve, "Advanced Triboluminescent Coatings for Structural Health Monitoring Applications," UCSD Postdoctoral Research Symposium (La Jolla, CA. Date: September 26, 2014).
- J.A. Bahena, J.P. Kelly, M. McKee, Y. Liu, and O.A. Graeve, "Tungsten Carbide / Steel Composites: Milling and Spark Plasma Sintering Studies," SHPE Region 2 Leadership Development Conference (La Jolla, CA. Date: April 18, 2014). **Mr. Bahena won first place and a laptop.**
- R. Pena and O.A. Graeve, "Alumina Nanofluid Characterization for Heat Transfer Applications: A Dynamic Light Scattering Study," SHPE Region 2 Leadership Development Conference (La Jolla, CA. Date: April 18, 2014). **Ms. Pena won third place and an HP scientific calculator.**
- C. Villa, K. Seo, and O.A. Graeve, "Phase Stability and Morphology of LaNbO₄ Nanopowders: A Combustion Synthesis Study," SHPE Region 2 Leadership Development Conference (La Jolla, CA. Date: April 18, 2014).

- B. Zhang and O.A. Graeve, "Devitrification Behavior of Amorphous Metal Foils During Spark Plasma Sintering," Jacobs School of Engineering 33rd Annual Research Expo (La Jolla, CA. Date: April 17, 2014).
- J.T. Cahill and O.A. Graeve, "Preparation of Hexaboride Nanocubes for Hydrogen Storage Applications," Jacobs School of Engineering 33rd Annual Research Expo (La Jolla, CA. Date: April 17, 2014).
- K. Karandikar and O.A. Graeve, "Analysis of Grain Size and Particle Size in Ceramic Powders," Jacobs School of Engineering 33rd Annual Research Expo (La Jolla, CA. Date: April 17, 2014).
- K. Seo and O.A. Graeve, "Morphological Characteristics of Gold/Cobalt Janus Nanoparticles Prepared Using Various Substrates," Jacobs School of Engineering 33rd Annual Research Expo (La Jolla, CA. Date: April 17, 2014).
- S. Choi, R. Vazquez-Duhalt, and O.A. Graeve, "Fabrication of Mono-sized Hemispherical Mesopores on Gold-coated Polystyrene Particle Surfaces," Jacobs School of Engineering 33rd Annual Research Expo (La Jolla, CA. Date: April 17, 2014).
- T. Ren and O.A. Graeve, "Solvothermal Process for the Preparation of Doped Ultra-high Temperature Carbide Ceramics," Jacobs School of Engineering 33rd Annual Research Expo (La Jolla, CA. Date: April 17, 2014).
- J.T. Cahill and O.A. Graeve, "Preparation of Hexaboride Nanocubes for Hydrogen Storage Applications," PerkinElmer & SFU Nanolytica 2014 Educational Symposium (La Jolla, CA. Date: April 11, 2014).
- R. Pena, J.P. Kelly, and O.A. Graeve, "Alumina Nanofluid Characterization for Heat Transfer Applications: A Dynamic Light Scattering Study," 2014 University of California LSAMP (CAMP) Statewide Undergraduate Research Symposium (Irvine, CA. Date: February 7-9, 2014). **Ms. Pena received Honorable Mention in the Physical Sciences & Engineering Category.**
- J.A. Duenas, J.T. Cahill, and O.A. Graeve, "Determination of Phase Stability During the Combustion Synthesis of Bismuth Ferrite Powders," Society of Hispanic Professional Engineers 2013 (Indianapolis, IN. Date: October 30 – November 3, 2013).
- H. Fathi, J.P. Kelly, and O.A. Graeve, "Fundamental Analysis of Reverse Micelle Stability for the Synthesis of Nanopowders," AU MRS Scholes Poster Competition (Alfred, NY. Date: April 19, 2012).
- M.S. Saterlie, J. Liu, S. Misture, D. Edwards, and O.A. Graeve, "New Facile Synthesis Route of Beta-Gallia Rutile Structured Intergrowths for High Temperature Applications," AU MRS Scholes Poster Competition (Alfred, NY. Date: April 19, 2012).
- J.P. Kelly, B.M. Clark, R.J. Grohsmeyer, R.J. Locker, A.W. Turner, and O.A. Graeve, "Microstructural Development During Spark Plasma Sintering of Tantalum Carbide Powders Prepared by Solvothermal Synthesis," AU MRS Scholes Poster Competition (Alfred, NY. Date: April 19, 2012).
- B.M. Clark, J.P. Kelly, and O.A. Graeve, "Chemical Treatments of Tantalum Carbide Powder to Manipulate Morphology and Particle Size," Undergraduate Research Forum (Alfred, NY. Date: April 19, 2012).
- K. Lambert, J.P. Kelly, and O.A. Graeve, "The Effect of Silica on the Fabrication of Translucent Polycrystalline Lutetium Orthosilicate for γ -Ray Detection Applications," Undergraduate Research Forum (Alfred, NY. Date: April 19, 2012).
- R.J. Grohsmeyer, J.P. Kelly, B.M. Clark, and O.A. Graeve, "Unique Processing and Properties Characterization of Dense Tantalum Carbide Ceramics," Undergraduate Research Forum (Alfred, NY. Date: April 19, 2012).
- K.E. Noll, J.P. Kelly, and O.A. Graeve, "Spark Plasma Sintering of Zinc Oxide Prepared by Combustion Synthesis," Undergraduate Research Forum (Alfred, NY. Date: April 19, 2012).

- M. Alberga, J.P. Kelly, and O.A. Graeve, "Synthesis of Doped and Undoped Titania Nanopowders for Use in SOFC Interconnect and Thermoelectric Applications," Undergraduate Research Forum (Alfred, NY. Date: April 19, 2012).
- D.W. Davies, J.P. Kelly, and O.A. Graeve, "A Unique Process for the Preparation of Boron Nitride Powders," Undergraduate Research Forum (Alfred, NY. Date: April 19, 2012).
- J.P. Kelly, B.M. Clark, R. Kanakala, and O.A. Graeve, "Pathway to the Scaled-Up Manufacturing of Nanostructured Ultra-high Temperature Refractory Ceramics," AU MRS Scholes Poster Competition (Alfred, NY. Date: April 27, 2011).
- M. Saterlie and O.A. Graeve, "Aqueous Combustion Synthesis of Beta-Gallia Rutile Structured Intergrowths," AU MRS Scholes Poster Competition (Alfred, NY. Date: April 27, 2011).
- H. Fathi and O.A. Graeve, "Fundamental Aspects of Reverse Micelle Stability for Controlled Synthesis of Nanoparticles," AU MRS Scholes Poster Competition (Alfred, NY. Date: April 27, 2011).
- C. Brunet and O.A. Graeve, "Novel Processing of IR Transparent Nanocrystalline Ceramics," AU MRS Scholes Poster Competition (Alfred, NY. Date: April 27, 2011).
- B. Clark, J.P. Kelly, and O.A. Graeve, "Preparation of Nanostructured Non-Oxide Ceramic Powders Using Solvothermal Reactions," Undergraduate Research Forum (Alfred, NY. Date: April 14, 2011).
- P.J. DiCesare and O.A. Graeve, "Spark Plasma Sintering of Highly Corrosion-Resistant Amorphous Metal/Ceramic Composites," Undergraduate Research Forum (Alfred, NY. Date: April 22, 2010).
- A.D. Galens and O.A. Graeve, "The Synthesis and Characterization of EuB_6 Nanopowders," Undergraduate Research Forum (Alfred, NY. Date: April 22, 2010).
- C.M. Brunet and O.A. Graeve, "Synthesis of Nanocrystalline Tantalum Powders," Alfred University Senior Poster Night (Alfred, NY. Date: December 2, 2009).
- K.C. Glass and O.A. Graeve, "A Comparative Analysis of Particle Size and Crystallite Size in Alumina Nanopowders Prepared by Reverse Micelle Synthesis," Alfred University Senior Poster Night (Alfred, NY. Date: December 2, 2009).
- K. Sinha, B. Kavlicoglu, Y. Liu, and O.A. Graeve, "Development of Nanoscale Magneto-Rheological (nMR) Fluid: Effect of Particle Size on Flow and Thermal Characteristics through Microchannels," Annual GSA Research Meeting of the University of Nevada – Reno 2008 (Reno, NV. Date: April 14, 2008). **Mr. Sinha won second place and a \$500 scholarship.**
- M. Saterlie, R. Kanakala, L. Kaufman, J.C. Farmer, B. Pearson, K. Sinha, and O.A. Graeve, "Spark Plasma Sintering of Fe-Based Structural Amorphous Metals (SAM) with Y_2O_3 Nanoparticle Additions," Summer 2007 Undergraduate Research Opportunities Program Poster Session (Reno, NV. Date: August 15, 2007).
- K. Sinha, B. Pearson, S. Robles-Casolco, J.E. Garay, and O.A. Graeve, "Synthesis and Consolidation of Barium Aluminum Silicate Doped With Europium (BAS:Eu): An Approach to Develop Smart Ceramic Skins for Structural Health Monitoring Systems," Annual GSA Research Meeting of the University of Nevada – Reno 2007 (Reno, NV. Date: April 16, 2007). **Mr. Sinha won first place and a \$650 scholarship.**
- B. Williams, A. Clifton, K. Sinha, and O.A. Graeve, "Synthesis and Characterization of Nanocrystalline Yttria-Stabilized Zirconia," Spring 2007 UNR Undergraduate Research Conference (Reno, NV. March 8, 2007).
- B. Pearson, O.A. Graeve, and J. Tinsley, "Processing of Luminescent Ceramics for Gamma-Ray Detection," Spring 2007 UNR Undergraduate Research Conference (Reno, NV. Date: March 8, 2007).

