NORM 2026

CHEMISTRY IN THE CITY OF TREES

- BOISE, IDAHO -

June 28 - July 1, 2026

Conference Program

June 28th – July 1st, 2026
Boise Centre East
Boise, ID

Hosted by:

ACS Snake River

Up-to-date information:

Open the NORM mobile app in your browser:

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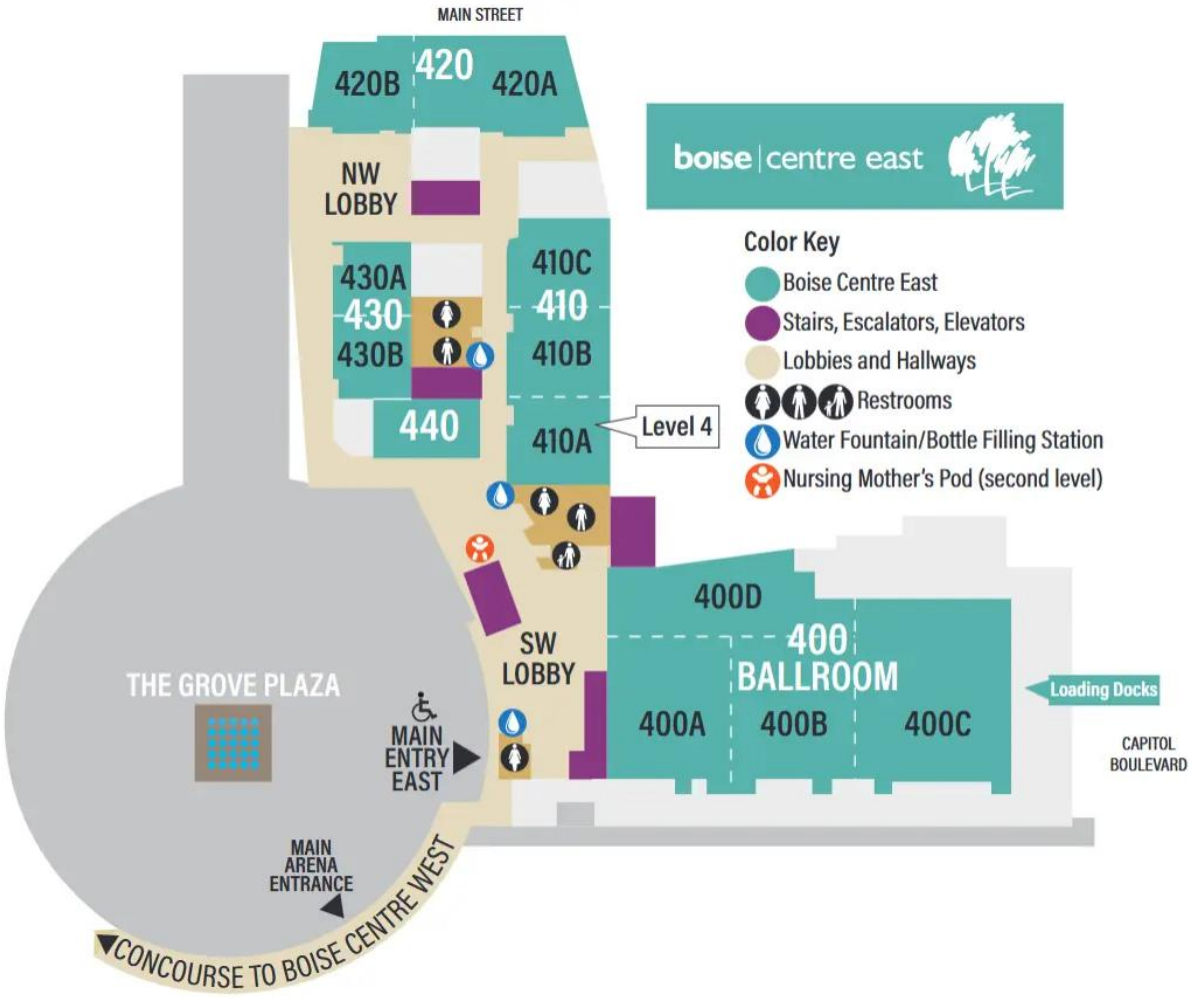
NORM 2026 Meeting at a Glance

TECHNICAL PROGRAM	S	M	T	W	ROOM	TIME
High School Teacher Program	A,P				Boise State Univ.	8:00 – 5:00 PM
Plenary Presentation: Nobel Laureate M. Stanley Whittingham	E				400C	6:00 – 6:50 PM
Frontiers in Scientific Research: Opening Night Poster Session	E				400A/B/D	7:00 – 9:00 PM
High School Teacher Program		A,P			430A & 430B	7:30 AM – 5:50 PM
Plenary Presentation: Dr. Geraldine “Geri” Richmond		A			400C	8:00 – 8:50 AM
Building a Sustainable Future with Chemical Methods and Materials		A			410A	9:00 AM – 12:15 PM
Chemistry and Biology in the Microbial World		A			410C	9:00 AM – 12:20 PM
Plenary Presentation: Dr. Helen Blackwell		A			410C	11:40 AM – 12:10 PM
Chemistry Behind the Chips: How Molecules Shape Memory Fabrication; From Micron R&D to High-Volume Manufacturing		A			410B	9:00 AM - Noon
Matter to Megawatts: The Future of Materials in Energy I		A			400C	9:00 AM – 12:20 PM
Organic Synthesis to Harness Biological Insight and Create Innovative Therapies		A			420A	9:00 AM – 12:05 pm
Plenary Presentation: Dr. Michelle Arkin		A			420A	11:00 – 11:30 AM
Topics in Physical and Computational Chemistry		A			440	9:00 AM – 12:20 PM
Undergraduate Student Poster Session		P			400A/B/D	Noon – 1:30 PM
Advanced Materials Chemistry		P			410A	1:30 – 5:15 PM
Matter to Megawatts: The Future of Materials in Energy II		P			400C	1:30 – 5:20 PM
Organic Synthesis to Access Complex Molecules and Potential Drugs		P			420A	1:30 – 5:05 PM
Plenary Presentation: Dr. John Wood		P			420A	3:10 – 3:40 PM
Organometallics: Ligand Design, Catalysis, and Other Applications I		P			440	1:30 – 4:40 PM
Software Development for Chemistry of Complex Systems		P			420B	1:30 – 4:55 PM
Topics in Biochemistry and Chemical Biology		P			410C	1:30 – 5:25 PM
Unraveling Structure and Dynamics in Molecules and Materials with Advanced Nonlinear Spectroscopy, Microscopy, and Photophysical Studies I		P			410B	1:30 – 4:45 PM
Advancing Chemistry through Computation and Artificial Intelligence			A		420B	8:00 – 10:55 AM
Innovations in Active Learning			A		430A	8:00 – 11:00 AM
Matter to Megawatts: The Future of Materials in Energy III			A		410A	8:00 – 11:05 AM
Nanoscale Materials and Their Applications I			A		400C	8:00 – 10:50 AM
Processing and Value-Enhanced Separation Strategies for Food, Dairy, and Biomass Valorization			A		440	8:00 – 11:05 AM
Therapeutics for the Treatment of Diseases in People, Plants, and Animals I			A		410C	8:00 – 11:05 AM
Undergraduate-Driven Organic Chemistry: Research Excellence at PUIs			A		430B	8:00 – 11:00 AM
Unraveling Structure and Dynamics in Molecules and Materials with Advanced Nonlinear Spectroscopy, Microscopy, and Photophysical Studies II			A		410B	8:00 – 10:50 AM
Plenary Presentation: Dr. Yury Gogotsi			A		400C	11:10 AM - Noon
Plenary Presentation: Dr. Mary “Nora” Disis, WCC Luncheon			P		420A	Noon – 1:30 PM
Future of Food in the Mountain West: Examining Priority Research Questions and Funding Opportunities			P		440	1:30 – 4:50 PM
Nanoscale Materials and Their Applications II			P		400C	1:30 – 5:15 PM
Nuclear Chemistry in the Northwest			P		430B	1:30 – 5:15 PM
Organometallics: Ligand Design, Catalysis, and Other Applications II			P		410A	1:30 – 4:20 PM
Scanning Probe Microscopy for Physical & Chemical Characterization of Materials			P		420B	1:30 – 5:15 PM
Student Learning and Success in STEM			P		430A	1:30 – 5:00 PM
Therapeutics for the Treatment of Diseases in People, Plants, and Animals II			P		410C	1:30 – 5:15 PM
Plenary Presentation: Dr. Mary “Nora” Disis			P		410C	3:25 – 3:55 PM
A = AM (MORNING), **P** = PM (AFTERNOON), **E** = EVENING						

NORM 2026 Meeting at a Glance

TECHNICAL PROGRAM (Continued)	S	M	T	W	ROOM	TIME
Unraveling Structure and Dynamics in Molecules and Materials with Advanced Nonlinear Spectroscopy, Microscopy, and Photophysical Studies III			P		410B	1:30 – 2:25 PM
Chemical and Lab Safety				A	410B	8:00 – 11:30 AM
Chemical Frontiers in Imaging: From Biomolecules to Semiconductors				A	410A	8:00 – 11:35 AM
From Access to Legibility: New Frontiers in Research Experiences for Students and Teachers				A	440	8:00 AM – 12:10 PM
Medical Devices, Sensors, and Systems				A	420B	8:00 AM - Noon
Nanoscale Materials and Their Applications III				A	420A	8:00 AM – 12:30 PM
Therapeutics for the Treatment of Diseases in People, Plants, and Animals III				A	410C	8:00 – 11:35 AM
Topics in Analytical, Environmental, and Inorganic Chemistry				P	410A	1:30 – 5:00 PM
Topics in Organic Chemistry				P	410B	1:30 – 5:00 PM
Nanoscale Materials and Their Applications IV				P	420A	2:00 – 4:30 PM
SPECIAL EVENTS	**S**	**M**	**T**	**W**	**ROOM**	**TIME**
Walk About Boise Walking Tour #1	P				Meet at Reg. Desk	2:30 – 4:00 PM
Opening Night Nobel Laureate Reception and Poster Session	E				400A/B/D	7:00 – 9:00 PM
ACS 150th Anniversary Reception		E			400A/B/D	Noon - 1:30 PM
Boise State Alumni Event		E				5:30 – 7:30 PM
High Scores, Strong Bonds, and Good Food		E				8:00 – 11:00 PM
Careers in Chemistry Panel and Breakfast			M		420A	7:30 – 9:00 AM
WCC Luncheon			P		420A	Noon – 1:30 PM
Basque Museum/Boarding House Tour			P			3:30 – 5:00 PM
Wine Tasting Event Sponsored by LECO			E		400A/B/D	5:00 – 6:00 PM
Awards Ceremony and ACS Governance Reception			E		400A/B/D	6:00 – 7:00 PM
Basque Cultural Dinner Banquet & History of Basques in Idaho			E			6:00 – 9:30 PM
Micron Technologies Tour				A		8:00 AM - Noon
Walk About Boise Walking Tour #2				P	Meet at Reg. Desk	3:00 – 4:30 PM
WORKSHOPS	**S**	**M**	**T**	**W**	**ROOM**	**TIME**
The Art of Negotiation Workshop		A			420B	10:30 AM - Noon
Accessing STEM: A Workshop in Course Material Accessibility & Title II Compliance Workshop				A	430A	8:00 – 10:00 AM
ACS Career Services Workshop: Acing the Interview Workshop				A	430B	8:00 – 10:00 AM
Bruker AFM Workshop - Technical Presentations				A	Boise State Univ.	9:00 AM – 1:30 PM
ACS Career Services Workshop: 1:1 Resume Review				A	430B	10:30 AM – Noon
Building Community in the Classroom Workshop				A	430A	10:30 AM - NOON
Python Training for Educators Workshop				P	420B	1:00 – 5:00 PM
ACS Career Workshop: Finding Yourself: Identifying a Career that Matches Your Strengths and Values				P	430 B	1:30 – 4:30 PM
Bruker AFM Workshop - Live Demonstrations				P	Boise State Univ.	1:30 – 5:00 PM
A = AM (MORNING), **P** = PM (AFTERNOON), **E** = EVENING						

NORM 2026 Boise Centre East Map



ACS Chemistry for Life®

American Chemical Society

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Rigoberto Hernandez, Ph.D.
President-Elect, 2025
President, 2026
Immediate Past President, 2027

1155 SIXTEENTH STREET, N.W.
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Phone 202-872-4461
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June 28, 2026

Dear Northwest Regional Meeting Participants:

On behalf of the global American Chemical Society community, I am pleased to welcome you to the 2026 ACS Northwest Regional Meeting (NORM) in scenic Boise, Idaho. As we gather this year, we are especially proud to celebrate the 150th Anniversary of the American Chemical Society, honoring a legacy of scientific excellence, innovation, and collaboration that continues to advance the chemical sciences worldwide.

NORM 2026 begins on **Sunday, June 28**, with the Walk About Boise Tour and an evening Opening Night Nobel Laureate Plenary delivered by Dr. M. Stanley Whittingham, followed by a reception and Frontiers in Scientific Research Poster Session.

Embracing the theme "**Chemistry in the City of Trees**," NORM 2026 brings together chemists across the Northwest for a vibrant, collaborative experience. The meeting features a robust program of oral and poster sessions highlighting innovative research and advancing connections across academia, industry, and government.

Monday, June 29 features a strong lineup of plenary speakers, including Dr. Geraldine "Geri" Richmond, Dr. Michelle Arkin, Dr. Helen Blackwell, and Dr. John Wood, along with the ACS 150th Anniversary Reception & Undergraduate Poster Session. Networking events include the Boise State Alumni Event and a student social at Realms Arcade. On **Tuesday, June 30**, highlights include the Careers in Chemistry Panel and Breakfast, a plenary by Dr. Yury Gogotsi, and the Women in Chemistry Luncheon featuring Dr. Mary (Nora) Disis. The day concludes with the ACS Governance and Awards Reception and the Basque Cultural Dinner Banquet, celebrating Boise's rich heritage. **Wednesday, July 1** offers professional development opportunities, including ACS Career Workshops, the Micron Technology Tour, Bruker AFM Workshops, and education-focused sessions. Attendees can also enjoy a second Walk About Boise Tour.