- D. Peterson, K. Sinha, and O.A. Graeve, "Surfactant-Assisted Synthesis of Magnetic Nanoparticles," Spring 2007 UNR Undergraduate Research Conference (Reno, NV. Date: March 8, 2007).
- G. Rojas-George, D. Peterson, K. Sinha, B. Williams, and O.A. Graeve, "Synthesis and Characterization of Luminescent Yttria Powders," Spring 2007 UNR Undergraduate Research Conference (Reno, NV. Date: March 8, 2007).
- K. Sinha and O.A. Graeve, "Reverse Micelle Synthesis of Magnetic Nanoparticles," Annual GSA Research Meeting of the University of Nevada – Reno 2006 (Reno, NV. Date: April 17, 2006). **Mr. Sinha won first place and a \$650 scholarship.**
- J. Corral and O.A. Graeve, "Synthesis of Ti_3SiC_2 Nanocrystalline Ductile Ceramic by High Energy Ball Milling," Northern California Section of the American Ceramic Society Annual Poster Competition and Dinner Meeting (Davis, CA. Date: May 5, 2004).
- H. Singh and O.A. Graeve, "Reverse Micelle Synthesis of Zirconia Nanopowders," Northern California Section of the American Ceramic Society Annual Poster Competition and Dinner Meeting (Davis, CA. Date: May 5, 2004). **Mr. Singh won first place and a \$300 scholarship.**
- S. Varma and O.A. Graeve, "Combustion Synthesis and Characterization of $\text{Y}_2\text{O}_3\text{:Tm,Yb}$ Blue Phosphors," Northern California Section of the American Ceramic Society Annual Poster Competition and Dinner Meeting (Davis, CA. Date: May 5, 2004). **Ms. Varma won second place and a \$200 scholarship.**

PROFESSIONAL ACTIVITIES

CONFERENCES and SYMPOSIA ORGANIZED

- *Chair.* 2024 MATS Symposium and Workshop: Innovations for a Changing Environment (La Jolla, CA. Date: July 23-26, 2024).
- *Member.* Scientific Committee, 2nd Conference on FAST/SPS: From Research to Industry (Warsaw, Poland. Date: October 16-18, 2023).
- *Member.* International Advisory Board, Sintering 2023 (Gifu, Japan. Date: August 27-31, 2023).
- *Chair.* IV CaliBaja Symposium and Workshop (La Jolla, CA. Date: April 21, 2023).
- *Co-chair.* ACerS-MRS Virtual Workshop – Ceramic Materials in Extreme Environments: New Processing Tools and Data-Driven Approaches (Date: March 8-9, 2023).
- *Chair.* Materials in Extreme Environments: New Monitoring Tools and Data-Driven Approaches; a Workshop presented by the National Academies' Condensed Matter and Materials Research Committee, under the auspices of the Board on Physics and Astronomy (Washington, DC. Date: October 5-6, 2022).
- *Chair.* 3rd CaliBaja Symposium and Workshop (La Jolla, CA. Date: June 20, 2022).
- *Member of the Scientific Committee.* 1st Conference on FAST/SPS: From Research to Industry (Poznan, Poland. Date: October 25-26, 2021).
- *Member of the Scientific Committee.* 2021 IACM Mechanistic Machine Learning & Digital Twins for Computational Science, Engineering and Technology Conference (San Diego, CA. Date: September 26-29, 2021).
- *Member of the International Advisory Board.* Sintering 2021 (Gifu, Japan. Date: March 27-31, 2021).
- *Co-chair.* Track 8: Mechanistic Data Science for High School and Undergraduate STEM Education and Applications, Mechanistic Machine Learning and Digital Twins for Computational Science, Engineering & Technology (MMLDT-CSET 2021) (San Diego, CA. Date: September 26-29, 2021).

- *Member of the Scientific Committee.* III National Workshop on Spark Plasma Sintering (Kraków, Poland. Date: October 23, 2020).
- *Symposium Co-chair.* Challenges in Materials and Technologies for Energy Conversion, Saving and Storage (MATECSS), 28th International Materials Research Congress (Cancún, México. Date: August 18-23, 2019).
- *Chair.* 2nd CaliBaja Symposium and Workshop (La Jolla, CA. Date: May 3, 2019).
- *Symposium Co-chair.* High Impact Practice-Increasing Ethnic and Gender Diversification in Engineering Education, 2019 MRS Spring Meeting & Exhibition (Phoenix, AZ. Date: April 22-26, 2019).
- *Member of the International Advisory Board.* XI Simposio Internacional: Investigación Química en la Frontera (Tijuana, México. Date: November 14-16, 2018).
- *Member of the Steering Committee.* Bridging Chasms Event (La Jolla, CA. Date: September 21-23, 2018).
- *Co-Chair.* Materials and Technologies for Energy Conversion, Saving and Storage (MATECSS), XXVII International Materials Research Congress (Cancun, Mexico. Date: August 19-24, 2018).
- *Member of the Scientific Committee.* 7th International Congress on Ceramics (Iguacu Falls, Brazil. Date: June 17-21, 2018).
- *Member of International Advisory Board.* 14th International Ceramics Congress (Salsomaggiore Terme, Italy. Date: June 4-8, 2018).
- *Chair.* 1st CaliBaja Symposium and Workshop: Advances and Collaborations in Microscopy (Tijuana, Mexico. Date: February 15-16, 2018).
- *Member of International Advisory Board.* Sintering 2017 (San Diego, CA. Date: November 12-16, 2017).
- *Co-Chair.* Mentoring Young Scientists: Developing Survival Skills Tutorial (Cancun, Mexico. Date: August 20-25, 2017).
- *Co-Chair.* Materials and Technologies for Energy Conversion, Saving and Storage (MATECSS), XXVI International Materials Research Congress (Cancun, Mexico. Date: August 20-25, 2017).
- *Member of Organizing Committee.* 3rd Panamerican Materials Congress (San Diego, CA. Date: February 26-March 2, 2017).
- *Co-Chair.* Sintering and Related Powder Processing Science & Technologies, Materials Science & Technology 2016 (Salt Lake City, UT. Date: October 23-27, 2016).
- *Co-Chair.* XXV International Materials Research Congress (Cancún, México. Date: August 14-19, 2016).
- *Member of International Organization Committee.* International Conference on Ceramic Processing Science (Nara, Japan. Date: May 8-11, 2016).
- *Co-Chair.* Advances in Ceramics, Glasses, and Composites by Women, their Mentors and their Mentees, Materials Science & Technology 2015 (Columbus, OH. Date: October 4-8, 2015).
- *Co-Chair.* Sintering and Related Powder Processing Science & Technologies, Materials Science & Technology 2015 (Columbus, OH. Date: October 4-8, 2015).
- *Co-Chair.* Nanostructured Materials and Nanotechnology, XXIV International Materials Research Congress (Cancun, Mexico. Date: August 16-20, 2015).
- *Co-Chair.* Sintering and Related Powder Processing Science & Technologies, Materials Science & Technology 2014 (Pittsburgh, PA. Date: October 12-16, 2014).