With a full schedule of scientific sessions, workshops, and networking events, NORM 2026 promises to be an engaging and enriching experience for all participants. I would like to extend my sincere thanks to the NORM organizers—Eric Brown, General Chair; Co-Program Chairs Don Warner and Olya Mass; the Snake River Local Section; the many dedicated volunteers; and ACS staff—for their hard work and commitment to creating a dynamic, inclusive, and intellectually stimulating program.

Best wishes for a successful and memorable NORM 2026!

Sincerely,

Rigoberto Hernandez, Ph.D.
2026 President
American Chemical Society

ACS Chemistry for Life®

Northwest Region Board of Directors
NOR Board

Dear Colleagues and Guests:

The Northwest Regional Board extends a warm welcome to participants of the 2026 American Chemical Society (ACS) Northwest Regional Meeting (NORM2026) hosted by the Snake River Local Section. The ACS annual NORM meetings provide an opportunity for professionals of the chemical sciences across the Northwest US to gather in an informal and hospitable environment to exchange ideas, build scientific networks and to begin new or reinforce established collaborative efforts. The theme of this year's NORM, Chemistry in the City of Trees, embodies those objectives. For centuries the indigenous peoples of the Boise Valley met along the shaded and abundant banks of the Boise River for important social and cultural events. The lure of this region later brought pioneers, miners, and entrepreneurs from around the world. NORM2026 follows that tradition with a conference that is rich in technical programming and unique social events that highlight the forging spirit of southern Idaho.

The organizing committee has organized symposia and sessions for NORM2026 featuring advances in cutting edge topics as well as basic research that has long set the foundation for new discoveries. The Materials, Energy and Manufacturing track explores applications of MOFs and nanoparticles in energy, health, and environmental technologies. Also in this track are discussions of molecular machinery and their potential to mimic natural processes, thus enabling advancements in synthetic biology and biotechnology. The symposia Building a Sustainable Future with Chemical Methods and Materials provides thoughtful discussions of sustainable energy production. And to ensure a future of bright scientific minds, discussions of impactful methods of teaching chemical principles is provided. It is my hope that the NORM2026 program will initiate meaningful discussions on the roles of chemistry and chemical education in addressing the complex issues that influence how our society moves forward.

The overall objectives of ACS are to support and promote the safe, ethical, responsible, and sustainable practice of chemistry coupled with professional and inclusive behavior and technical competence while recognizing a responsibility to safeguard the health of the planet and the people who live on it, through chemical stewardship. The ACS NOR Board, working with ACS Meetings and Expositions staff provides support for ACS local sections of the Pacific Northwest and Alaska as they plan and execute NORM events that contribute to these objectives.

Finally, I would like to thank the NORM2026 Local Organizing Committee (LOC) of the Snake River Local Section of the ACS, led by Drs. Eric Brown and Don Warner, for their hard work and commitment to assembling a comprehensive scientific program and a series of exceptional social events. The leadership skills and dedication of this group have been inspirational and the NOR Board commends the team's proficiency and efficiency in constructing a NORM that is a genuine reflection of the multi-disciplinary and collaborative nature of successful chemical endeavors. A special thank you goes out to participants that have contributed oral and poster presentations. The members of ACS are what makes it great.

I am delighted to welcome all participants and their guests to the tree-lined streets of Boise where a mix of historic and modern architecture is framed with mountain scenery. I wish you an enjoyable and rewarding experience at NORM2026.

Lisa Hoferkamp
Chair, NOR Board, Inc. 2023 - 2026
Northwest Region Board of Directors

NORM2026
June 28 – July 1, 2026

OFFICE OF THE MAYOR
MAYOR: Lauren McLean

May 8, 2026

Dear attendees of NORM 2026:

As the Mayor of Boise, and on behalf of the residents of our community, I'm pleased to welcome you to our beautiful City of Trees for the 79th annual Northwest Regional Meeting (NORM) of the American Chemical Society.

Boise is a city that values curiosity, innovation, and collaboration, all qualities that define both the scientific community and our shared commitment to building a thriving, sustainable future. As you gather to exchange ideas, explore new research, and strengthen professional connections, we hope our city serves as an inspiring backdrop for your work.

I do hope you enjoy our vibrant community during your time here. Boise is home to a wide range of cultural amenities including the Boise Art and History Museums and theaters such as the Boise Contemporary Theater, Idaho Shakespeare Festival, and Idaho Dance Theatre. I hope you take the time for a stroll along the Boise River or to visit one of our many parks that include more than 200 miles of trails over 14 reserves totaling 5,000 acres. Spring is a magnificent time in Boise when our community really comes alive. And don't forget to dine at one of Boise's many restaurants who highlight seasonal and local produce and ingredients from across the region.

I wish you all the best throughout your convention and trust that spending this time together will leave you refreshed, inspired, and even more strongly committed to igniting and fostering a passion for science.

Respectfully,

Mayor Lauren McLean
City of Boise

BOISE CITY HALL: 150 N. Capitol Boulevard | MAIL: P.O. Box 500, Boise, Idaho 83701-0500 | P: 208-972-8520 | TTY: 711
BOISE CITY COUNCIL: Meredith Stead (President), Kathy Corless (President Pro Tem), Jimmy Hallyburton, Jordan Morales, Colin Nash, Luci Willits
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NORM 2026 ACS Governance

Wayne E. Jones Jr.
Chair of the Board of Directors, and Director-At-Large

Jeanette M. Van Emon
Director, District VI

Will E. Lynch
Director-At-Large

NORM 2026 Plenary Speakers

Dr. M. Stanley Whittingham

Distinguished Professor of Chemistry
Binghamton University

Title: “Lithium Batteries are more than 50 Years: The Challenges Faced in Building an American Industry”

Time/Location: Sunday, June 28th, 6:00 PM, 400C

Dr. M. Stanley Whittingham is a British-American chemist who was awarded the 2019 Nobel Prize in Chemistry for his pioneering development of the lithium-ion battery. His foundational breakthrough occurred in the 1970s while working at Exxon, where he discovered the mechanism of intercalation—allowing lithium ions to move within a crystal lattice to create the first functional, rechargeable lithium battery. Currently a Distinguished Professor at Binghamton University (SUNY) and Director of the NorthEast Center for Chemical Energy Storage, Dr. Whittingham remains a leading figure in energy research. His work serves as the technological cornerstone for modern portable electronics and the widespread adoption of electric vehicles, fundamentally transforming how the world stores and uses power.

Dr. Geraldine Richmond

Presidential Chair of Science
University of Oregon

Title: “Curiosity, Research and the Wisdom of Dr. Seuss”

Time/Location: Monday, June 29th, 8:00 AM, 400C

Geraldine Richmond is a preeminent physical chemist honored with the National Medal of Science and the Priestley Medal, the American Chemical Society’s highest award. She recently concluded her service as the U.S. Under Secretary of Energy for Science and Innovation (2021–2025), where she managed 13 national laboratories and a $15 billion research portfolio. Currently the Interim Vice President for Research & Innovation at the University of Oregon, Dr. Richmond is renowned for using nonlinear laser spectroscopy to map molecular interactions at complex liquid surfaces. As the founder of COACh, she has mentored over 25,000 women scientists worldwide, leaving a transformative legacy in both molecular research and global science advocacy.

NORM 2026 Plenary Speakers

Dr. Michelle Arkin

Professor of Chemistry
University of California San Francisco

Title: “Systematic, fragment-based discovery of molecular glues for selective stabilization of protein-protein interactions”

Time/Location: Monday, June 29th, 11:00 AM, 420A

Michelle Arkin is a chemical biologist, Executive Director of the Small Molecule Discovery Center, and Vice Dean of Research Technology and Entrepreneurship in the School of Pharmacy at UCSF. Her research focuses on developing methods and molecules that target currently ‘undruggable proteins,’ including protein-protein interactions and dynamic or intrinsically disordered proteins. For this work, she was recognized by the 2024 ACS Cope Scholar Award, 2024 ACS/Biochemistry Gordon Hammes Lecturer Award, and 2025 Harrison Howe Award (Rochester section of the ACS). Prior to UCSF, Dr. Arkin was a scientist at Sunesis Pharmaceuticals, where she helped discover small molecule inhibitors of IL-2/IL-2R and LFA/ICAM (the anti-inflammatory drug lifitegrast, marketed by Novartis). She is a co-founder of Elgia Tx, Ambagon Tx, ResNovas Tx, and BNM Oncology.

Dr. Helen Blackwell

Norman C. Craig Professor of Chemistry,
University of Wisconsin-Madison

Title: “Redirecting bacterial conversations with synthetic chemical signals”

Time/Location: Monday, June 29th, 11:40 AM, 410C

Helen Blackwell pursued her graduate studies in organic chemistry at the California Institute of Technology (Ph.D. with Bob Grubbs), and performed postdoctoral research in chemical biology at Harvard University (with Stuart Schreiber). She has been a faculty member at the University of Wisconsin–Madison since 2002, where she is currently the Norman C. Craig Professor of Chemistry and a Vilas Distinguished Achievement Professor. Helen leads a research program at the interface of organic chemistry and bacteriology. Blackwell also serves as the Program Director for the 33-year strong NIH T32 Chemistry-Biology Interface Training Program at UW–Madison. She has received numerous awards, including a Research Corporation Cottrell Scholar and STAR Award, Burroughs Welcome Fund Investigator Award, Alfred P. Sloan Foundation Fellowship, Camille-Dreyfus Teacher-Scholar Award, and an American Chemical Society Arthur C. Cope Scholar Award.

NORM 2026 Plenary Speakers

Dr. John Wood

Distinguished Professor of Chemistry
Baylor University

Title: “Recent Efforts in the Synthesis of Complex Natural Products”

Time/Location: Monday, June 29th, 3:10 PM, 420A

John L. Wood earned a B.A. degree from the University of Colorado in 1985 and a Ph.D. from the University of Pennsylvania in 1991 under the direction of Amos B. Smith, III. In 1991, he moved to Harvard University as an American Cancer Society postdoctoral fellow and continued studying natural products synthesis in the laboratories of Stuart Schreiber. He joined the faculty at Yale University in 1993 as an Assistant Professor and was promoted to Full Professor in 1998.

In 2006, Professor Wood joined the faculty at Colorado State University as the Albert I. Meyers Professor of Chemistry and in 2013 moved to Baylor University as the Robert A. Welch Distinguished Professor of Chemistry and Cancer Prevention Research Institute of Texas Scholar. In 2024, Professor Wood was named a University Distinguished Professor. The major focus of Professor Wood’s research is synthetic organic chemistry. Of primary emphasis is the design of innovative solutions to problems in natural product synthesis.

Dr. Yury Gogotsi

Charles T. and Ruth M. Bach Professor,
Drexel University

Title: “MXenes – A unique family within the 2D materials landscape”

Time/Location: Tuesday, June 30th, 11:10 AM, 400C

Yury Gogotsi is a Distinguished University Professor and Bach Endowed Chair in the Department of Materials Science and Engineering at Drexel University, where he serves as the founding Director of the A.J. Drexel Nanomaterials Institute. He is credited with developing carbon materials with tunable porosity for electrochemical capacitors and the discovery of Mxenes, a major class of two-dimensional materials. His groundbreaking work includes the first microscopic observation of water inside carbon nanotubes, the discovery of polygonal nanotubes, and the invention of the field of high-pressure surface science.

He has received numerous honors, including the ACS Chemistry of Materials Award, honorary doctorates, election as a Fellow of the US National Academy of Inventors, World Academy of Ceramics, European Academy of Sciences, Academia Europaea, and many professional societies. The impact of his work is demonstrated by over 330,000 citations, with the 2025 Stanford List ranking him 21st among all scientists across all disciplines and 2nd in Nanoscience and Nanotechnology worldwide.

NORM 2026 Plenary Speakers

Dr. Mary “Nora” Disis

Helen B. Slonaker Endowed Professor
University of Washington

Title: “The Long and Winding Road to Cancer Vaccines”

Time/Location: Tuesday, June 30th, 12:00 PM, 420A (WCC luncheon speaker)

and

Title: “Epitope editing non-mutated antigens for Th1 selective cancer vaccines”
Time/Location: Tuesday, June 30th, 3:25 PM, 410C

Mary “Nora” Disis is the Helen B. Slonaker Endowed Professor for Cancer Research at the University of Washington (UW), Professor of Medicine and Adjunct Professor of Pathology and Laboratory Medicine and Obstetrics and Gynecology at UW and a Member of the Fred Hutchinson Cancer Center. She is the Director of UW Medicine’s Cancer Vaccine Institute.

Her research interest is in the discovery of new immunologic targets in solid tumors for the development of vaccine and cellular therapy for the treatment and prevention of common malignancies. In addition, her group evaluates the use of the immune system to aid in the diagnosis of cancer and develops novel assays and approaches to quantitate and characterize human immunity. She holds several patents in the field of targeted cancer immunotherapy and immune-based diagnostics. Dr. Disis is a member of the American Society of Clinical Investigation and the Association of American Physicians. She is an American Cancer Society Professor, a Deputy Editor at *JAMA*, and the Editor-in-Chief of *JAMA Oncology*.

Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences

Dr. Don L. Warner, a Professor of Chemistry and Biochemistry at Boise State University, has built a distinguished career marked by a sustained, deeply impactful commitment to expanding access, promoting equity, and fostering a genuine sense of belonging within the chemical sciences across the Northwest region. Dr. Warner has successfully created pathways into chemistry for students from economically disadvantaged and historically underrepresented backgrounds.

At the local level, Dr. Warner has served as the Coordinator and Mentor for the ACS Snake River Local Section Project SEED program since 2013. Under his leadership, the site expanded from a single-department effort into a robust, multi-institutional collaboration across Boise State University, Idaho State University–Meridian, and Northwest Nazarene University. The program has hosted 46 SEED I and 23 SEED II students, offering a comprehensive cohort experience that integrates ethical research practices, scientific communication, and professional development. Remarkably, 100% of the site's SEED participants have gone on to enroll in college, and approximately 40% have received ACS-sponsored scholarships or recognition. Dr. Warner's commitment to student success is further reflected in his lab mentorship, through which he has mentored 130 undergraduates, 18 high school researchers, and 10 Master of Science students since 2002.

Dr. Warner's leadership in diversity and education also extends to the national stage. As National Chair (2018–2020) of the ACS Project SEED National Committee, he directed the program's long-range strategic planning and spearheaded the rapid development of a virtual national summer camp during the COVID-19 pandemic, preserving crucial STEM engagement for roughly 300 under-resourced students nationwide.

An active advocate for equity, Dr. Warner helped establish the Idaho Conference on Undergraduate Research (ICUR) to lower barriers to statewide research presentation. He has consistently leveraged his leadership roles within the American Chemical Society—including serving as an ACS Fellow, Snake River Section Councilor, and Program Chair for multiple Northwest Regional Meetings (NORM)—to secure travel and attendance funding so that high school teachers and undergraduates of limited financial means can participate in professional conferences free of charge. Through his cohesive efforts spanning K–12 outreach, regional governance, and national advocacy, Dr. Warner perfectly embodies the spirit of the Stanley C. Israel Regional Award.

The American Chemical Society

Division of Chemical Education

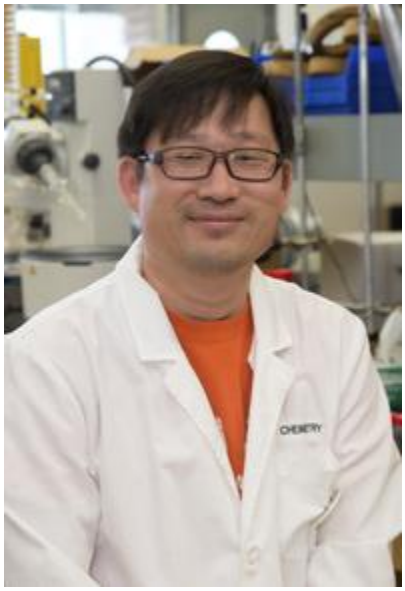
2026 Jane and Glenn Crosby Northwest Region Award for Excellence in High School Teaching

Tanya S. Elmer is an accomplished and deeply dedicated chemistry educator with nearly three decades of exemplary service in public education. Currently serving as an AP, Pre-AP, and Chemistry teacher at Borah High School in Boise, Idaho, and previously spending 25 years teaching chemistry at Eagle High School, Ms. Elmer has committed her career to making the chemical sciences accessible, engaging, and meaningful for all students. Her teaching philosophy centers on the belief that chemistry should be actively experienced rather than passively memorized. Through inquiry-based learning, hands-on modeling, and collaborative problem-solving, she routinely transforms complex theoretical content into straightforward, student-driven discoveries.

Beyond her classroom, Ms. Elmer is a highly respected pillar of leadership within the broader regional and state science education communities. As a Certified Lead Teacher in Green Chemistry with Beyond Benign, she integrates sustainable, modern scientific practices directly into high school curriculum development. She has left an enduring impact on statewide educational policy, serving as the high school chair of the State of Idaho Science Standards Adoption Committee, contributing to the development of district chemistry End-of-Course (EOC) assessments, and participating in the Standards-Based Grading pilot cohort.

As the Past-President of the Idaho Science Teaching Association (ISTA) and Chairperson for the Idaho STEM 2026 Conference, Tanya is a vital mentor to fellow educators, delivering high-quality professional development internationally and coaching early-career teachers through the Idaho Mentoring Program. Her sustained impact, instructional innovation, and relentless focus on equity and learner agency earned her distinction as a Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST) Idaho State Finalist in both 2021 and 2025. Ms. Elmer perfectly embodies the spirit of the Glenn & Jane Crosby Northwest Region Award through her enduring commitment to fostering the next generation of scientists and educators.

E. Ann Nalley Award for Volunteer Service to the American Chemical Society in the Northwest Region



Dr. Joshua Pak, a Professor and former Department Chair (2018–2024) at Idaho State University, is an ACS Fellow whose decades of exemplary volunteer leadership and profound commitment to the chemical community make him highly deserving of the E. Ann Nalley Award. As a long-standing Alternate Councilor, Councilor, and executive committee member for the Idaho Section, he has successfully engaged local chemists with national ACS initiatives, served as General Co-Chair for NORM 2015, and organized numerous regional symposia. A tireless champion for the next generation, Dr. Pak has fostered a nationally recognized ACS Student Affiliate group at ISU, secured three NSF S-STEM grants, and mentored more than 110 individuals in his organic, nanomaterials, and green chemistry research laboratory, including over 80 undergraduates and 20 Master's students. His transformative work with ACS Project SEED spans two decades, co-coordinating the ISU site to provide summer research opportunities for over 100 economically disadvantaged and underrepresented rural high school students. This dedication ultimately extended to the national stage, where he strategically guided the program as Chair of the national ACS Committee on Project SEED and led the U.S. National Chemistry Olympiad Committee, perfectly embodying the spirit of selfless service celebrated by this award.

NORM 2026 Sponsors

Diamond Sponsors ($10,000+)

BOISE STATE UNIVERSITY	**Boise State University Biomedical Research Institute:** The Biomedical Research Institute (BRI) at Boise State University is a collaborative and multidisciplinary research hub designed to provide a supportive environment for interdisciplinary research and education. The institute concentrates on supporting the careers and professional development of students, staff and researchers in biomolecular and biomedical research interests. The BRI is home to the IDeA Programs Office (IPO), the Center of Biomedical Research Excellence in Matrix Biology, the Center of Biomedical Research Excellence in Convergent Engineering and Biomolecular Science, Clinical and Translational Research, and the Idaho INBRE Program Data Science Core and BSU INBRE student fellows program. Learn more at https://www.boisestate.edu/bri.
BOISE STATE UNIVERSITY CONCURRENT ENROLLMENT	**Boise State University Concurrent Enrollment**: The focus of the Concurrent Enrollment Program is to provide quality university classes for high school students taught by approved high school instructors. Students gain access to university courses, build confidence in their academic ability and gain an early start on their college degree. Boise State is the first public institution in Idaho to gain national accreditation in 2009 from the National Alliance of Concurrent Enrollment Partnerships, leading the way in offering rigorous classes and teacher professional development in the content area. There are 200 approved high school instructors with 7,000 students currently participating in the program.
ACS Snake River	**The Snake River Local Section of the American Chemical Society:** The Snake River Local Section of the American Chemical Society is made up of chemists and scientists who live in Southwestern and Central Idaho and Eastern Oregon. The section received its charter in 2007. We are a science education and service organization; whose mission is to sponsor educational and public outreach programs to increase knowledge of chemistry and science in our communities.

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Project SEED AMERICAN CHEMICAL SOCIETY	**ACS Project SEED:** ACS Project Seed (Summer Experiences for the Economically Disadvantaged) is a paid summer fellowship program by the American Chemical Society that provides high school students from economically disadvantaged and diverse backgrounds with hands-on research experiences in academic, industrial, and government laboratories.
BOISE STATE UNIVERSITY COLLEGE OF ARTS AND SCIENCES	**Boise State University College of Arts and Sciences:** The College of Arts and Sciences (COAS) at Boise State University is the institution's largest and most diverse academic unit, offering over 250 programs across twenty-five departments in arts, humanities, social sciences, and sciences. It provides foundational education, research opportunities, and comprehensive advising services.
BOISE STATE UNIVERSITY CHEMISTRY AND BIOCHEMISTRY	**Boise State University Department of Chemistry and Biochemistry:** The Department of Chemistry and Biochemistry at Boise State University offers comprehensive undergraduate and graduate programs focused on student success through hands-on research, modern instrumentation, and a supportive, collaborative culture. It provides specialized studies in chemistry, biochemistry, and education, featuring an accelerated master's program and active research in areas like medicinal, computational, and environmental chemistry.
BOISE STATE UNIVERSITY COLLEGE OF ENGINEERING *Materials Science and Engineering*	**Boise State University Department of Chemistry and Biochemistry:** The Micron School of Materials Science and Engineering (MSMSE) at Boise State University, founded in 2003, is a leading research-intensive department offering ABET-accredited undergraduate degrees and the state's largest STEM-based PhD program. Focused on sustainability and semiconductors, the school specializes in materials for extreme environments, nanotechnology, and characterization, featuring strong industry ties and a flexible, specialized curriculum.

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IdahoINBRE IDeA Network of Biomedical Research Excellence	**The Idaho INBRE:** The Idaho INBRE Program is an unprecedented statewide scientific network of research and educational collaborations. Our aim is to improve the health of all Idahoans by augmenting and strengthening Idaho's capacity to do and sustain biomedical research and STEM education. The University of Idaho is the lead institution and partners with ten Idaho institutions of higher education and the Idaho Veterans Research and Education Foundation at the Boise VA Medical Center to comprise the network. Together, the 12 institutions create an integrated 'pipeline' to health research careers.
micron™	**Micron Technology:** Micron Technology is a leading American multinational semiconductor manufacturer of computer memory and data storage, including DRAM, NAND flash, and solid-state drives (SSDs). Founded in 1978 and headquartered in Boise, Idaho, it is the only major U.S.-based memory manufacturer, supplying essential hardware for the cloud, mobile devices, and artificial intelligence.
Organic Syntheses	**Organic Synthesis Inc. :** Organic Syntheses is a peer-reviewed scientific journal that publishes detailed and checked procedures for the synthesis of organic compounds. A unique feature of the review process is that all of the data and experiments reported in an article must be successfully repeated in the laboratory of a member of the editorial board as a check for reproducibility prior to publication.
SHIMADZU Excellence in Science	**Shimadzu:** Established in 1875, Shimadzu Corporation is one of the largest suppliers of analytical instrumentation, physical testing, and environmental monitoring systems in the world. Ground-breaking scientific research and a strong commitment to innovative hardware and software solutions continue to propel Shimadzu's reputation of 'Excellence in Science.' A majority of Shimadzu's instruments are manufactured in Canby, OR and with local teams of service, technical support, and sales strategically positioned throughout the PNW, Shimadzu offers the highest level of personalized service and support.

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ACS Committee Local Section Activities	**ACS Division of Local Activities:** The ACS local sections provide personal connections and networking, with the backing of a global organization, its vast resources and an ACS Community of more than 262,000 individuals.
Division of Organic Chemistry, American Chemical Society	**ACS Division of Organic Chemistry:** The ACS DOC is one of the premier international societies for organic chemists. Our mission is to foster and promote the advancement of the field of organic chemistry. We can do this because of our diverse membership and the ways they contribute.
Agilent	**Agilent:** Agilent supports scientists in 110 countries in cutting-edge life science research; patient diagnostics; and testing required to ensure the safety of water, food and pharmaceuticals. Our advanced instruments, software, consumables, and services enable our customers to produce the most accurate and reliable results as well as optimal scientific, economic, and operational outcomes. We play a role in advancing important research and testing, with our scientists creating some of the world's most leading-edge technology and our field engineers working side by side with customers to help them maximize productivity. We bring these solutions to a variety of markets, from pharma and diagnostics to applied materials and chemicals.
BOISE STATE UNIVERSITY	**Boise State University:** Boise State offers a high-quality undergraduate education as well as a supportive graduate school that cultivates the personal and career growth of its students. Within seven academic colleges, the Honors College and Graduate College, Boise State offers a wide variety of degree programs, lifelong learning, community engagement, innovation and creativity.
BRUKER	**Bruker Nano, Inc. :** Bruker's AFM, nanoIR, and nanoindentation platforms enable high-resolution imaging, nanoscale chemical mapping, and precise mechanical measurements. Stop by our table to talk with experts and discover how these complementary techniques work together to solve complex research challenges. Learn more at https://www.bruker.com/

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ACS Chemistry for Life®	**Description:** The ACS Office of Science Outreach is a division of the American Chemical Society that coordinates volunteers, develops educational resources, and hosts public events to promote chemistry globally. It is a sponsor of the High School Teacher Program at NORM 2026.
BOISE STATE UNIVERSITY OFFICE OF THE PROVOST	**Description:** Boise State University Office of the Provost is the sponsor for the Nobel Laureate Reception of NORM 2026. The Office of the Provost at Boise State University serves as the central administrative hub for all academic operations, faculty affairs, and student success initiatives.
BRUKER	**Bruker Biospin:** Bruker's high-performance scientific instruments and high-value analytical and diagnostic solutions enable scientists to explore life and materials at molecular, cellular and microscopic levels. In close cooperation with our customers, Bruker is enabling innovation, improved productivity and customer success in fundamental research, in life science molecular research, in applied and pharma applications, in microscopy and nanoanalysis, and in industrial applications, as well as in cell biology, preclinical imaging, clinical phenomics and proteomics research and clinical microbiology. Learn more at https://www.bruker.com/.
GILEAD	**Gilead:** At Gilead, we are relentlessly committed to advancing transformative therapies for the most serious diseases, delivering an exponentially positive impact on health. For more than three decades, we have combined scientific rigor with a deep sense of purpose to improve health outcomes and reimagine care. Our work spans more than 35 countries with a focus on three therapeutic areas: virology, oncology, and inflammation, where unmet medical needs remain greatest. Importantly, our focus extends beyond medicine — because innovation means little if it does not reach those who need it most. Through partnerships, licensing programs, and local collaborations, we expand access to life-saving medicines across the globe.