- *Member of International Advisory Board.* International Conference on Sintering 2014 (Dresden, Germany. Date: August 24-28, 2014).
- *Co-Chair.* Nanostructured Materials and Nanotechnology Symposium, XXIII International Materials Research Congress (Cancún, México. Date: August 17-21, 2014).
- *Chair.* Processing of Materials Symposium, Pan American Materials Conference 2014 (Sao Paulo, Brazil. Date: July 21-25, 2014).
- *Member of International Advisory Board.* CIMTEC 2014: 13th International Ceramics Congress (Montecatini Terme, Italy. Date: June 8-13, 2014).
- *Advisor.* SHPE Region 2 Leadership Development Conference (La Jolla, CA. Date: April 17-19, 2014).
- *Co-Chair.* 3rd International Symposium on Nanoscience and Nanomaterials (Ensenada, México. Date: March 10-14, 2014).
- *Co-Chair.* Sintering and Related Powder Processing Science & Technologies, Materials Science & Technology 2013 (Montreal, Canada. Date: October 27-31, 2013).
- *Co-Chair.* Nanostructured Materials and Nanotechnology Symposium, XXII International Materials Research Congress (Cancún, México. Date: August 11-16, 2013).
- *Member of International Organizing Committee.* 12th International Conference on Ceramic Processing Science (Portland, OR. Date: August 4-7, 2013).
- *Co-Organizer.* Diversity in MSE Workshop (Arlington, VA. Date: December 9-11, 2012).
- *Co-Chair.* Novel Sintering Processes and News in Conventional Sintering and Grain Growth, Materials Science & Technology 2012 (Pittsburgh, PA. Date: October 7-11, 2012).
- *Co-Chair.* Nanostructured Materials and Nanotechnology Symposium, XXI International Materials Research Congress (Cancún, México. Date: August 13-17, 2012).
- *Co-Chair.* Nanostructured Materials and Nanotechnology Symposium, XX International Materials Research Congress (Cancún, México. Date: August 14-18, 2011).
- *Chair.* ACerS Sosman Award Symposium: Sol-Gel Fundamentals and Applications, Materials Science & Technology 2010 Conference & Exhibition (Houston, TX. Date: October 17-21, 2010).
- *Chair.* Hexaboride Materials Processing, Properties, and Applications, Materials Science & Technology 2010 Conference & Exhibition (Houston, TX. Date: October 17-21, 2010).
- *Co-Chair.* Nanostructured Materials and Nanotechnology Symposium at the XIX International Materials Research Congress (Cancún, México. Date: August 15-19, 2010).
- *Member of Scientific Committee.* IV Workshop on Metastable and Nanostructured Materials (México, D.F., México. Date: August 23-26, 2009).
- *Member of Scientific Committee.* VI Taller Iberoamericano de Educación en Ciencia e Ingeniería de Materiales (Barcelona, Spain. Date: December 1-2, 2008). <http://sites.upc.edu/~www-cmem/VITIECIM/>
- *Member of Organizing Committee.* XVII International Materials Research Congress (Cancún, México. Date: August 17-21, 2008).
- *Advisor.* SHPE Region 1 Leadership Development Conference (South Lake Tahoe, NV. Date: April 13-14, 2007).
- *Conference Secretariat.* The 3rd International Workshop on Advanced Smart Materials and Smart Structures Technology (South Lake Tahoe, CA. Date: May 29-30, 2006).

- *Conference Secretariat.* The 10th International Conference on Electrorheological Fluids and Magnetorheological Suspensions (South Lake Tahoe, CA. Date: June 18-22, 2006). <http://coeweb.engr.unr.edu/ermr2006/>
- *Member of International Organizing Committee.* V International Workshop on Materials Education (Córdoba, Argentina. Date: April 13-15, 2006). <http://www.uns.edu.ar/Congresos/TIECIMV/>
- *Advisor.* SHPE Region 1 Student Leadership Conference (Reno, NV. Date: April 7-8, 2006).
- *Co-Chair.* Symposium on the Synthesis and Processing of Nanostructured Materials at the 30th International Conference and Exposition on Advanced Ceramics and Composites (Cocoa Beach, FL. Date: January 22-27, 2006).
- *Chair.* Nanostructured Materials and Nanotechnology Symposium at the XIV International Materials Research Congress (Cancún, México. Date: August 21-25, 2005).
- *Chair.* Nanostructured Materials and Nanotechnology Symposium at the XIII International Materials Research Congress (Cancún, México. Date: August 22-26, 2004).

SERVICES TO PROFESSIONAL SOCIETIES

- *Member.* Materials Research Society Topical Curation Subcommittee (February 2025 – present).
- *Member.* Graduate Excellence in Materials Science Awards 2023 Committee, Basic Science Division of the American Ceramic Society.
- *Member.* Graduate Excellence in Materials Science Awards 2022 Committee, Basic Science Division of the American Ceramic Society.
- *Member.* Graduate Excellence in Materials Science Awards 2021 Committee, Basic Science Division of the American Ceramic Society.
- *Member.* Frontiers of Science and Society Rustum Roy Lecture Award Committee of the American Ceramic Society (October 2020 – September 2025).
- *Member.* Graduate Excellence in Materials Science Awards 2020 Committee, Basic Science Division of the American Ceramic Society.
- *Member.* Graduate Excellence in Materials Science Awards 2019 Committee, Basic Science Division of the American Ceramic Society.
- *Chair.* American Ceramic Society EPDC Awards Committee (June 2018 – May 2019).
- *Member.* American Ceramic Society EPDC Awards Committee (June 2014 – May 2018).
- *Member.* Materials Research Society Program Development Subcommittee (2015-2018).
- *Member.* Graduate Excellence in Materials Science Awards 2018 Committee, Basic Science Division of the American Ceramic Society.
- *Chair.* Society of Hispanic Professional Engineers 2017 Distinguished Lecture Series (Kansas City, MO. Date: November 1-5, 2017).
- *Committee Member.* Arthur Frederick Greaves-Walker Lifetime Service Award, National Institute of Ceramic Engineers of the American Ceramic Society (October 2016 – May 2017).
- *Committee Member.* Karl Schwartzwalder Professional Achievement in Ceramic Engineering (PACE) Award, National Institute of Ceramic Engineers of the American Ceramic Society (October 2016 – May 2017).
- *Member.* Graduate Excellence in Materials Science Awards 2017 Committee, Basic Science Division of the American Ceramic Society.

- *Chair.* Society of Hispanic Professional Engineers 2016 Graduate Programs (Seattle, WA. Date: November 2-6, 2016).
- *Committee Member.* Karl Schwartzwalder Professional Achievement in Ceramic Engineering (PACE) Award, National Institute of Ceramic Engineers of the American Ceramic Society (October 2015 – May 2016).
- *Member.* Graduate Excellence in Materials Science Awards 2016 Committee, Basic Science Division of the American Ceramic Society.
- *Panelist.* SHPE 2015 Panel “Developing the Vision for Your Research Program”, (Baltimore, MD. Date: November 12, 2015).
- *Panelist.* SHPE 2015 Panel “Faculty Application Process: Research, Teaching and Service”, (Baltimore, MD. Date: November 12, 2015).
- *Panelist.* SHPE 2015 Panel “Call to Action! The Need for Diverse STEM Faculty”, (Baltimore, MD. Date: November 12, 2015).
- *Judge.* SHPE 2015 Student Technical Paper Competition, Mechanics of Materials and Fluids Session (Baltimore, MD. Date: November 13, 2015).
- *Co-Chair.* SHPE 2015 Distinguished Lecture Series (November 2015).
- *Member.* Graduate Excellence in Materials Science Awards 2015 Committee, Basic Science Division of the American Ceramic Society.
- *Committee Member.* Karl Schwartzwalder Professional Achievement in Ceramic Engineering (PACE) Award, National Institute of Ceramic Engineers of the American Ceramic Society (October 2014 – May 2015).
- *Committee Member.* SHPE National Institute for Leadership Advancement (March – August 2014).
- *Member.* Graduate Excellence in Materials Science Awards 2014 Committee, Basic Science Division of the American Ceramic Society.
- *Member.* Greaves-Walker Lifetime Achievement Award 2014 Selection Committee, National Institute of Ceramic Engineers of the American Ceramic Society.
- *Chair.* Arthur L. Friedberg Memorial Lecture 2014 Selection Committee, National Institute of Ceramic Engineers of the American Ceramic Society.
- *Chair.* Society of Hispanic Professional Engineers 2013 Graduate Programs (Indianapolis, IN. Date: October 30 – November 2, 2013).
- *Chair.* The American Ceramic Society Bulletin Advisory Board (October 2012 – October 2013).
- *Member.* Arthur L. Friedberg Memorial Lecture 2013 Selection Committee, National Institute of Ceramic Engineers of the American Ceramic Society.
- *President.* National Institute of Ceramic Engineers (October 2012 – October 2013).
- *Member.* Graduate Excellence in Materials Science Awards 2013 Committee, Basic Science Division of the American Ceramic Society.
- *Chair.* Society of Hispanic Professional Engineers 2012 Graduate Programs (Fort Worth, TX. Date: November 14-18, 2012).
- *Co-Chair.* The Robert B. Sosman Award 2012 Selection Committee, Basic Science Division of the American Ceramic Society.

- *Member.* Arthur L. Friedberg Memorial Lecture 2012 Selection Committee, National Institute of Ceramic Engineers of the American Ceramic Society.
- *President Elect.* National Institute of Ceramic Engineers (October 2011 – October 2012).
- *Member.* Graduate Excellence in Materials Science Awards 2012 Committee, Basic Science Division of the American Ceramic Society.
- *Vice President.* National Institute of Ceramic Engineers (October 2010 – October 2011).
- *Member.* The American Ceramic Society Bulletin Advisory Board (October 2009 – October 2012).
- *Member.* Materials Research Society 2011 Nominating Committee.
- *Member of the Board of Directors.* Sociedad Mexicana de Materiales (2005 – 2011).
- *Member.* The Robert B. Sosman Award 2011 Selection Committee, Basic Science Division of the American Ceramic Society.
- *Ad-hoc Reviewer.* L’Oreal For Women in Science Post-doctoral Fellowship Program (January 2006 – present).
- *Chair.* Society of Hispanic Professional Engineers 2011 Graduate Programs (Anaheim, CA. Date: October 26-30, 2011).
- *Co-Chair of Programming 2010.* Basic Science Division of the American Ceramic Society.
- *Chair.* Society of Hispanic Professional Engineers 2010 Graduate Institute (Cincinnati, OH. Date: October 27-31, 2010).
- *Secretary.* National Institute of Ceramic Engineers (October 2009 – September 2010).
- *Member.* Long Range Planning Committee, Basic Science Division of the American Ceramic Society (2007-2009).
- *Member.* Materials Research Society International Relations Committee (June 2003 – November 2009).
- *Chair.* Society of Hispanic Professional Engineers 2009 Annual Conference Student Technical Paper and Poster Competition (Washington, DC. Date: October 28 – November 1, 2009).
- *Member.* National Academy of Sciences Review Panel for the NASA Institute for Advanced Concepts (December 2008 – August 2009).
- *Chair.* V Annual Women in Science Luncheon at the XVIII International Materials Research Congress. The keynote speaker was Dr. Gabriela Alicia Díaz Guerrero, Universidad Nacional Autónoma de México. (Cancún, México. Date: August 19, 2009).
- *Chair.* Society of Hispanic Professional Engineers 2008 Annual Conference Student Technical Paper and Poster Competition (Phoenix, AZ. Date: November 12-15, 2008).
- *Chair.* IV Annual Women in Science Luncheon at the XVII International Materials Research Congress. The keynote speaker was Dr. Katja Lindenberg, University of California, San Diego. (Cancún, México. Date: August 20, 2008).
- *Treasurer.* Northern California Section of the American Ceramic Society (January 2000 – July 2008).
- *Chair.* Society of Hispanic Professional Engineers 2007 Annual Conference Student Technical Paper Competition (Philadelphia, PA. Date: October 31-November 3, 2007).
- *Chair.* Society of Hispanic Professional Engineers 2007 National Technical and Career Conference Student Technical Paper and Poster Competition (Denver, CO. Date: January 10-13, 2007).

- *Chair.* Society of Hispanic Professional Engineers 2006 National Technical and Career Conference Undergraduate and Graduate Technical Paper and Poster Competition (Lake Buena Vista, FL. Date: January 4-8, 2006).
- *Chair.* III Annual Women in Science Luncheon at the XV International Materials Research Congress. The keynote speakers were Dr. Noemi Elisabeth Walsöe de Reca (Centro de Investigación en Sólidos, Argentina) and Dr. Karen Lozano (University of Texas Panamerican). (Cancún, México. Date: August 23, 2006).
- *Chair.* Northern California Section of the American Ceramic Society Annual Dinner Meeting (Davis, CA. Date: May 11, 2005).
- *Chair.* Society of Hispanic Professional Engineers 2005 National Technical and Career Conference Undergraduate and Graduate Technical Paper and Poster Competition (Dallas, TX. Date: January 5-9, 2005).
- *Chair.* II Annual Women in Science Luncheon at the XIV International Materials Research Congress. The keynote speakers were Dr. Lynn Loo (University of Texas at Austin) and Dr. Julia Tagüeña (Universidad Nacional Autónoma de México). (Cancún, México. Date: August 24, 2005).
- *Chair.* Northern California Section of the American Ceramic Society Annual Poster Competition and Dinner Meeting (Davis, CA. Date: May 5, 2004).
- *Chair.* Society of Hispanic Professional Engineers 2004 National Technical and Career Conference Undergraduate Technical Paper Competition (Chicago, Illinois. Date: January 7-10, 2004).
- *Chair.* I Annual Women in Science Luncheon at the XIII International Materials Research Congress. The keynote speakers were Dr. Mildred Dresselhaus (Massachusetts Institute of Technology) and Dr. Merrilea Mayo (The National Academies). (Cancún, México. Date: August 24, 2004).
- *Chair.* Northern California Section of the American Ceramic Society Annual Poster Competition and Dinner Meeting (Davis, CA. Date: May 7, 2003).
- *Chair.* Society of Hispanic Professional Engineers 2003 National Technical and Career Conference Undergraduate Technical Paper Competition (New Orleans, LA. Date: January 8-11, 2003).
- *Chair.* Society of Hispanic Professional Engineers 2002 National Technical and Career Conference Undergraduate Technical Paper Competition (Minneapolis, MN. Date: February 6-9, 2002).
- *Banquet Chair.* Society of Hispanic Professional Engineers UC Davis Student Chapter (September 1996 – June 1998).
- *Treasurer.* Society of Hispanic Professional Engineers UC San Diego Student Chapter (September 2003 – June 2004).
- *Secretary.* Society of Hispanic Professional Engineers Southwestern Community College Student Chapter (August 2001 – May 2002).

SERVICES TO FOUNDATIONS AND BOARDS

- *Member.* Southwestern College President's Advisory Committee (January 2025 – present).
- *Member.* U.S. National Committee for Theoretical and Applied Mechanics, National Academies (November 2023 – present).
- *Member.* Board of Directors, La Jolla Symphony and Chorus (June 2021 – present).
- *Member.* Consejo Consultivo Internacional, Universidad Autónoma de Baja California (October 2020 – present).
- *Member.* University of Nevada–Reno, College of Engineering Advisory Board (August 2020 – present).