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Idaho State University	**Idaho State University:** Idaho State University is a Carnegie-classified high research activity, doctorate-granting university. ISU offers exceptional academic opportunities in more than 250 programs across seven colleges. Its faculty and students lead in cutting-edge research and innovative solutions in various fields including health professions, nuclear research, natural resources, teaching, humanities, engineering, performing and visual arts, technology, biological sciences, pharmacy, and business.
JET PATENT & IP TRANSLATIONS	**JET Patent & IP Translations:** JET Patent & IP Translations is a specialized team of linguistic professionals supporting engineers, researchers, and legal professionals alike with technical translation and language-related consulting between English and select East-Asian languages. We help communicate complex innovations and high-risk content across borders, with the backing of a curated team of specialists that speak your technical language. Learn more at https://jetpatentandiptranslations.com.
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ACS Division of Chemical Education	**American Chemical Society Division of Chemical Chemistry:** The Division of Chemical Education (DivCHED) is a technical division of the American Chemical Society. Our membership is a dynamic, engaged community spanning secondary schools, universities, research institutions, and industry—united by a shared passion for advancing chemistry education and inspiring future scientists.
Division of Medicinal Chemistry	**American Chemical Society Division of Medicinal Chemistry:** MEDI is the Medicinal Chemistry Division of the American Chemical Society covering all aspects of drug discovery, chemical biology and medicinal chemistry. MEDI has about 5,500 members. The Division provides comprehensive programming at the twice annual National ACS meetings, as well as at the biennial National Medicinal Chemistry Symposium.
YCC The Future of Chemistry	**American Chemical Society Younger Chemist:** Established in 1974, the YCC is a joint board-council committee of the ACS consisting of thirty-three members and associates. Along with its many alumni, the committee represents a wide range of industrial, governmental, and academic fields and serves as the voice of younger chemists in the ACS.
BOISE STATE UNIVERSITY FOUNDATION	**Boise State University:** The Boise State University Foundation, a nonprofit organization, was established in 1964 to inspire, generate and prudently manage private support for Boise State University. We build relationships and rally support to help students thrive and to advance Boise State's mission as a metropolitan research university of distinction. We share the university's story, foster meaningful donor relationships and steward every gift with care.
Oakwood Chemical Enabling Discovery	**Oakwood Chemical:** Oakwood Chemical, a manufacturer and distributor, supplies research chemicals to the pharmaceutical, agrochemical, and materials research communities. The Oakwood listing contains over 40,000 items including many unique building blocks and reactive intermediates.
Pfizer	**Pfizer:** Over the years, we've been a leader in manufacturing some of the world's most sophisticated, life-saving therapies. As a top global CMO, we are dedicated to you and your long-term success and bring you the power and expertise of a large pharmaceutical manufacturer to help you scale as your project progresses. By using the latest technologies and harnessing the scientific excellence of our world-class experts, we're on a mission to help deliver the quality and flexibility you need to lead your project to success.

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ACS Committee Senior Chemists	American Chemical Society Senior Chemists Committee: The Senior Chemists Committee (SCC) encourages engagement and collaboration across the Society with ACS groups and within the community. SCC's objectives are to improve communication among senior chemists, increase the number of senior chemists' groups and the level of their engagement within local sections, and encourage the involvement of senior chemists in programs focused on K-12 education, undergraduate networking, and mentoring.
DIVISION OF INORGANIC CHEMISTRY ACS	**American Chemical Society Division of Inorganic Chemistry**: The Division of Inorganic Chemistry, a division of The American Chemical Society, is dedicated to advancing the field of inorganic chemistry through supporting its practitioners and purveyors. The Division works to build and maintain relationships among inorganic chemists, arrange inorganic chemistry programs at professional meetings, and promote the teaching of inorganic chemistry at both the undergraduate and graduate levels. Our combined passion and dedication has made our organization the oldest Inorganic Chemistry organization in North America.
ACS Division of Nuclear Chemistry & Technology	**American Chemical Society Division of Nuclear Chemistry & Technology:** The Nuclear Chemistry Summer Schools (NCSS) are a prestigious six-week summer program for undergraduates interested in nuclear science who are presently in their sophomore or junior year of study at a US college or university.
Eldex Precision Under Pressure	**Eldex Corporation:** The company focuses on developing precision instrumentation for scientists, chemists, and engineers. From initial products, including fraction collectors and HPLC column heaters, Eldex introduced its first high-pressure metering pumps in 1978. The company has trusted relationships with a blue-chip customer base and a carefully cultivated partnership network providing global distribution and support.
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PHYS Physical Chemistry ACS Technical Division	**American Chemical Society Division of Physical Chemistry:** We promote the research and intellectual exchange in physical chemistry, both experimental and theoretical, through which we understand chemistry.

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Penn Master of Chemical Sciences	**University of Pennsylvania Master of Chemical Sciences:** University of Pennsylvania's Master of Chemical Sciences is a rigorous course of study offered in a compact time frame to prepare both current and aspiring chemistry professionals for their next step. Our program accelerates chemistry careers by building expertise through specialized concentrations, professional industry connections, and research in cutting-edge laboratories. Learn more at https://www.lps.upenn.edu/degree-programs/mcs.
MDPI	**MDPI:** MDPI is a leader in the transition to open science by making more research free and accessible to everyone. Over 4.5 million researchers have entrusted us with publishing their scientific discoveries. We aim to ensure that high-quality research is verified and made available to the research community as quickly as possible.
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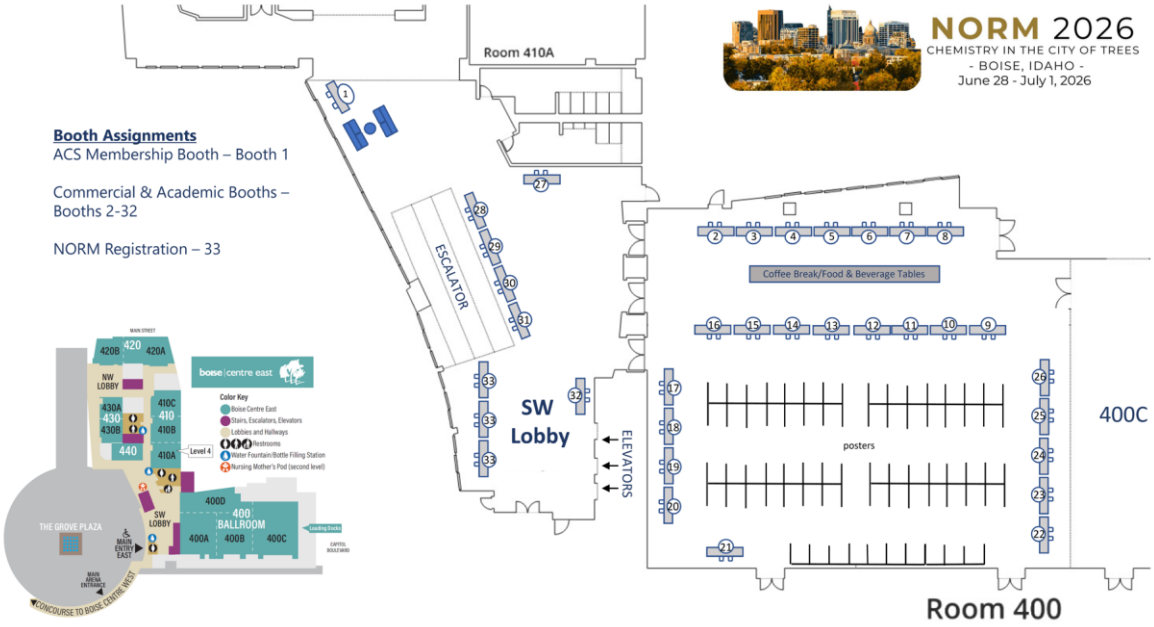

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Advion Interchim scientific	**Booth 18:** At Advion Interchim Scientific, we deliver tailored solutions to improve our customers' most challenging identification, quantification, and purification needs with our broad range of innovative instruments, consumables, reagents, and scientific expertise. Our unrivaled portfolio ranges from media and columns to consumables, accessories and instruments for flash chromatography, preparative (U)HPLC, analytical (U)HPLC, mass spectrometry, ICP-MS, coupled with intelligent apps and software. Strategically aligned for global growth, we recognize that our success has always come from our customers, and we are dedicated and committed to providing best-in-class service and support worldwide. Learn more at https://www.advion-interchim.com.
SCHB acs-schb.org ACS Division of Small Chemical Businesses	**Booth 30**: The ACS Division of Small Chemical Businesses (SCHB) has the overall objective "To aid in the formation, development, and growth of small chemistry-based businesses." SCHB helps chemists working in start-ups and small enterprises, including self-employed, with the legal, social, educational, legislative, regulatory, and economic aspects of their unique professional status. SCHB provides informative programs at both ACS national and regional meetings, including a webinar series entitled "The Mini-Chemical MBA", which is a collaboration with ACS. Learn more at https://acs-schb.org/.
Agilent	**Booth 25:** Agilent is a leader in life sciences, diagnostics and applied chemical markets. The company provides laboratories worldwide with instruments, services, consumables, applications and expertise, enabling customers to gain the insights they seek. Agilent's expertise and trusted collaboration give them the highest confidence in our solutions. Learn more at https://www.agilent.com/en.

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BOISE STATE UNIVERSITY Biomedical Research Institute (BRI)	**Booth 19:** The Biomedical Research Institute (BRI) at Boise State University is a collaborative and multidisciplinary research hub designed to provide a supportive environment for interdisciplinary research and education. The institute concentrates on supporting the careers and professional development of students, staff and researchers in biomolecular and biomedical research interests. The BRI is home to the IDeA Programs Office (IPO), the Center of Biomedical Research Excellence in Matrix Biology, the Center of Biomedical Research Excellence in Convergent Engineering and Biomolecular Science, Clinical and Translational Research, and the Idaho INBRE Program Data Science Core and BSU INBRE student fellows program. Learn more at https://www.boisestate.edu/bri/.
BOISE STATE UNIVERSITY CHEMISTRY AND BIOCHEMISTRY	**Booth 25**: The Boise State University Department of Chemistry and Biochemistry bridges rigorous academic instruction with hands-on, cutting-edge research to prepare students for careers in industry, medicine, and academia. Grounded in American Chemical Society (ACS) standards, the department offers low-enrollment, high-interaction undergraduate and graduate programs that give students direct access to advanced instrumentation, such as its state-of-the-art Nuclear Magnetic Resonance (NMR) facility. From combating global health challenges through antimicrobial drug discovery to innovating in DNA nanotechnology, faculty and students collaborate in a deeply supportive culture that champions the "central science" as a vehicle for global impact and student success. Learn more at https://www.boisestate.edu/chemistry/.

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BOISE STATE UNIVERSITY COLLEGE OF ENGINEERING *Materials Science and Engineering*	**Booth 21**: The Micron School of Materials Science and Engineering at Boise State University is a nationally recognized hub for materials innovation. The school bridges physics, chemistry, biology, and engineering to study the relationships between materials' structure, properties, processing, and performance. Backed by strong industry partnerships—including close ties to local tech giant Micron Technology—the program offers ABET-accredited undergraduate degrees, a specialized semiconductor certificate, and robust graduate programs (M.S., M.Engr., Ph.D.). Learn more at https://www.boisestate.edu/coen-materials/.
BRUKER	**Booth 7**: Bruker's AFM, nanoIR, and nanoindentation platforms enable high-resolution imaging, nanoscale chemical mapping, and precise mechanical measurements. Stop by our table to talk with experts and discover how these complementary techniques work together to solve complex research challenges. Learn more at https://www.bruker.com/.
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IdahoINBRE IDeA Network of Biomedical Research Excellence	**Booth 20:** The Idaho INBRE Program is an unprecedented statewide scientific network of research and educational collaborations. Our aim is to improve the health of all Idahoans by augmenting and strengthening Idaho's capacity to do and sustain biomedical research and STEM education. The University of Idaho is the lead institution and partners with ten Idaho institutions of higher education and the Idaho Veterans Research and Education Foundation at the Boise VA Medical Center to comprise the network. Together, the 12 institutions create an integrated 'pipeline' to health research careers. Learn more at https://inbre.uidaho.edu/.
INL Idaho National Laboratory	**Booth 29:** As one of 17 national labs in the U.S. Department of Energy complex, Idaho National Laboratory is home to more than 6,400 researchers and support staff focused on innovations in nuclear research, integrated energy systems and security solutions that are changing the world. From discoveries in advanced nuclear energy to reliable energy options and to protecting our nation's most critical infrastructure assets, our talented team at INL is constantly pushing the limits to redefine what's possible. Learn more at https://inl.gov/.
JET PATENT & IP TRANSLATIONS	**Booth 28**: JET Patent & IP Translations is a specialized team of linguistic professionals supporting engineers, researchers, and legal professionals alike with technical translation and language-related consulting between English and select East-Asian languages. We help communicate complex innovations and high-risk content across borders, with the backing of a curated team of specialists that speak your technical language. Learn more at https://jetpatentandiptranslations.com/.

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	**Booth 32:** Keep the momentum going! Stop by the Future NORM Meetings booth to catch a sneak peek of what's in store for the regional scientific community. Pick up official promotional materials and key details for NORM 2027, which will be hosted by Oregon State University in beautiful Corvallis, Oregon.
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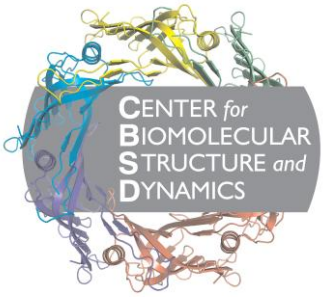
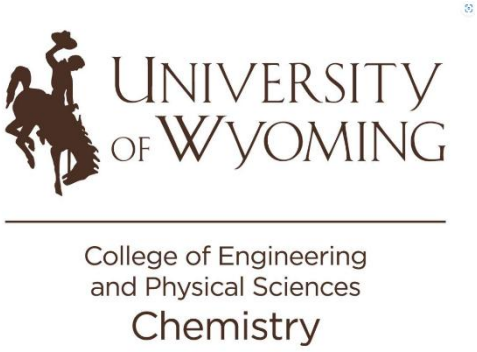
SHIMADZU Excellence in Science	**Booth 4:** Established in 1875, Shimadzu Corporation is one of the largest suppliers of analytical instrumentation, physical testing, and environmental monitoring systems in the world. Ground-breaking scientific research and a strong commitment to innovative hardware and software solutions continue to propel Shimadzu's reputation of 'Excellence in Science.' A majority of Shimadzu's instruments are manufactured in Canby, OR and with local teams of service, technical support, and sales strategically positioned throughout the PNW, Shimadzu offers the highest level of personalized service and support. Learn more at https://www.shimadzu.com/.
TELEDYNE | LABS	**Booth 15**: Teledyne LABS consolidates CETAC, Hanson, ISCO chromatography and pumps, Leeman Labs and Tekmar for Chromatography, GC Sample Prep, Elemental Analysis, Automated Liquid Handling, Pumping and Dissolution, Diffusion, Physical Tablet Testing. These complementary brands support our commitment to delivering innovative laboratory instruments that improve our environmental sustainability and quality of life. Learn more at https://www.teledynelabs.com/.
University of Idaho Department of Chemistry	**Booth 23:** The University of Idaho Department of Chemistry offers B.S. and research M.S. and Ph.D. degrees in Chemistry. For the student who wants to pursue a graduate degree or will work in a field related to chemistry, we offer the Professional B.S. in Chemistry, which is the degree accredited by the American Chemical Society. For students interested in pursuing careers in medicine, dentistry, and pharmacy we offer a B.S.-Pre Med. Learn more at https://www.uidaho.edu/science/academics/chemistry.