- *Member.* External Review Committee of the Centro de Investigación en Materiales Avanzados, S.C. (December 2017 – present).
- *Member.* Board of Directors, American Ceramic Society (October 2021 – October 2024).
- *Member.* Science Advisory Council, Ocean Discovery Institute (July 2021 – June 2023).
- *Member.* National Academies Condensed Matter and Materials Research Committee (October 2017 – June 2023).
- *Member.* Committee on Advising NSF on its Efforts to Achieve the Nation’s Vision for the Materials Genome Initiative (June 2021 – January 2023).
- *Member.* Panel on Assessment of the National Institute of Standards and Technology Center for Neutron Research (NCNR) (July 2021 – November 2021).
- *Member.* Panel on Assessment of the Materials and Manufacturing Sciences at the Army Research Laboratory (May 2020 – August 2021).
- *Member.* Panel on Assessment of the Material Measurement Laboratory of the National Institute of Standards and Technology (MML NIST) (July 2020 – November 2020).
- *Member.* Panel on Review of the In-house Laboratory Independent Research in Materials Sciences at the Army's Research, Development, and Engineering Centers (December 2018 – October 2019).
- *Member.* Panel on Materials Science and Engineering at the Army Research Laboratory (June 2017 – February 2019).
- *Member.* 52 Weeks of Science Committee - Reuben H. Fleet Science Center (January 2017 – April 2018).
- *Committee Member.* Advancing Hispanic Excellence in Technology, Engineering, Mathematics, and Science (AHETEMS) Foundation Scholarship Committee (2009 – 2011).
- *Member of the Board of Directors.* Advancing Hispanic Excellence in Technology, Engineering, Mathematics, and Science (AHETEMS) Foundation (2005).

SERVICES TO COMMUNITY

- *Panelist.* Mujeres que Inspiran, Tijuana Innovadora (Tijuana, México. Date: March 19, 2025).
- *Panelist.* “Materials for the Future of Aerospace”, Advanced Materials for the Future of the Oklahoma Economy: Challenges and Opportunities, additional panelists: Andrea Hodge, Donald Brenner, Yingtao Liu (Norman, OK. Date: November 15, 2024).
- *Panelist.* “Building an innovative and equitable economy through education, business and government collaboration in the Los Angeles-San Diego-Tijuana region”, RE:BORDER Binational Conference 2024, additional panelists: Luis Enrique Palafox, Tatiana Clouthier, and Maritza Diaz (San Diego, CA. Date: October 15, 2024).
- *Welcome Speaker.* UC Centers for Teaching and Learning Annual Meeting (La Jolla, CA. Date: September 4, 2024).
- *Guest Speaker.* 3er. Bootcamp Internacional de Emprendimiento con Ciencia, Universidad Autónoma de Baja California (Tijuana, México. Date: August 22, 2024).
- *Panelist.* Partnerships: Expanding NSF INTERN, Directorate for Engineering (ENG) Advisory Committee Meeting, National Science Foundation (Date: April 4, 2024).
- *Panelist.* Foro Mujer 2024: Mujeres Extraordinarias (Mexicali, México. Date: March 20, 2024).
- *Panelist.* National Discovery Cloud for Climate Workshop (La Jolla, CA. Date: March 7, 2024).

- *Guest Speaker.* Eleanor Roosevelt College Freshman Honors Seminar (La Jolla, CA. Date: February 26, 2024).
- *Guest Speaker.* REV'd Monday—Revelle College (La Jolla, CA. Date: February 26, 2024).
- *Guest Speaker.* adWISE—Advice from Women in Science and Engineering (La Jolla, CA. Date: August 18, 2023).
- *Participant and Author.* Space Materials Workshop, Principal organizers: Timothy Minton (University of Colorado), Vicky Doan-Nguyen Trigg (Aerospace Corporation), Michael P. SanSoucie (NASA Marshall Space Flight Center), Joyce Dever (NASA Glenn Research Center), Ryan Hoffmann (Air Force Research Laboratory), Todd Turner (Air Force Research Laboratory), July 24-28, 2023.
- *Panelist.* “Accessing Graduate Studies in Engineering”, UC San Diego Undergraduate Research Hub (La Jolla, CA. Date: July 17, 2023).
- *Keynote Speaker.* Jacobs School of Engineering Corporate Affiliates Program (La Jolla, CA. Date: June 8, 2023).
- *Panel Moderator.* Coloquio: La UNAM en las Fronteras de México (Tijuana, México. Date: May 18, 2023).
- *Keynote Speaker.* Concurso Estatal de Creatividad e Innovación Tecnológica y Hackathon 2023 (Tijuana, México. Date: March 31, 2023).
- *Guest Speaker.* ALRISE Alliance (Date: November 28, 2022).
- *Keynote Speaker.* Like A Girl (Monterrey, México. Date: November 23, 2022).
- *Guest Speaker.* REV 20 (La Jolla, CA. Date: November 15, 2022).
- *Guest Speaker.* Take a Triton to Class Webinar (La Jolla, CA. Date: October 18, 2022).
- *Panelist.* CLS Latino Heritage Month STEM Faculty Plática (La Jolla, CA. Date: October 14, 2022).
- *Keynote Speaker.* LatinX Trailblazers in Engineering (Date: July 26, 2022).
- *Guest Speaker.* UC San Diego Outreach Program for Advancing Learning in STEM (La Jolla, CA. Date: July 20, 2022).
- *Guest Speaker.* HACU's La Academia de Liderazgo (Coronado, CA. Date: June 23, 2022).
- *Keynote Speaker.* Western Alliance to Expand Student Opportunities Sixteenth Annual Student Research Conference (Date: March 26, 2022).
- *Panelist.* Faculty Forum - UC San Diego ACE Internationalization Lab Peer Review Site Visit (Date: November 15, 2021).
- *Panelist.* UC Riverside After Grad: Academic Pathways Week, First-Gen Faculty Keynote Panel (Date: November 1, 2021).
- *Keynote Speaker.* Jornada de Iniciación Científica (Date: October 15, 2021).
- *Outreach Panelist.* MMLD-CEST-2021 (Date: September 28, 2021).
- *Guest Speaker.* Desayuno del Sábado (Date: August 7, 2021).
- *Reviewer.* ColibriMX Scholarship Program, Mexican Consulate in San Diego (August 2021).
- *Guest Speaker.* Girl Up STEAM (Date: July 26, 2021).
- *Guest Speaker.* Jacobs School of Engineering Transfer Prep Closing Event (Date: July 16, 2021).
- *Guest Speaker.* Bee Wise Workshop (Date: July 13, 2021).

- *Guest Speaker.* Meet a Scientist Monthly Speaker Series, Association for Women in Science (AWIS) San Diego (Date: February 10, 2021).
- *Keynote Speaker.* "Broadening Participation in the Materials Science and Engineering Profession", MS&T20 (Date: November 4, 2020). <https://www.youtube.com/watch?v=UqaIWgk7Dw>
- *Guest Speaker.* REV 20 (Date: November 3, 2020).
- *Panelist.* "International Recruitment", UC-Mexico Academic Mobility Workshop (October 28-29, 2020).
- *Panelist.* NANO 282 (Date: October 22, 2020).
- *Panelist.* Borderless Business Congress "Advanced Materials for Advanced Manufacturing" (Date: October 13, 2020).
- *Panelist.* Tijuana Innovadora 2020 "Future of Bi-national Education" (Date: October 6, 2020).
- *Reviewer.* ColibriMX Scholarship Program, Mexican Consulate in San Diego (August 2020).
- *Distinguished Speaker.* Naval Research Laboratory HBCU/MI Undergraduate Summer Research Program Seminar Series (Date: August 5, 2020).
- *Guest Speaker.* EducationUSA Webinar: Letters of Recommendation for Graduate Students (Date: August 4, 2020).
- *Keynote Speaker.* UC San Diego TRIO SSSP 27th Annual Awards Ceremony & Grad Celebration (La Jolla, CA. Date: June 7, 2020).
- *Welcome Speaker.* UC San Diego Professional Evening with Industry (La Jolla, CA. Date: October 23, 2019).
- *Keynote Speaker.* MANA de San Diego Scholarship Celebration (El Cajon, CA. Date: July 7, 2019).
- *Invited Speaker.* UC San Diego CSE Department Diversity, Equity, and Inclusion Seminar Series (La Jolla, CA. Date: May 13, 2019).
- *Guest Speaker.* REV 20 (La Jolla, CA. Date: May 7, 2019).
- *Keynote Speaker.* UC San Diego College Signing Day (La Jolla, CA. Date: May 1, 2019).
- *Speaker.* EDI Grant Recipient Luncheon (La Jolla, CA. Date: April 29, 2019).
- *Keynote Speaker.* Women in Materials Science & Engineering Breakfast, Materials Research Society Spring 2019 Meeting (Phoenix, AZ. Date: April 24, 2019).
- *Invited Speaker.* Madrugadores de Tijuana (Tijuana, México. Date: March 28, 2019).
- *Keynote Speaker.* Adelante Mujer Conference (La Jolla, CA. Date: March 16, 2019).
- *Panelist.* Undergraduate Women in Physics Panel (La Jolla, CA. Date: February 8, 2019).
- *Keynote Speaker.* Enspire (La Jolla, CA. Date: January 28, 2019).
- *Keynote Speaker.* STEMMing for Success (La Jolla, CA. Date: December 1, 2018).
- *Guest Speaker.* Red Global San Diego (San Diego, CA. Date: August 9, 2018).
- *Keynote Speaker.* SPIS Welcome Reception (La Jolla, CA. Date: August 5, 2018).
- *Welcome Speaker.* Summer Engineering Institute (La Jolla, CA. Date: August 5, 2018).
- *Distinguished Lecturer.* Osher Lifelong Learning Institute (La Jolla, CA. Date: July 10, 2018).
- *Keynote Speaker.* 2018 AEP Summer Research Program Faculty Breakfast (La Jolla, CA. Date: June 21, 2018).

- *Keynote Speaker.* SHPEtinias Women's Empowerment Conference (Irvine, CA. Date: May 26, 2018).
- *Guest Speaker.* Smart Border Coalition San Diego-Tijuana Stakeholders Working Committee Meeting (San Diego, CA. Date: May 10, 2018).
- *Keynote Speaker.* STEMengineering Day (La Jolla, CA. Date: April 7, 2018).
- *Guest Speaker.* Sharp Minds Lecture Series at the Fleet Science Center (San Diego, CA. Date: April 2, 2018).
- *Keynote Speaker.* Val Verde Unified School District Family Engagement Symposium (Perris, CA. Date: March 23, 2018).
- *Guest Speaker.* Julian Dark Sky Network (Julian, CA. Date: March 10, 2018).
- *Guest Speaker.* REV 20 (La Jolla, CA. Date: February 13, 2018).
- *Welcome Speaker.* Undocu Joy (La Jolla, CA. Date: January 17, 2018).
- *Welcome Speaker.* GEM GRAD Lab (La Jolla, CA. Date: October 27, 2017).
- *Guest Speaker.* Instituto México de Baja California High School Career Week (Tijuana, México. Date: October 27, 2017).
- *Plenary Speaker.* CREDITS: Strengthening Team Science in California (Lake Arrowhead, CA. Date: October 14, 2017).
- *Co-chair.* Cross-border Innovation Gala (La Jolla, CA. Date: September 9, 2017).
- *Guest Speaker.* STARS Science Lecture (La Jolla, CA. Date: July 21, 2017).
- *Guest Speaker.* "Colonizing Mars - Dream or Future?", Suds & Science Program, Ruben H. Fleet Science Center (Vista, CA. Date: June 5, 2017).
- *Panelist.* Cross-border Business Forum - San Diego Regional Chamber of Commerce (Tijuana, México. Date: May 23, 2017).
- *Guest Speaker.* Vi Technology Group (La Jolla, CA. Date: May 18, 2017).
- *Keynote Speaker.* ChicasSTEM Program of US Consulate (Ciudad Juárez, México. Date: May 13, 2017).
- *Guest Speaker.* Federal Women's Program at US Consulate (Ciudad Juárez, México. Date: May 12, 2017).
- *Guest Speaker.* Education USA Advising Center (Ciudad Juárez, México. Date: May 12, 2017).
- *Guest Speaker.* La Rodadora Children's Museum (Ciudad Juárez, México. Date: May 11, 2017).
- *Guest Speaker.* Webinar, US Consulate Ciudad Juárez (Date: May 3, 2017).
- *Guest Speaker.* Webinar, Red de Talentos Dallas (Date: April 27, 2017).
- *Closing Speaker.* UC San Diego 30th Annual Undergraduate Research Conference (La Jolla, CA. Date: April 22, 2017).
- *Welcome Speaker.* SHPE Region 2 Leadership Development Conference (La Jolla, CA. Date: April 20, 2017).
- *Keynote Speaker.* Enspire 2017 (La Jolla, CA. Date: March 2, 2017).
- *Panelist.* SWE Envision 2017 (La Jolla, CA. Date: February 25, 2017).
- *Plenary Speaker.* NSF INCLUDES Conference: Collective Impact as a Pathway to Reinvigorate Broadening Participation in STEM (La Jolla, CA. Date: January 21, 2017).

- *Panelist.* "Mentoring Historically Underrepresented Minority Faculty", Uncovering the Institutional Impact of Scholars from Historically Underrepresented Backgrounds: A meeting sponsored by RWJF Connections and the University of Southern California (Los Angeles, CA. Date: December 1, 2016).
- *Chair.* Art Sale Scholarship Fundraiser (La Jolla, CA. Date: November 19-20, 2016).
- *Honorary Lecturer.* SHPE 2016 (Seattle, WA. Date: November 3, 2016).
- *Moderator.* Panel on the Mexican Diaspora, Red Global MX 2016 (México City, México. Date: September 28 - October 1, 2016).
- *Guest Speaker.* CANIETI Breakfast (Tijuana, Mexico. Date: September 22, 2016).
- *Guest Speaker.* San Diego Chamber of Commerce Education & Workforce Development Committee Meeting (San Diego, CA. Date: September 21, 2016).
- *Faculty Panelist.* TRIO Program New Student Orientation (La Jolla, CA. Date: August 12, 2016).
- *Keynote Speaker.* Semana de Ciencias (Ensenada, México. Date: July 30, 2016).
- *Guest Speaker.* Programa de Género Altazor (Tijuana, México. Date: June 13, 2016).
- *Keynote Speaker.* Loma Verde Elementary School Graduation / Promotion (Chula Vista, CA. Date: June 3, 2016).
- *Keynote Speaker.* 2016 ESL Certificate Ceremony, Southwestern Community College (Chula Vista, CA. Date: May 13, 2016).
- *Keynote Speaker.* 16th annual MSE Scholarship Awards Banquet, Southwestern Community College (Chula Vista, CA. Date: May 6, 2016).
- *Guest Speaker.* Engineering Class at Our Lady of Peace Academy (San Diego, CA. Date: April 27, 2016).
- *Judge.* Expo Proyectos Interdisciplinarios, Bachillerato La Paz (Tijuana, Mexico. Date: April 19, 2016).
- *Panelist.* Panel on Academic Careers organized by the Women in Bioengineering Graduate Student Group (La Jolla, CA. Date: March 30, 2016).
- *Panelist.* EXPOTECH 2016 (Tijuana, Mexico. Date: March 3, 2016).
- *Guest Speaker.* CANIETI Breakfast (Tijuana, Mexico. Date: September 30, 2015).
- *Guest Speaker.* UC San Diego Creating Scientists Undergraduate Research Program (La Jolla, CA. Date: July 7, 2015).
- *Judge.* Expo Proyectos Interdisciplinarios, Bachillerato La Paz (Tijuana, Mexico. Date: May 12, 2015).
- *Keynote Speaker.* Madrugadores de Tijuana (Tijuana, Mexico. Date: May 7, 2015).
- *Panelist.* Women Faculty Mixer and Roundtable "Are you Bossy or Brilliant?" (La Jolla, CA. Date: April 22, 2015).
- *Keynote Speaker.* Annual S.M.A.R.T. Conference (Science, Mathematics, Articulation, Resource, Technology) (Chula Vista, CA. Date: April 18, 2015).
- *Guest Speaker.* SHPE UNR Student Chapter Meeting (Reno, NV. Date: April 13, 2015).
- *Keynote Speaker.* Cesar E. Chavez 11th Annual Scholarship Breakfast, Southwestern College Chicano Latino Coalition (Chula Vista, CA. Date: March 27, 2015).
- *Keynote Speaker.* CAMP 2015 Symposium Awards Dinner (Irvine, CA. Date: February 7, 2015).