NORM 2026 Exhibitors

	**Booth 24:** The Center for Biomolecular Structure and Dynamics (CBSD) at the University of Montana applies the methods and concepts of biophysics, structural biology, and mathematics to better understand the mechanistic basis of biological processes in health and disease. Through its expertise, advanced instrumentation, and collaborative research resources, the NIH-supported CBSD recharge center supports both basic and translational research for academic and external investigators through its seven core facilities. Learn more at https://www.umt.edu/center-biomolecular-structure-dynamics/
	**Booth 22:** Founded in 1887 as a core pillar of the University of Wyoming—the state's historic, public land-grant research institution—the Department of Chemistry combines a proud legacy with forward-looking scientific discovery. Our department serves a vibrant community of 110 undergraduate and 50 graduate students, offering rigorous coursework and dynamic, hands-on research opportunities across a wide spectrum of topic areas. Guided by world-renowned and award-winning faculty, UW Chemistry provides a collaborative, supportive environment designed to prepare the next generation of scientists, educators, and innovators. Learn more at https://www.uwyo.edu/chemistry/index.html.
	**Booth 6:** VWR is a leading life science tools company and global provider of mission-critical products and services to the life sciences and advanced technology industries. We work side by side with customers at every step of the scientific journey to enable breakthroughs in medicine, healthcare, and technology. Our portfolio is used in virtually every stage of the most important research, development, and production activities at more than 300,000 customer locations in 180 countries. Learn more at https://www.vwr.com/us/en/.

NORM 2026 High School Teacher Program

Financially supported by the Boise State University Concurrent Enrollment Program and the Micron Foundation. H.S. Teacher Program workshop descriptions found after the technical program.

Workshops/Events

SUN, JUNE 28	**Location: Boise State University, Science Bldg., 3rd Floor**	
8:30 -9:00 am	**Welcome Remarks and Breakfast Snacks (Science 332)**	
	Group #1	**Group #2**
9:00 – 10:30 am	**Electrolysis and Galvanic Cell Simulations** **Dr. Tom Greenbowe** (University of Oregon) **Marian DeWane** (Boise Independent School District)	**Interactive Science Demonstrations** **Dr. Henry Charlier Jr.** (Boise State University)
10:45–12:15 am	**Electrochemistry Laboratory** **Dr. Tom Greenbowe** (University of Oregon) **Marian DeWane** (Boise Independent School District)	**Green Chemistry and Benign Chemicals** **Tanya Elmer** (Boise Independent School District)
12:15 – 1:30 pm	**Lunch - It's Not Magic, It's Biology** **Speaker: Dr. Allan Albig** (Boise State University), Science 332	
1:45 – 3:15 pm	**Interactive Science Demonstrations**	**Electrolysis and Galvanic Cell Simulations**
3:30 – 5:00 pm	**Green Chemistry and Benign Chemicals**	**Electrochemistry Laboratory**
5:00 – 6:00 pm	**Dinner (on your own)**	
6:00 – 7:00 pm	**Nobel Laureate Presentation at NORM 2026 – Boise Centre East (optional)**	
7:00 – 9:00 pm	**Poster Session and Reception – Boise Centre East (optional)**	
MON, JUNE 29	**Location: Boise Centre East 430A and 430B**	
8:30 – 10:00 am	**Physics with Phones** **Greg Losinski** (Idaho National Laboratory) **Cait McGraw** (Idaho National Laboratory)	**POGIL** **Dr. Shawn Simonson** (Boise State University)
10:15 –11:45am	**POGIL**	**Physics with Phones**
12:00 –1:15 pm	**Lunch – Idaho Department of Education High School Teacher Resources** **Speaker: Andrea Baerwald** (Idaho Department of Education), 430A	
1:30 – 3:00 pm	**ChipWorks Series: Electrify Your Class** **Hailey Lynch (**Boise State University) **Camille Platts-McPharlin** (Boise State University)	**Cellulose and the Paper Industry** **Ed Drapher** (Director of Washington Pulp and Paper Foundation)
3:15 – 4:45 pm	**Cellulose and the Paper Industry**	**ChipWorks Series: Electrify Your Class**
5:00 – 5:50 pm	**Analysis of the 2025 and 2026 AP Chemistry Exam and Final Day Wrap-Up**	

NORM 2026 Undergraduate Program

MONDAY, June 29th

10:30 AM - noon **The Art of Negotiation Workshop** - Negotiations occur every day in the scientific laboratory and workplace and often involve issues that are key to research success and career advancement. This workshop teaches the fundamentals of negotiation relevant to a variety of one-on-one conversations and group settings. Location: 420B

12:00 – 1:30 PM **Undergraduate Poster Session** - Explore the latest research from the region's top undergraduate talent at the Undergraduate Poster Session.

8:00 – 11:00 PM **High Scores, Strong Bonds, and Good Food** - Take a break from the conference and recharge with a fun evening at a Downtown Boise arcade! Join fellow Chemistry enthusiasts for catered pizza, classic games and pinball, and a chance to unwind outside the professional world. It's the perfect opportunity to bond over shared interests, spark new reactions, and explore a bit of the city while you're at it! Location: Realms Arcade (109 S. 23rd St, Suite A)

TUESDAY, June 30th

7:30 – 9:00 AM **Careers in Chemistry Panel and Breakfast** - Explore the diverse professional landscapes of chemistry through the lens of Academia, Industry, and National Laboratories. Our expert panelists will compare the day-to-day realities of these three distinct sectors. Join us to discover how to navigate these career paths and find the environment that best catalyzes your scientific goals. Breakfast will be provided. If interested, see registration desk. Location: 420A

12:00 – 1:30 PM **Women in Chemistry Luncheon (WCC)** – Students receive a discounted lunch ticket. The ACS Women Chemists Committee (WCC) Luncheon features Mary (Nora) Disis, M.D., a world-renowned expert in cancer immunotherapy and Director of the University of Washington Medicine Cancer Vaccine Institute. If interested, see registration desk. Location: 420A

7:00 – 9:00 PM **Basque Cultural Dinner Banquet** - Students receive a discounted banquet ticket. The banquet will be a unique cultural experience centered on Boise's rich Basque heritage. Guests will enjoy a Basque-themed dinner, a presentation by Dr. John Ysursa, Director of the Basque Studies Program at Boise State University, and a performance by the Oinkari Basque Dancers. If interested, see registration desk. Location: 400C

WEDNESDAY, July 1st

8:30 – 12:00 PM **Micron Technology Tour** - This tour offers a behind-the-scenes look at Micron Technology's Surface and Chemistry labs, where advanced chemical and material characterization ensures the precision of next-generation memory and storage technologies.

NORM 2026 Workshops

The Art of Negotiation Workshop

Monday, June 29th, 10:30 AM – 12:00 PM, Boise Centre 420B
Facilitator: Dr. Geraldine "Geri" Richmond (University of Oregon)

Description: Negotiations occur every day in the scientific laboratory and workplace and often involve issues that are key to research success and career advancement. This workshop teaches the fundamentals of negotiation relevant to a variety of one-on-one conversations and group settings. Topics include the importance of negotiation to advance research and career objectives, identification of negotiables for research and career advancement, elements of a successful negotiation, the importance of data and how to collect, techniques for handling difficult people and conversations, the importance of listening and appreciating different viewpoints, and identification of short and long-term negotiation goals and advocating for yourself.

ACS Career Workshop: Acing the Interview Workshop

Wednesday, July 1st, 8:00 – 10:00 AM, Boise Centre 430B

Description: This workshop breaks down the interview process into navigable stages. Participants will also learn how to identify critical performance factors from job announcement media. The course will also help interviewees to develop a plan to relate their experience and values to the job requirements and organization values of their potential employers.

Accessing STEM: A Workshop in Course Material Accessibility & Title II Compliance

Wednesday, July 1st, 8:00 – 10:00 AM, Boise Centre 430A
Facilitators: Jeremy Harper (Boise State University), Sherena Huntsman (Boise State University)

Description: Join us for a hands-on opportunity to highlight the unique requirements of STEM-based course material access. Have you struggled with Title II compliance? Have you lost sleep contemplating the need for tagging, alt-text, captioning, color contrast ratios, etc., in your course materials? With a focus on student success, this workshop offers the opportunity to meet those challenges together while working on your own, unique documents.

Bruker AFM Workshop - Technical Presentations

Wednesday, July 1st, 9:00 AM -1:30 PM, MCMR Bldg. 105 (Boise State University)
Facilitators: Dr. Paul Davis (Boise State University), Dr. Senli Guo (Bruker), Dr. Jinhee Kim (Bruker)

Description: Technical talks/lectures on the practical aspects of implementing advanced AFM modes. Complimentary lunch provided.

NORM 2026 Workshops

ACS Career Services - 1:1 Resume Review

Wednesday, July 1st, 10:30 AM – 12:00 PM, Boise Centre 430B

Description: One-on-One resume reviews.

Building Community in the Classroom Workshop

Wednesday, July 1st, 10:30 AM – 12:00 PM, Boise Centre 430A
Facilitators: Teresa Focarile (Boise State University), Sarah Lausch (Boise State University)

Description: This workshop explores the importance of building a strong sense of community in the classroom and its impact on student engagement and learning. Participants will examine key factors that contribute to a positive classroom community and collaborate to develop practical, actionable strategies they can apply in their own teaching contexts.

Python Training for Educators Workshop

Wednesday, July 1st, 1:00 – 5:00 PM, Boise Centre 420B
Facilitator: Dr. Oliviero Andreussi (Boise State University)

Description: This workshop introduces college and high-school instructors to practical strategies for developing course and laboratory materials using Python and Google Colab notebooks. Participants will explore how interactive notebooks can support data analysis, modeling, and visualization in science education, and how emerging AI tools can assist with content creation, coding support, and student engagement. No prior programming experience is required; examples will be adaptable across disciplines.

ACS Career Workshop - Finding Yourself: Identifying a Career that Matches Your Strengths and Values

Wednesday, July 1st, 1:30 - 4:30 PM, Boise Centre 430B

Description: The workshop allows you to self-assess your career values and strengths. Participants will also learn how the four sectors of chemistry employment compare and contrast. This workshop will also help you determine which sector best aligns to your values and strengths and plan your next steps to obtain an ideal position.

Bruker AFM Workshop - Live Demonstrations

Wednesday, July 1st, 1:30 – 5:00 PM, MCMR Bldg. 126, Ruch Engineering Bldg. 104A (Boise State University)
Facilitators: Dr. Paul Davis (Boise State University), Dr. Senli Guo & Dr. Jinhee Kim (Bruker)

Description: Live demos of various AFM makes/models and characterization modes using AFM instruments located on the Boise State University campus.

NORM 2026 Tours

SUNDAY, June 28th

2:30 – 4:00 PM — **Walk About Boise Walking Tour #1** - An experienced architectural historian will lead this approximately 90-minute guided walking tour through 150 years of Boise's history and architecture. Participants will explore the evolution of downtown's-built environment, from its pioneer roots to its modern skyline, while learning the stories behind the city's most iconic landmarks. Space is limited so see registration booth to see if room is still available. Meet at registration desk at 2:15 PM.

TUESDAY, June 30th

3:30 – 5:00 PM — **Basque Museum & Boarding House Tour** - The Basque Museum and boarding house tour highlights Basque culture and immigration history. Guests will explore the Cyrus Jacobs-Uberuaga House, Boise's oldest brick dwelling, and the historic Anduiza Fronton, home to one of the few remaining indoor Basque handball courts in the country. This experience offers a unique look at how the Basque community preserved its traditions while helping to shape the American West. The museum is one block from the Boise Centre. If interested, please see the registration booth. Show your ticket for admission to the museum. The Basque Museum is located 1-block from the Boise Centre at 611 W Grove Street.

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WEDNESDAY, July 1st

8:00 AM – 12:00 PM — **Micron Technology Tour** - This tour offers a behind-the-scenes look at Micron Technology's Surface and Chemistry labs, where advanced chemical and material characterization ensures the precision of next-generation memory and storage technologies. Transportation is provided. Buses depart at 8:00 AM at bus loading zone on Front Street next to Boise Centre West.

3:00 – 4:30 PM — **Walk About Boise Walking Tour #2** - An experienced architectural historian will lead this approximately 90-minute guided walking tour through 150 years of Boise's history and architecture. Participants will explore the evolution of downtown's-built environment, from its pioneer roots to its modern skyline, while learning the stories behind the city's most iconic landmarks. Space is limited so see registration booth to see if room is still available. Meet at registration desk at 2:45 PM.

NORM 2026 Special Events

SUNDAY

8:00 AM – 5:00 PM
High School Teacher Program, Boise State University (Science Bldg. 3rd floor)

4:00 – 8:00 PM
Registration, SW Lobby

6:00 – 7:00 PM
Plenary Lecture: Nobel Laureate M. Stanley Whittingham, 400C

7:00 – 9:00 PM
Exposition, 400A/B/D

7:00 – 9:00 PM
Frontiers in Scientific Research: Opening Night Poster Session and Reception, 400A/B/D

MONDAY

7:00 AM – 5:00 PM
Registration, SW Lobby

8:00 AM – 5:50 PM
High School Teacher Program Cont., Boise Centre East 430A & 430B

8:00 AM – 5:00 PM
Exposition, 400A/B/D

8:00 – 8:50 AM
Plenary: Dr. Geraldine "Geri" Richmond, 400C

11:00 – 11:35 AM
Plenary Lecture: Dr. Michelle Arkin, 420A

11:40 AM – 12:15 PM
Plenary Lecture: Dr. Helen Blackwell, 410C

12:00 – 1:30 PM
150th ACS Anniversary Reception and Undergraduate Poster Session, 400A/B/D

3:10 – 3:45 PM
Plenary Lecture: Dr. John Wood, 420A

5:30 – 7:30 PM
Boise State Alumni Event, Fine Arts Building Lobby and Keith and Catherine Stein Luminary at Boise State University

8:00 – 11:00 PM
High Scores, Strong Bonds and Good Food – Undergraduate and Graduate Program, Realms Arcade

TUESDAY

7:00 AM – 5:00 PM
Registration, SW Lobby

8:00 AM – 5:00 PM
Exposition, 400A/B/D

7:30 – 9:00 AM
Careers in Chemistry Panel and Breakfast – Undergraduate and Graduate Program, 420A

11:10 AM – 12:00 PM
Plenary Lecture: Dr. Yury Gogotsi, 400C

12:00 – 1:30 PM
WCC Luncheon, Plenary Lecture: Dr. Mary “Nora” Disis, 420A

3:25 – 3:55 PM
Plenary Presentation: Dr. Mary “Nora” Disis, 410C

5:00 – 6:00 PM
Wine Tasting Event Sponsored by LECO (free event), 400A/B/D

NORM 2026 Special Events

6:00 – 7:00 PM
ACS Governance and Awards Reception, 400A/B/D

7:00 – 9:00 PM
Basque Cultural Dinner and Entertainment, 400C

Wednesday

7:00 AM – 2:00 PM
Registration, SW Lobby

8:00 AM – 12:00 PM
Exposition, 400A/B/D

8:00 AM – 12:00 PM
Micron Technology Tour, Meet at Front Street next to Boise Centre

SUNDAY EVENING – June 28

Frontiers in Scientific Research: Opening Night Poster Session and Reception

Boise Centre East
Exposition Hall (400A, 400B, 400D)

O. A. Mass, D. L. Warner, Organizers

7:00 - 9:00

1. A conductive silk–MXene/GelMA cardiac patch for promoting stem cell maturation and functional cardiac regeneration. **G. Rajabi**

2. Safety assessment of transcranial radio frequency stimulation for non-invasive brain stimulation. **D. Hall**, H. Henderson, o. yaghmazadeh

3. Chemical tools to determine the mechanism of cargo-flipping in ACP-dependent enzymes. **S. Khatun**, R. Nagarajan

4. Biophysical and functional characterization of bovine lactoferrin as an antibacterial compound. **A. Baclig**, G. Clother, K. Meister

5. Cyclic Acyl-Chain Substrates for the *Burkholderia cepacia* CepI AHL Synthase. **H.C. Grenke**, S. Kesharwani, J. Kovach, R. Nagarajan

6. Developing chemical tools to monitor acyl-chain cargo flipping in carrier protein dependent enzymes. **R. Burton**, R. Nagarajan

7. Harnessing co-evolution to discover bioactive natural products. **M. Skinner**, J. Forbey, D. Reed, E. Friedlander, A. Everard, D. Conner, C. Dadabay

8. In silico identification and characterization of chromatin-associated HMG proteins in a non-model Keystone shrub. **P. Skinner**, J.M. Wojahn, A. Renfrow, S. Buerki

9. Screening of fungal pathogen Verticillium dahliae for minimum inhibitory concentration using novel pipeline for fungicide discovery. **E. Novak**, L. Oloff, D. Condon, P. Rowley, K.V. Waynant, M. Ytreberg, **B. Schroeder**

10. Computational modeling of scFv-based bispecific T-cell engagers targeting IL13Rα2 and T-cell receptors for glioblastoma immunotherapy. **G. Thiagarajan**, G. Sharma

11. Optimization and utilization of a ferrocene-templated approach to prepare variants of Chalaniline a for exploration of its biological mode of action and structure activity relationships. **V.P. Dasari**, P.R. Blakemore

12. N,N'-(ethane-1,2-diyl)bis-(substituted) benzylidene derivatives with enhanced anticancer activity. M.M. Alanazi, **A. Rahman**

13. Optimization of furan-based small molecules to inhibit breast cancer metastasis. **O. Asante**, C. VanRenselaar, S. Bones, D.L. Warner

14. Targeting cell cycle plasticity with triple-selective CDK2/4/6 probes. **J. Shrestha**, E. Kaweesa, S. Zeleke

15. Exploring the effects of hydrogen bonding on the reactivity in synthetic suicidal Zn^{II} DNA N-Ada20 repair protein analogs. **M. Glassey**

16. Toward a stereospecific synthesis of non-conjugated alkenes using carbenoid eliminative cross-coupling (CEXc). **H. Simpson**, **P.R. Blakemore**

17. Investigation of asymmetric ring-opening reactions from Meso 1,4-Dihydro-1,4:4a,9a-diepoxyanthracene-9,10-diones for the enantioselective synthesis of epoxyanthraquinol natural products. **P.S. Gupta**, **P.R. Blakemore**

18. Exploring acyl-homoserine lactone analogs as quorum signal synthesis inhibitors in Bradyrhizobium Japonicum. **F. Aghahowa**, S. Kesharwani, S. Jude, D. Monet, E.C. Brown, R. Nagarajan

19. Infusion of green chemistry and organic synthesis research into O-chem labs. **F. Guo**

20. Plasma-catalytic conversion of CO2-containing CH4 to oxygenated hydrocarbon products. **S. Afrin**

21. Directed evolution of artificial metalloenzymes for ruthenium biocatalysis of polyketide like compounds. **L.F. Garrett**, P. Neupane, T.L. Suyama

22. Albumin-ruthenium catalyst for selective delivery of cytotoxic drug to cancer cells via bioorthogonal uncaging. **P. Neupane**

23. Photochemical aerobic oxidation of benzylic alcohols for the production of hydrogen peroxide. **J. Ewers**, S. Oakrest, T. McCormick

24. Synthesis and reactivity of a paramagnetic Iron(II) Phosphaethynolate complex. **Z. Velasco**, R.R. Thompson

25. N-Heterocyclic carbene-supported cuprous phosphaethynolates and their P-atom transfer. **C.J. Abonyi**, M. Hoffman, J. Speirs, F. Fronczek, K.A. Wheeler, R.R. Thompson

26. Ln doped cerium oxide nanoparticles as a structural and electronic surrogate for UO_2. **E. Asante**

27. Development of heat-reflecting novel Inorganic pigments based on $BaMTe_2O_7$-type structure. **C. Hsu**, J. Li, A. Ramirez, M. Subramanian

28. Synthetic and activation routes for the M2Cl2bbta metal-azolate framework family for reactive carbon capture applications. **M. Bugri**

29. Stability enhancement in $Na_{0.67}Fe_{0.2}Mn_{0.8}O_2$ positive electrode via spherical coprecipitated hydroxide precursor synthesis for Na-ion batteries. **K. Graff**, C.A. Koroni, J.A. Russell, S.E. Pooley, J. Hu, Y. An, E. Gabriel, A. Koisch, Y. Liu, D. Schwartz, Y. Hwa, H. Xiong

30. Using ultrafast lasers to investigate critical battery interfaces. **S. Langlois**, S.E. Pooley, H. Xiong, J.D. Cyran

31. Morphology and crystallinity effects of nanochanneled niobium oxide electrodes for Na-ion batteries. **C. Koroni**, K. Dixon, P.L. Barnes, D. Hou, L. Landsberg, Z. Wang, G. Grbic', S.E. Pooley, S. Frisone, T. Olsen, A. Muenzer, D. Nguyen, B. Bernal, H. Xiong

32. Enhanced structural stability in Mn-rich layered transition metal oxide positive electrode materials via germanium substitution. **J. Hu**, S. Deng, E. Gabriel, G. Lee, Y. Jin, B. Michaelsen, W. Yang, Y. Hu, C. Sun, A. Yakovenko, J. Liu, S. Pooley, J.A. Russell, C. Koroni, K. Graff, D. Schwartz, S. Kelly, Y. Dong, H. Xiong

33. Solvation-driven plating behavior of lithium and sodium metal anodes across electrolyte concentration regimes and its impact on cycling performance. **S. Eskender**, J. Russell, S. Pooley, C. Swenwold, C.M. Efaw, H. Xiong

34. Effect of water on TIO_2 nanoparticles for lithium-ion batteries. **T. Olsen**

35. Variable pressure impedance spectroscopy in metal triazolate nanoparticles. **J.L. Rowell**

36. Chemical-free solvolysis strategies for recycling plastics: A sustainable pathway to circular economy. **B.N. Tei**

37. Fabrication of sustainable lignocellulosic biomass based foam using green solvents. **Y. Huang**, H. Liu

38. Fully biodegradable foams with tunable properties for packaging applications. **Y. Wang**, H. Liu

39. Structure-property-processing correlations of MXene films on human mesenchymal stem cells. **H. Burgoyne**, A. Pratap, T. Valayil Varghese, D. Estrada

40. Plasma-jet printing for direct writing of self-sintered metal traces with enhanced adhesion. L. Prakasan, **H. Subbaraman**

41. Shaking the surface: How sonication rewrites PFAS interfacial structure. **H. Hajab**, L. D Jenkins, J.D. Cyran

42. JACOBIK: Inverse kinematics for transition metal complex conformer generation. **Z. Chen**

43. Forever chemicals and Langmuir films: Irreversible adsorption of perfluorooctanoic acid to stearic acid monolayers. **N. Kashyap**, R.A. Walker

44. Probing the critical oxide thickness for electron-mediated O2 adsorption on n-type silicon using second harmonic generation. **D. Gupta**, S. Shanto, R.A. Walker

45. Reorganization energy calculations of poly(phenylene sulfide), a case study in organic semiconductor charge mobility prediction. **S. McCallum**, E. Jankowski

46. Overcoming fluorescence in time-resolved sum frequency generation spectroscopy of organic pollutants using a spatial filter. **E.L. Foss**, B.M. Luther, J.D. Cyran

47. Determining adsorption of volatile organic compounds on single-crystalline ice using nonlinear surface specific SFG spectroscopy. **L. Manning**, J.D. Cyran

48. Electronic structure and excited-state dynamics of DNA-templated monomers and aggregates of asymmetric polymethine dyes. **K. Duncan**, H. Byers, M. Houdek, S.K. Roy, D. Kellis, J. Lee, O.A. Mass, L. Li, J. Hall, W.B. Knowlton, B. Yurke, R.D. Pensack

49. Probing homogeneous and inhomogeneous broadening in DNA-templated cyanine heteroaggregates using two-dimensional electronic spectroscopy. **N. Wright**, M. Barclay, I. Medintz, J.S. Melinger, P.H. Davis, R.D. Pensack, D. Turner

50. Effect of structural variations between surrogate reference standards and target analyte on assay values in isocratic HPLC-UV quantitation. **J.O. Ofosu**, S. Asare-Nkansah, J.S. Ayim

51. Optimizing sensitivity in lateral flow assays: Effects of reaction kinetics and nanoparticle valency. **M. Soroush**, D.K. Roper

52. Real-time opto-electrochemical PFAS sensing at low ppt concentration. **L. Crockett**, K. Campbell

53. Environmental hazard detection with low-cost systems. **A. Carraway**

54. Direct visualization of sacrificial layer dissolution during freestanding membrane release processes using Cryo-ToF-SIMS. **H. Kao**, M. Choi, J. Yao, C. Chang, P.V. Sushko, Z. Zhu, Y. Du

414. The effects of interfacial constraints in oxide perovskite systems on thermochemical water splitting. **S. Bhattacharya**, L. Wang, Z. Yang, M. Bowden, H. Shi, P. Sushko, Y. Du

415. Data Driven Analysis of Lanthanide Separation in Capillary Electrophoresis Using Ligands. **K. D'Souza**, C. Tolbert, V. Yadav

416. PFAS in Solution – Micellization, Aggregation, or Something Else? **J.R. DeWald**, J.E. Hemphill, R.A. Walker

417. Targeting Mitochondrial Bioenergetics in the Metastatic Niche: The Anti-Cancer Nullomer Peptide 9S1R Selectively Disrupts mTNBC Within iPSC-Derived Functional Human Brain Organoids. **A. Bhakta**, T. Engmann, C. Htoo, J. Marks, D. Fologea, G. Hampikian, C. Jorcyk, N. Ali

MONDAY MORNING – June 29

Building a Sustainable Future with Chemical Methods and Materials

Boise Centre East, 410A

Financially supported by Department of Chemistry at Idaho State University, Office of Research at Idaho State University
C. Jenkins, L. A. Nickerson, Organizers
J. Pak, Organizer, Presiding

9:00 Introductory Remarks.

9:05 55. Overcoming hidden barriers in zeolite-catalyzed Friedel–Crafts acylations using carboxylic acids. A. Hayden, A. Summerill, J. Tzompa, S. Call, I. Marshall, **L.A. Nickerson**

9:30 56. Controlling carbon structure in three dimensions. **N.P. Stadie**

9:55 57. Designing redox-active ligands for metal dissolution and applications to sustainable e-waste recycling. **K.V. Waynant**, J. Moberly, E.B. Hulley

10:20 Break.

10:35 58. From sulfur waste to gold recovery: Charged polysulfides for

sustainable metal capture. **C. Jenkins**, J. Rollins, W. Kimball, C. Call

11:00 59. Engineering living materials for remediation of persistent halogenated pollutants. **J. Moberly**

11:25 60. Withdrawn

11:50 61. Harnessing seaweed biopolymers to develop next generation tissue engineering scaffolds. **P. Ghalsasi**, B. Joddar

Chemistry and Biology in the Microbial World

Boise Centre East, 410C

R. Nagarajan, Organizer, Presiding

9:00 Introductory Remarks.

9:05 62. Discovery of delta-valerobetaine biosynthesis by anaerobic human gut bacteria. S. Syberg, T.J. Hall, N. Clayton, N.C. Arguelles, Jr., **L.J. Rajakovich**

9:30 63. Assessing the potential of GABA-producing probiotics for healthy aging. **K. Sharma**, S. Nava, S. Pradhan, K. Aho, C. Blanton, J. Ochoa-Reparaz

9:55 64. ArtAB from Salmonella Typhimurium alters host cell signaling and disrupts epithelial barrier function. **N.M. Souza**, A. Hale, J. Tinker

10:10 Break.

10:25 65. More than a pore: OprF modulates eDNA release during Pseudomonas aeruginosa biofilm maintenance. **B. Tseng**

10:50 66. Multiple types of signaling impact the surface behavior of Pseudomonas aeruginosa. **M. Parsek**

11:15 67. Chemical biology methods to interrogate the competence regulon quorum sensing circuitry in Streptococci. **Y. Tal-Gan**

11:40 68. Redirecting bacterial conversations with synthetic chemical signals. **H.E. Blackwell**

12:15 Closing Remarks.