- *Guest Speaker.* UCSD IDEA Center Grad Talk: How to Choose and Advisor (La Jolla, CA. Date: October 10, 2014).
- *Keynote Speaker.* Chancellor's Scholars Opening Reception (La Jolla, CA. Date: October 10, 2014).
- *Plenary Speaker.* 1er Foro Mujeres en la Ciencia at Universidad Autónoma de Baja California (Tijuana, México. Date: October 6, 2014).
- *Speaker.* COSMOS Discovery Lecture (La Jolla, CA. Date: July 29, 2014).
- *Guest Speaker.* Eco-Engineering Academy at Southwest High School (Chula Vista, CA. Date: May 29, 2014).
- *Keynote Speaker.* The SHPE 8th Annual High School Conference EmPower 2014 (La Jolla, CA. Date: May 3, 2014).
- *Speaker.* UC San Diego JSOE CAREER Award Preparation Workshop (La Jolla, CA. Date: April 30, 2014).
- *Keynote Speaker.* MANA de San Diego meeting at UC San Diego (La Jolla, CA. Date: March 22, 2014).
- *Guest Speaker.* UC San Diego IDEA Center Grad Talk: How to Choose an Impactful Research Question/Topic (La Jolla, CA. Date: February 28, 2014).
- *Guest Speaker.* UC San Diego Initiative for Maximizing Student Development Seminar Series (La Jolla, CA. Date: February 11, 2014).
- *Surprise Reader.* Pre-K Class at San Carlos United Methodist Pre-school (San Diego, CA. Date: November 22, 2013).
- *Keynote Speaker.* Castle Park Middle School Graduation / Promotion (Chula Vista, CA. Date: June 7, 2013).
- *Judge.* 4th Expo of Interdisciplinary Projects of "La Paz" High School (Tijuana, Mexico. Date: April 30, 2013).
- *Keynote Speaker.* VISTAS Dinner (Alfred, NY. Date: April 12, 2012).
- *Surprise Reader.* Pre-K Class at San Carlos United Methodist Pre-school (San Diego, CA. Date: March 2, 2012).
- *Keynote Speaker.* VISTAS Dinner (Alfred, NY. Date: April 7, 2011).
- *Keynote Speaker.* Alfred University Board of Trustees Dinner (Alfred, NY. Date: October 14, 2010).
- *Keynote Speaker.* VISTAS Dinner (Alfred, NY. Date: April 29, 2010).
- *Keynote Speaker.* Bergren Forum (Alfred, NY. Date: April 15, 2010).
- *Invited Speaker.* VISTAS Dinner (Alfred, NY. Date: April 16, 2009).
- *Host.* "Man in Space – How Far" Table, Food for Thought 2008 Banquet (Reno, NV. Date: April 28, 2008).
- *Keynote Speaker.* Nevada MESA Program Fall Banquet (Sparks High School, Reno, NV. Date: November 18, 2004).
- *Guest Speaker.* Nevada MESA Summer PASS Program (University of Nevada–Reno, Reno, NV. Date: August 3, 2004).
- *Judge.* Roy Gomm Elementary School Inventor's Convention (Reno, NV. Date: March 2, 2004).

- *Keynote Speaker.* University of California–Davis Minority Engineering Program Annual Banquet (Davis, CA. Date: May 16, 2003).
- *Judge.* Lemelson Science Fair (Reno, NV. Date: March 13, 2003).
- *Keynote Speaker.* Nevada MESA Program Fall Banquet (Traner Middle School, Reno, NV. Date: December 5, 2002).
- *Exhibits Committee Member.* The Tech Museum of Innovation (San Jose, CA. Date: September 2000 – December 2003).
- *Reviewer.*

Agencies

National Science Foundation (NSF)
 National Aeronautics and Space Administration (NASA)
 Department of Homeland Security (DHS)
 Department of Energy
 Air Force Office of Scientific Research (AFOSR)
 U.S. Civilian Research and Development Foundation (CRDF)
 American Chemical Society Petroleum Research Fund (PRF)
 Consejo Nacional de Ciencia y Tecnologia (CONACyT)
 Army Research Office (ARO)
 European Research Council
 Defense Systems Information Analysis Center
 National Academies of Sciences, Engineering, and Medicine

Journals

ACS Applied Materials & Interfaces
 ACS Applied Nanomaterials
 ACS Nano
 Acta Materialia
 Advanced Engineering Materials
 Advanced Materials
 Advances in Applied Ceramics
 AIP Advances
 Applied Surface Science
 Beilstein Journal of Nanotechnology
 Biomaterials Advances
 Biomedical Materials
 Carbon
 Catalysts
 Ceramics International
 Ceramic Transactions
 ChemComm
 Chemical Engineering Journal
 Chemistry of Materials
 Chemistry Select
 Chemical Physics Letters
 Colloids and Surfaces A
 CrystEngComm
 ECS Journal of Solid State Science and Technology
 ECS Solid State Letters
 Electrochemical and Solid-State Letters
 Energy & Fuels
 Experimental Thermal and Fluid Science

European Physical Journal D
 Extreme Mechanics Letters
 Heat Transfer Engineering
 IEEE Transactions on Nuclear Science
 Industrial & Engineering Chemistry Research
 Instrumentation Science & Technology
 International Journal of Applied Ceramic Technology
 International Journal of Applied Glass Science
 International Journal of Refractory Metals and Hard Materials
 International Journal of Thermal Sciences
 International Journal of Electrochemistry
 International Journal of Nanomedicine
 International Journal of Nanoparticles
 Inorganic Chemistry
 Journal of Advanced Materials
 Journal of Alloys and Compounds
 Journal of Applied Physics
 Journal of Applied Research and Technology
 Journal of ASTM International
 Journal of Biomedical Materials Research Part B: Applied Biomaterials
 Journal of Biomedical Nanotechnology
 Journal of Cleaner Production
 Journal of Colloid and Interface Science
 Journal of Crystal Growth
 Journal of Inorganic Materials
 Journal of Luminescence
 Journal of Materials Chemistry
 Journal of Materials Engineering and Performance
 Journal of Materials Research
 Journal of Materials Research and Technology
 Journal of Materials Science
 Journal of Materials Science and Technology
 Journal of Materials Science: Materials in Medicine
 Journal of Molecular Liquids
 Journal of Nanoparticle Research
 Journal of Nano Research
 Journal of Nanoscience and Nanotechnology
 Journal of Physical Chemistry
 Journal of Physical Chemistry Letters
 Journal of Physics – Condensed Matter
 Journal of Physics D
 Journal of Professional Issues in Engineering Education and Practice
 Journal of Rare Earths
 Journal of Solid State Chemistry
 Journal of the American Ceramic Society
 Journal of the American Chemical Society
 Journal of Women and Minorities in Science and Engineering
 Langmuir
 Materials
 Materials Characterization
 Materials Chemistry and Physics
 Materials Letters
 Materials Research Bulletin

Materials Research Express
 Materials Research Letters
 Materials Science and Engineering A
 Materials Science and Engineering B
 Materials Science Forum
 Metallurgical and Materials Transactions A
 Metallurgical and Materials Transactions B
 Metals
 MRS Communications
 Nano Letters
 Nanomaterials and Nanotechnology
 Nanoscale
 Nanoscale Advances
 Nanoscale Research Letters
 Nanotechnology
 Nature
 New Journal of Chemistry
 Optical and Quantum Electronics
 Optical Materials
 Optical Materials Express
 Particle & Particle Systems Characterization
 Philosophical Magazine
 Physical Chemistry Chemical Physics
 Powder Technology
 Revista Ingeniería é Investigación
 Science of Advanced Materials
 Scientific Reports
 Scripta Materialia
 Solid State Ionics
 Solid State Sciences
 SpringerPlus
 RSC Advances
 Surface and Coatings Technology
 Revista Latinoamericana de Metalurgia y Materiales
 Thermal Science
 Transactions on Nuclear Science

ACTIVITIES CONNECTED TO THE UNIVERSITY OF CALIFORNIA, SAN DIEGO

SERVICES TO THE UNIVERSITY OF CALIFORNIA SYSTEM

- *Member.* Joint Senate-Administration Workgroup to Review Academic Personnel Manual Policy Language (APM - 015 & APM - 016) (September 2024 – present).
- *Member.* UCLA Materials Science and Engineering External Advisory Board (September 2024 – August 2025).
- *Vice-Chair.* UC-Mexico Initiative's Taskforce on Student Mobility (January 2015 – February 2017).
- *Member.* UC-Mexico Initiative's Energy Working Group (October 2014 – February 2017).
- *Member.* External Advisory Board for the UC Davis ADVANCE Program (November 2012 – December 2017).
- *Member.* Executive Steering Committee for the UC LEADS Program (November 2012 – June 2015).