Chemistry Behind the Chips: How Molecules Shape Memory Fabrication; From Micron R&D to High-Volume Manufacturing

Boise Centre East, 410B

B. Andreani, F. Fabreguette, Organizers, Presiding

9:00 Introductory Remarks.

9:05 69. Chemical safety by design: Using Process Hazard Analysis to accelerate semiconductor innovation. **S. Uhlenbrock**

9:35 70. Designing atomic layer deposition precursors for high volume manufacturing: Considerations and case studies. **T. Quick**, B. Kraus

10:05 Break.

10:25 71. Mitigating pattern collapse in advanced semiconductor manufacturing via novel surface modification chemistry. **J. Imonigie**

10:55 72. Enhancing semiconductor yield through ultra trace contamination control using ICP MS. **D. Palsulich**

11:25 73. Responsible chemistry in semiconductor industry. **B. Canham**

11:55 Closing Remarks.

Matter to Megawatts: The Future of Materials in Energy I

Boise Centre East, 400C

Financially supported by APS PRX Energy
P. L. Barnes, C. M. Efaw, Organizers
H. Xiong, Presiding

9:00 Introductory Remarks.

9:05 74. Recovery of critical materials from spent Li-ion batteries: Challenges in graphite recycling. **C.K. Chan**

9:30 75. Unraveling SEI formation, structure, and Li+ transport kinetics in lithium-ion batteries using in situ liquid SIMS. **Z. Zhu**

9:55 76. Amorphous vs. crystalline superionic electrolytes for next-generation lithium-metal solid-state batteries. **A. Smirnova**, **F. Bahmani**, **T. Wither**

10:20 Break.

10:40 77. Green hydrogen and high purity alumina from gallium-aluminum and water. **S. Oliver**

11:00 78. Advancing cathode design for high-energy all-solid-state Li–S batteries. M. Jeong, J. Bao, Y. Xu, J. Wu, J. Liu, J. Xiao, **D. Lu**

11:25 79. Propagation of heterogeneities in Li metal anodes and strategies for Li surface homogenization. **B.H. Chen**, P. Thakur, E. Espinosa Villatoro, P.L. Barnes, A. Narla, J. Nelson Weker, E.J. Dufek

11:50 80. Interfacial microenvironments: Impacts of electrode heterogeneity on solvent and electrolyte structure. **Y. Zhang**

12:15 Closing Remarks.

Organic Synthesis to Harness Biological Insight and Create Innovative Therapies

Boise Centre East, 420A

Cosponsored by ORGN
Financially supported by Pfizer, Gilead
D. L. Warner, Organizer
E. McInturff, Organizer, Presiding

9:00 Introductory Remarks.

9:05 81. Enabling Negishi cross-coupling for the safe scale-up of a drug substance intermediate. **T.W. Wilson**

9:30 82. Development of a concise synthetic strategy to target the cytotoxic epoxyanthraquinol natural product mensacarcin. B. Hopewell, **P.R. Blakemore**

9:55 83. Greener solid-phase peptide synthesis of fluorinated dipeptides targeting Pseudomonas aeruginosa. **A. Dounay**, A.A. Fuller, O. Hatton, J. Samaritoni, D.M. Schirch, W.L. Scott

10:20 Break.

10:35 84. Leveraging organometallic reactivity for spatially controlled drug activation in tumors. **T.L. Suyama**, P. Pourali, P. Neupane, L. Garrett

11:00 85. Systematic, fragment-based discovery of molecular glues for selective stabilization of protein-protein interactions. **M. Arkin**

11:35 86. Chiral pool synthesis of sphingoid base analogs as modulators of ceramide-mediated apoptosis in cancer. **S. Mateen**, S. Pashikanti

12:00 Closing Remarks.

Topics in Physical and Computational Chemistry

Boise Centre East, 440

O. A. Mass, D. L. Warner, Organizers
B. McClain, Presiding

9:10 Introductory Remarks.

9:20 88. Understanding coupled electron and phase transfer at air/water/electrode interfaces. **K. Kawashima**, M. Cisewski, P. Nasehi, S. Gutierrez-Portocarrero, V. Sutton, A. Pendergast, J. Choi, A.E. Clark, G.A. Voth, R. Noriega, H.S. White

9:40 89. Under pressure: Unraveling liquid monopropellant air-independent combustion mechanisms with optical emission spectroscopy. **R.A. Walker**, B.N. Dean, D.T. Forbes

10:00 90. Zinc-based cationic coordination polymers: Effects of anion variation on structure and properties. **E. Chinchilla**, S. Oliver

10:15 91. Investigation of the hydration shell surrounding ice-binding proteins using Raman-MCR spectroscopy and molecular dynamics simulations. **D.J. Bell**, A.L. Devries, R. Drori, O. Andreussi, K. Meister

10:30 Break.

10:45 92. Electrostatic interaction distance in implicit and explicit solvation models. **J. Filser**, B.B. Gadjagboui, O. Andreussi

11:05 93. Dissecting molecular dynamics of functional systems via an ultrafast spectroscopic toolset. **C. KUAN**, T. Krueger, C. Fang

11:25 94. Parametrizing a force field to understand alkali phosphate aggregation. **E. Uyar**, A.E. Clark

11:45 95. Understanding the mechanism of formation for Ni(SO_4) complexes from Ni(SO_2). **D. Huerta**, E. Lopes, C. Stieber

12:05 96. Using molecular acidity to train A field-aware continuum solvation model. **E. Read**, O. Andreussi, J. Filser

MONDAY AFTERNOON – June 29

Undergraduate Student Poster Session

Boise Centre East
Exposition Hall (400A, 400B, 400D)

O. A. Mass, D. L. Warner, Organizers

12:00 - 1:30

97. Towards improving shape yield of gold nanoparticles for multimodal therapy. **A. Ordiway**, L. Moreau

98. Comparative evaluation of sensors for infant biomechanics in a Pavlik harness. **N.T. Smith**, A. Lakatos, B. Johnson, E. Mannen

99. Salt-binding proteins from Halobacterium Salinarum strain NRC-1: A Study of archaeal protein-salt binding capabilities and isolation techniques. **K. Johnston**

100. Random hexamer PCR amplification from low concentration Jurassic-aged halite. **L. Owens**, E. Bunde, C.M. Evilia

101. Biochemical characterization of the putative housekeeping 3-deoxy-D-arabino-heptulosonate-7-phosphate synthases of Pseudomonas aeruginosa PAO1. **E. Wamsley**, B.R. Lundgren

102. Removal of senescent cells attenuates α-synuclein-aggregation mediated Parkinson's Disease pathology. **P. Wardwell**, D.K. Verma, Y. Kim

103. Temporal dynamics of nasal-induced olfactory bulb inflammation in wild-type mice. **H. Herring**, Q. Gong, B. Montano Ramirez

104. Enhancing solubility and bioavailability of antibiotic/antifungal drug tavaborole via crystal engineering. **V. Bhaniramka**, E. Cabrera-Vega, A. E.Colatrella, S. J. Teat, N. S. Settineri, **G. Campillo-Alvarado**

105. Synthesis of novel α-aminoboronic acids and their analogues as potential inhibitors of key therapeutic enzymes. **E. Miller**, **A. Granados-Ramos**, Q. Hunt, H.N. Huber, A. Wilson, L. Fabry-Asztalos

106. Synthetic efforts towards 2-phosphono-D-arabinose: A potential antibacterial. B. Schuff, **E. Stene**, **G. McVay**, **C. Brose**, E. Dexheimer

107. Improving potency and solubility in furan-based small molecule inhibitors to combat breast cancer metastasis. **C. VanRenselaar**, S. Bones, D.L. Warner

108. Synthesis of quorum-sensing inhibitors to disrupt signal-producing BjaI enzymes behind bacterial communication in B. japonicum. **D. Monet**, F. Aghahowa, M. Eitzen, S. Kesharwani, R. Nagarajan, E.C. Brown

109. Efficient solid-phase peptide synthesis of (bis)methacrylamide zwitterionic cross-linkers. **C. Malloy**, M. Witherwax, M. Bernards, K.V. Waynant

110. Manipulating organic chemistry techniques to restrain Streptococcal pyrogenic exotoxin B (SpeB). **I. Mohamed**, S. Gonzalez, D. Breuer, S. Faozia, D.L. Warner, S. Hobdey

111. Synthesis of enantiomeric aromatic AHL analogs as quorum signal synthase modulators. **D. Yang**, E.C. Brown, R. Nagarajan

112. Heterocyclic acyl-chain specificity for a medium-chain quorum signal synthase. **J. Kovach**, H.C. Grenke, R. Nagarajan

113. Elucidating the non-reductive cytotoxicity of synthetic aziridinomitosenes. B. Ediss, I. Kump, **J. Martinez**, D.L. Warner

114. Modeling selectivity for terminal olefins in ruthenium-catalyzed olefin metathesis. **S. Koehler**, **G. Barrionuevo**, K. Neff, S. Duggan, B.L. Taylor

115. Computational study of initiation in ruthenium-catalyzed ethenolysis reactions. **A. Trouette**, **S. Koehler**, B.L. Taylor

116. Zeolite-catalyzed Friedel-crafts acylations. J. Tzompa, A. Hayden, **A. Summerill**, S. Call, L.A. Nickerson

117. Using zeolites as a greener alternative in the Prins-Pinacol reaction. **B. Adams**, **C. Kay**, L.A. Nickerson, A. Barlow

118. Synthesis of manganese complexes supported by a tetradentate organic ligand and various co-ligands. **A. Mendoza-Melchor**

119. Synthesis and electrochemical characterization of layered transition metal oxide cathodes for Sodium-ion batteries. **L. Brown**, E. Gabriel, H. Xiong

120. Synthesis, characterization, and antibacterial properties of 4-hydroxybenzoic acid-capped ZnO nanoparticles. **L.G. Harris**, J.C. Nixon, **J.D. Harris**

121. Formation of Thiolate-bridged dinuclear palladium complexes and sulfide-bridged trinuclear palladium complexes. **J. Andreani**, R. Clifton, M. Glassey, M. Callahan, E.C. Brown

122. Synthesis of urea and their related compounds for metal binding studies. **F.M. Hernandez**, **K.M. Hansen**, J.M. Gouldby, P.J. Coleman, A.J. Franks, Z. Lorenzana, A. Woodward, S. Pradhan, C. Jenkins, J.J. Pak

123. Sustainable synthesis of vinyl-flanked diketopyrrolopyrrole (DPP) polymers via direct arylation polymerization (DArP). **M.C. Hernandez Caballero**, R.W. Wahalathantrige Don, **J. Smith**, **R. Gonzales**, **J. Crittenden**, **A. Devereaux**

124. Introducing spacing units to bis(methacrylate) zwitterionic cross-linkers for evaluation in polyampholytes. **C. Barker**, R. Hubbard, S. Oneida, K.V. Waynant

125. Effects of high sulfur-content polysulfides on bacterial growth. **M. Lozano**, **S. Warner**, C.M. Evilia, C. Jenkins

126. Hydrophilic high sulfur content polysulfides: Effects of bacterial exposure and porosity. **A. Pepin**, M. Lozano, C. Norby, C. Jenkins

127. Synthesis, characterization, and oxidation of sulfur-PEG hydrogels via inverse vulcanization. **J. Blaser**, C. Jenkins

128. Effects of sulfur content, crosslinking, and pH on metal binding in imidazolium polysulfides. **K. Torrez**, **W. Black**, J. Rollins, C. Jenkins

129. Engineering hybrid lipid membranes to suppress ion release and

enable long-term stability of nickel and cobalt nanoparticles in biological environments. **K. Rodriguez**, A. Nagar, M.R. Mackiewicz

130. Effect of surface roughness on the nanopore structure of tantalum pentoxide. **G. Cook**, S. Pooley, H. Xiong

131. Deconstruction of model compounds of condensation polymers using Gamma Radiation. **J.M. Gouldby**, F.M. Hernandez, K.M. Hansen, P.J. Coleman, A.J. Franks, Z. Lorenzana, A. Woodward, S. Pradhan, J.J. Pak, C. Jenkins

132. Effects of dispersants and carriers on anthraquinone dye uptake in polyester fabric. **I. Stucki**, S. Bair, R.S. Johnson

133. Novel functionalized Cu-4-methyl-1,2,3-triazolate MOF for tunable sorptive properties. **A.N. Boeschoten**, C. Brozek

134. Synthesis of sustainable sulfur-based hydrogels. **L.E. Jager**, **W.A. Berrett**, C. Jenkins

135. Rigidity vs. reactivity: Controlling excited-state Decay in Dipyrrinone bilin subunits. **C. Williams**

136. RONS quantification in a Dielectric barrier Discharge cold plasma system. **H. Cleere**, B. Rojas, M. Villatoro, L. Dew, R. Komma, N. Benavente, T. Giannotta, H. Wallin, H. Mohamed, D. Titus, S. Rood, M. Pearlman, J. Browning, **K. Cornell**

137. Benchmarking the soft-sphere continuum solvation model for electrochemical applications. **C. Orizaba**, M. Khan, O. Andreussi

138. Computational study using Hansen Solubility Parameters (HSP) on coffee-contaminated polystyrene cups for green solvent selection. **J.S. Laboy Figueroa**, W. Serrano Garcia

139. Rethinking aqueous behavior of PFOA: Indications of aggregation. **J.E. Hemphill**

140. Towards enhancing fluorescence of DNA-templated Dyes at interfaces. **A. Cleveland**, S. Batista, P.H. Davis, K. Cervantes-Salguero

141. Effects of nanoparticle formation on provitamin D photochemistry. **E. Monson**, I. Haslem, J. Dean

142. Systematic structural exploration to elucidate structure-property relationships of fluorescent chalcone derivatives. **L. Plaza Arenas**, **T.A. Hindman**, **K. Kostoff**, A. Macabinguil, **L.R. Plagenz**, M. Matsumoto, S.D. Warren

143. Formulation and GC-MS quantification of farnesol-loaded DSPC/cholesterol liposomes utilizing a salting-out extraction methodology. **H.A. Mohamed**, S. Schumacher

144. Mechanistic studies on non-thermal plasma treatment of crop pathogens. **M. Villatoro**, S. Rood, H. Cleere, R. Komma, K. Cornell, J. Browning