SERVICES TO UNIVERSITY OF CALIFORNIA, SAN DIEGO

- *Chair.* UC San Diego Academic Senate (September 2024 – August 2025).
- *Vice-Chair.* UC San Diego Academic Senate (September 2023 – August 2024).
- *Member.* EVC 5-Year Review Committee (January 2023 – August 2023).
- *Member.* Education Advisory Committee of the UC San Diego MRSEC (July 2022 – present).
- *Alternate Delegate.* Representative Assembly, Revelle College (July 2022 – June 2023).
- *Member.* WIFIRE Advisory Board (October 2021 – present); <https://wifire.ucsd.edu/>
- *Member.* TILOS Internal Advisory Board (July 2021 – June 2022)
- *Member.* Center for Comparative Immigration Studies Board (September 2018 – present); <https://ccis.ucsd.edu/>
- *Member.* Task Force on Holistic Graduate Funding (July 2021 – June 2022).
- *Member.* UC San Diego Basement Faculty Advisory Committee (September 2018 – June 2022).
- *Member.* ACE Internationalization Lab Steering Committee (October 2019 – December 2021).
- *Member.* OAR² Advisory Board (January – August 2021).
- *Member.* HDH Social Impact & Innovation Committee (September 2018 – June 2021).
- *Member.* School of Engineering Time-to-Degree Task Force (April 2019 – June 2021).
- *Member.* Summer General Campus Task Force on Budget Planning Guidance (June 2020 – August 2020).
- *Member.* VC-EDI 5-Year Review Committee (January 2020 – August 2020).
- *Member.* La Jolla Symphony & Chorus Advisory Committee (March 2019 – June 2020).
- *Member.* UC San Diego Chemical Safety and Surveillance Committee (February 2019 – June 2020).
- *Member.* HSI Workgroup (September 2017 – June 2020).
- *Member.* Conflict of Interest Independent Review Committee (September 2015 – June 2020).
- *Member.* CLAH Steering Committee (September 2017 – July 2019).
- *Member.* VCSA Search Committee (January – September 2018).
- *Advisor.* Society of Hispanic Professional Engineers UC San Diego student chapter (January 2013 – June 2018).
- *Chair.* Diversity & Equity Committee of the Faculty Senate (September 2016 – August 2017).
- *Member.* JSOE Excellence Diversity Hire Search Committee (September 2016 – June 2017).
- *Member.* UC San Diego Interdisciplinary Initiative: Exploring the Basis of Human Knowledge, Learning and Creativity Faculty Search Committee (September 2016 – June 2017).
- *Member.* Joint Administrative-Senate Task Force on Exploring Hispanic Serving Institution Designation for UC San Diego (October 2016 – May 2017).
- *Revelle's Alternate Delegate.* Academic Senate Representative Assembly (July 2015 – June 2016).
- *Member.* JSOE Excellence Diversity Hire Search Committee (September 2015 – June 2016).
- *Member.* Revelle College 50th Anniversary Faculty and Emeriti Engagement Committee (October 2014 – June 2015).

- *Member.* JSOE Excellence Diversity Hire Faculty Search Committee (September 2014 – June 2015).
- *Member.* Assistant Vice Chancellor for Student Retention and Success Search Committee (February – June, 2015).
- *Member.* JSOE Excellence Diversity Hire Search Committee (September 2013 – June 2014).
- *Member.* Chemical Safety and Surveillance Committee of the Faculty Senate (October 2013 – October 2016).
- *Member.* Diversity & Equity Committee of the Faculty Senate (September 2014 – August 2016).
- *Member.* Director of the Center for Engaged Teaching Search Committee (July-August 2015).
- *Member.* Revelle College Natural Sciences Requirement Committee (May 2014 – August 2015).
- *Member.* Vice Chancellor and Chief Financial Officer Search Committee (April – August 2014).
- *Member.* Undergraduate Scholarships and Honors Committee of the Faculty Senate (September 2013 – August 2014).
- *Member.* IDEA Scholars 2014 Selection Committee (June 2014).
- *Member.* IDEA Student Center's Faculty/Executive Diversity Advisory Board (April 2013 – May 2014).
- *Member.* IDEA Scholars 2013 Selection Committee (June 2013).
- *Member.* Revelle College Provost Search Committee (September – December 2013).
- *Member.* Raza Resource Centro Director Search Committee (September – December 2013).

SERVICES TO THE DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING

- *Member.* MAE Council (September 2022 – present).
- *Member.* Mechanics & Materials Faculty Search Committee (September 2022 – June 2023).
- *Chair.* Committee for Equity, Diversity & Inclusion (July 2020 – June 2022).
- *Member.* MAE Council (July 2017 – July 2021).
- *Chair.* Excellence Faculty Search Committee (September 2019 – April 2020).
- *Member.* MAE Undergraduate Affairs Committee (July 2019 – June 2020).
- *Advisor.* Rocket Propulsion Laboratory (November 2017 – June 2019).
- *Advisor.* Students for the Development of Space (November 2017 – June 2019).
- *Member.* Building Renovation Committee (July 2017 – June 2018).
- *Member.* MAE Space Committee (January 2015 – June 2017).
- *Diversity Officer.* MAE Department (September 2014 – August 2016).
- *Member.* ABET Committee (November 2012 – August 2016).
- *Director.* MAE Characterization Core Facility (November 2023 – June 2016).
- *Member.* Materials in Extreme Environments Search Committee (September 2014 – June 2015).

ACTIVITIES CONNECTED TO ALFRED UNIVERSITY

SERVICES TO UNIVERSITY

- *Chair.* New York State College of Ceramics Faculty Council (August 2012 – March 2013).
- *Member.* New York State College of Ceramics Faculty Council (August 2010 – July 2012).
- *Member.* Vice-President for Statutory Affairs Search Committee (May 2009 – April 2010).

SERVICES TO THE SCHOOL OF ENGINEERING

- *Member.* Kazuo Inamori School of Engineering Graduate Admissions Committee (October 2008 – October 2012).
- *Member.* Kazuo Inamori School of Engineering Research Strategic Planning Committee (August 2008 – October 2012).
- *Member.* Scholes Library Committee (August 2011 – May 2012).
- *Member.* Fall 2011 Faculty Search Committee (September 2011 – May 2012).
- *Chair.* Fall 2010 Faculty Search Committee (September 2010 – May 2011).
- *Advisor.* Keramos Student Chapter (August 2010 – October 2012).

ACTIVITIES CONNECTED TO THE UNIVERSITY OF NEVADA, RENO

SERVICES TO UNIVERSITY

- *Member.* Curriculum Committee, College of Engineering (January 2005 – May 2008).
- *Founding Faculty Advisor.* Society of Hispanic Professional Engineers UNR Student Chapter (March 2004 – May 2008).
- *Member.* Faculty Search Committee, Department of Chemistry, College of Science (Fall 2003).
- *Member.* Faculty Search Committee, Department of Mechanical Engineering, College of Engineering (Spring 2006).
- *Member.* Chair Search Committee, Department of Chemical and Metallurgical Engineering, College of Engineering (Spring 2007).
- *Member.* Dean Search Committee, College of Engineering (September 2007 – May 2008).

SERVICES TO DEPARTMENT OF CHEMICAL AND METALLURGICAL ENGINEERING

- *Member.* Department Student Recruitment Committee (July 2002 – May 2008).
- *Chair.* Metallurgical and Materials Engineering Division Bi-Monthly Seminars (July 2002 – May 2005).
- *Webmaster.* Department of Chemical and Materials Engineering Web Page (July 2002 – June 2009).
- *Faculty Advisor.* Materials Advantage and Research Society (July 2002 – May 2008).
- *Chair.* Faculty Search Committee (September 2005 – June 2006).
- *Member.* Department Chair Search Committee (September 2006 – June 2007).