145. Development of point-of-care drug sensors using electron spin and gold nanoparticles. **R. Whynman**, C. Webster, M. Mancias, J. Reeck, C. Baumbauer, K. Srinivasan

146. Comparative analysis of fatty acid methyl ester (FAME) derivatization

methods across diverse biological matrices. **G. Parsons**, G. Josephson, J. VanderWal, J. Anderson, H. Dalton, R. Myers, J. Bowden

147. Investigating the colorimetric sensor array's ability to differentiate and quantify aspect ratio 4 gold nanorods (AuNR) based on surface chemistry. **K. Lee**, S.E. Lohse

148. Illuminating forever chemicals: PFOS detection via optically gated transistors. **T. Gratton**, J.D. Cyran, K. Campbell

149. Degradation and quantification of PFAS using cold atmospheric pressure plasma and vibrational spectroscopy. **L.R. Gold**, T.I. Sprague, J.D. Cyran, K. Cornell

150. Withdrawn

151. Powered by plastic: How waste polymer pyrolysis impacts agricultural communities. **B. Watts**

152. Metal tolerance of halophilic Archaea from the Great Salt Lake. **M. Spafford**, C.M. Evilia

153. Valorization of dairy wastewater biomass through hydrothermal liquefaction. **L. Mallory**

154. Multi-elemental analysis of shoreline waters and oil-rich environments of the northern arm of the Great salt lake. **J. Hernandez**

155. Heterotrophic cultivation and environmental conditions influence biomass production and biochemical composition in acidophilic algae. **A.M. Carbajal**, **C.I. Wilson**, **J. Vasquez**, A. Garza, K. Maitra

156. De Novo bacteriochlorin with orthogonal bioconjugation linkers for the detection of point mutations in cell-free DNA. **G. Harrentsian**, O.A. Mass

412. Concentrating Lavender Hydrosol without Organic Solvents via Lyophilization and Bulk Freezing. **K. Uda**, B. Seare, D. Collins

413. Concentrating Lavender Hydrosol via Directional Freeze Distillation. **B. Seare**, K. Uda, D. Hakizimana, and D. Collins

Advanced Materials Chemistry

Boise Centre East, 410A

J. Lee, Organizer, Presiding

1:30 Introductory Remarks.

1:35 157. Cationic MOFs for trapping pollutants from water. **S. Oliver**

2:00 158. Phase changes with smaller, softer MOF particles. **C. Brozek**, A. Davenport, E. Svensson Grape

2:25 159. Redox-active CO_2 adsorbent. **A. Gladysiak**, A. Yadav, K. Stylianou

2:45 160. Framework modulation of spin-spin interactions in a two-dimensional photoactive metal–organic framework. **K. Everitt**, A. Kiran, A. Dye, W. Clifford, G. Streblow, A. Chalasani, S. Fatima, H. Le, J.L. Andrews

3:05 Break.

3:25 161. Light-engineered silver nanotriangles for precision imaging of triple-negative breast cancer and melanoma. **M.R. Mackiewicz**, H. Yue

3:50 162. Mechanically planar chiral rotaxanes exhibiting circularly polarized luminescence. **X. Li**

4:15 163. Solvent-governed quality of sulfide electrolyte thin films for all-solid-state batteries. **Z. Fan**

4:35 164. Programmable nanoscale organization: Orienting single molecules with DNA nanotechnology. **K. Cervantes-Salguero**

4:55 165. Dye aggregates as programmable excitonic nanomaterials. **G. Pascual Pariona**, S. Diaz, S.K. Roy, K. Cervantes-Salguero, O.A. Mass, R.D. Pensack, L. Li, B. Yurke, W.B. Knowlton, I.L. Medintz, P.D. Cunningham, A. Meares, J.S. Melinger, J. Lee

Matter to Megawatts: The Future of Materials in Energy II

Boise Centre East, 400C

Financially supported by APS PRX Energy
P. L. Barnes, C. M. Efaw, Organizers
H. Xiong, Presiding

1:30 Introductory Remarks.

1:35 166. Transition metal halide complexation and metal deposition reactivity in aqueous electrolytes. **T. Gao**, J. Liu

2:00 167. Dynamic behavior of electrode interfaces in concentrated alkaline electrolytes for renewable energy storage. **P. Kempler**, M. Rajeev

2:25 168. Electrosynthesis of agrochemicals via alternating-current-driven selective, continuous dehalogenation. **L. Luo**

2:50 Break.

3:10 169. Incorporating the effect of the electric double layer (EDL) in multicomponent electrolytes on electrochemical reactions. **Y. Qi**

3:35 170. Insights into aqueous Zn metal battery operation through X-ray scattering. **M. Toney**

4:00 171. Pairing operando Raman spectroscopy and chronocoulometry to track SOFC degradation. **K.R. Walker**, K. Held, R.A. Walker

4:20 172. Electrical double layer structure in concentrated versus dilute lithium-ion battery electrolytes. **S.E. Pooley**, S. Eskender, S. Langlois, J.A. Russell, C. Swenwold, J. Kim, H. Wang, C.M. Efaw, J.D. Cyran, H. Xiong

4:40 173. Tracking surface redox in YSZ: Where fuel cell stability begins to shift. **S. Shanto**, R.A. Walker

5:00 174. Bikes and Beans from local shop to global battery insights. **A. little**

5:15 Closing Remarks.

Organic Synthesis to Access Complex Molecules and Potential Drugs

Boise Centre East, 420A

Cosponsored by ORGN
Financially supported by Pfizer, Gilead
D. L. Warner, Organizer
E. McInturff, Organizer, Presiding

1:30 Introductory Remarks.

1:35 175. Manufacturing process for the macrocyclic peptide enlicitide. **A. Klapars**

2:05 176. An efficient synthesis of 3,5-bis-aminated pyrazolo[1,5-a]pyrimidines: Microwave-assisted copper catalyzed C-3 amination of 5-amino-3-bromo-substituted precursors. **M.A. Peterson**, T. Iorkula, L. Ganiyu, B. Tolman

2:30 177. Strain-release pentafluorosulfanylation: Exploring new concepts in "hybrid bioisosterism". **C.R. Pitts**

2:55 Break.

3:10 178. Recent efforts in the synthesis of complex natural products. **J.L. Wood**

3:45 179. Process development for a TLR-7 immunostimulatory drug-linker. **Y. Kwon**

4:10 180. Synthesis of 2-(N-acyl)amino-1,3-dienes via a ring fragmentation approach. Y. Punjabi, **M. Brewer**

4:35 181. Natural product mimicry: Residue-selective, oxidative peptide cyclization methods inspired by bioactive natural products. J. Sandres, M. Austin, M. Mifflin, D. Keyes, A. Gohier, M. Okhovat, C. McGrath, T. Dillon, Z. Nguyen, S. Minteer, M. Robes, M. Wallace, A. Puri, J. Price, **A.G. Roberts**

5:00 Closing Remarks.

Organometallics: Ligand Design, Catalysis, and Other Applications I

Boise Centre East, 440

R. R. Thompson, K. V. Waynant, Organizers, Presiding

1:30 Introductory Remarks.

1:35 182. Adventures in base-metal phosphaethynolates. **R.R. Thompson**

1:55 183. Reversible O-O bond activation and formation on dinuclear cobalt complexes. **W. He**, Y. Li, D. Wang

2:15 184. Bis(bidentate) N-heterocylic carbene Mn(I) complexes for CO_2 reduction. **D. Cabral**, A.H. Gaynes, P. Verma, C. Stieber, L. Filian, C.C. McCrory, M. Massey

2:35 185. Multimetallic ligand platform enabling cooperative small-molecule activation across first-row transition metals. **S. Rumi**

2:55 Break.

3:15 186. Computational, data science, and experimental evaluation and design of homogeneous transfer hydroformylation catalysts. **D.A. Odogwu**, J. Joy, I. Atkins, J.

Goldscheitter, G. Villarreal-Quiroga, A. Koppaka, S.J. Smith, D.J. Michaelis, D.H. Ess

3:35 187. Computational design of ligands for noble metal dissolution. **J. Deobald**, E.B. Hulley, J. Moberly, K.V. Waynant

3:55 188. Coordinating Lewis bases to Ni(IV) enhances reactivity toward strong sp^3 C-H bonds. **C.R. Bryant**, D. Wang

4:15 189. Catalytic conversion of hydrocarbon substrates utilizing Niobium single-site heterogeneous catalysts. **K. Searles**

4:35 Closing Remarks.

Software Development for Chemistry of Complex Systems

Boise Centre East, 420B

E. Jankowski, Organizer, Presiding

1:30 Introductory Remarks.

1:35 190. Solvent sets the tempo: Rhythms of interaction in molecular systems. **S. Sarupria**

2:05 191. REACTER for molecular modeling of polymer composites and metamaterials. **J. Gissinger**

2:35 192. How to connect predictive models towards actionable hypotheses in chemical informatics. **R. Cersonsky**

3:05 Break.

3:20 193. Linking fast fluctuations to protein conformational transitions in molecular dynamics simulations: Data streaming and anharmonic mode analysis. **M. Heyden**

3:50 194. Mapping and learning catalysis simulations with MapSy. **O. Andreussi**

4:20 195. Modeling interfacial complexation reactions using a configurationally-sampled embedding methodology. **J. Koegel**, A.E. Clark

4:35 196. 3D immersed interface method with RBF interpolation for the Generalized Poisson equation. **D. Mulumba**, D. Calhoun, G. Wright, J. Filser, O. Andreussi

4:50 Closing Remarks.

Topics in Biochemistry and Chemical Biology

Boise Centre East, 410C

O. A. Mass, D. L. Warner, Organizers
L. Warner, Organizer, Presiding

1:30 Introductory Remarks.

1:35 197. Establishment of a scalable machine learning–driven platform for protein design. **Y. Zou**, P. Hosseinzadeh

2:00 198. Using molecular dynamics (MD) for an In-silico study of fungal ice nucleating proteins (INPros). **K. Shaw**

2:25 199. Withdrawn

2:50 200. Applying machine learning models to guide high-throughput discovery of ribozymes. **K. Matteo**, E.J. Hayden

3:15 Break.

3:35 201. Investigation of the Acyl-substrate recognition in B. glumae TofI AHL synthase. **J. J K George**, **R. Nagarajan**

4:00 202. Natural Products Magnetic Resonance Database (NP-MRD): Open NMR database and repository helping natural products research. **J.R. Cort**

4:25 203. Thermodynamic profiling of Catalase via macromolecular rate theory (MMRT): Kinetic evidence of a highly evolved peroxidase. **M. Smith**, D. Scott

4:40 204. Methodology development for volatile organic compound capture in Staphylococcus cultures using charcoal fiber strips and GC-MS analysis. **Z. Ahmed**, **K. Huang**

5:00 205. Synthesis and invitro evaluation of antibacterial properties of hydroxylated cardanol from extracted cashew nut shell liquid. **V.O. Okodugha**, G.A. Emuokhonun

5:20 Closing Remarks.

Unraveling Structure and Dynamics in Molecules and Materials with Advanced Nonlinear Spectroscopy, Microscopy, and Photophysical Studies I

Boise Centre East, 410B

Cosponsored by PHYS
Financially supported by Light Conversion
J. D. Cyran, Organizer
R. D. Pensack, Organizer, Presiding

1:30 Introductory Remarks.

1:35 206. Photoinduced-absorption detected magnetic resonance studies of molecular materials. **O. Reid**, L. Romanetz

1:55 207. Ultrafast optomagneto spin conversion in organic single crystals and twisted bilayer graphene. **M.W. Graham**

2:15 208. Single particle spectroscopy of emerging functional nanomaterials. **E. Grumstrup**

2:35 Break.

2:50 209. Spectroscopy, photophysics, and photochemistry of model bilin subunits from jet-cooled conditions to the condensed phase. **J. Dean**

3:10 210. Experimental and computational investigation of tellurium-containing rhodamines. **T. McCormick**, A. LaVigne, B. Stienkamp, L. Lutkus

3:30 Break.

3:45 211. 2D-IR studies of the dynamics in concentrated electrolyte solutions. **Z. Wang**, R. Felsted, T. Graham, S. Mergelsberg, D. Bazak, e. Nienhuis, a. joly, C. Pearce, K. Rosso

4:05 212. Withdrawn

4:25 213. Measuring coupled electronic and vibrational degrees of freedom from molecules to materials using two-

dimensional electronic vibrational spectroscopy. **W.R. Jeffries**, M.H. Khalil

TUESDAY MORNING – June 30

Advancing Chemistry through Computation and Artificial Intelligence

Boise Centre East, 420B

R. Devanathan, Organizer, Presiding

8:00 Introductory Remarks.

8:05 214. Adaptive, Bayesian experimental design to efficiently determine the critical micelle concentration of a surfactant. M. Hammond, Q. Ke, **C.M. Simon**, A. Bain

8:35 215. Data-driven correction of continuum solvation models. **B.B. Gadjagboui**, J. Filser, M. Khan, O. Andreussi

8:50 216. From structural matching to chemical validation: Comparing enzymes and MOFs for biomimetic catalyst design. **T. McCarthy**, J. Crawford

9:05 217. Machine learning for chemically complex aqueous solutions. **M. Dinpajooh**

9:35 Break.

9:50 218. Machine-learning and quantum approaches to semiconducting two-dimensional materials. **M. Mosquera**

10:20 219. Modeling the absolute solvation energy and reduction-deposition potential from dilute to high concentration electrolytes. **X. Tan**, N. Redkar, C. Gu, Y. Qi

10:35 220. Machine learning potentials for disorder-aware modeling and dopant design in metallic glass HER catalysts. **M. Khan**, O. Andreussi

10:50 Closing Remarks.

Innovations in Active Learning

Boise Centre East, 430A

Financially supported by Department of Chemistry at Idaho State University, Office of Research at Idaho State University
L. A. Nickerson, J. J. Pak, Organizers, Presiding

8:00 Introductory Remarks.

8:05 221. Molecular structure jigsaw puzzles: Many pieces, one structure. **S.J. Donnelly**

8:25 222. Cooperative learning in the flipped general and physical chemistry classrooms. **L.M. Goss**

8:45 223. Using branding and project-based learning in general chemistry. **S. Towne**

9:05 224. Specifications grading in first semester organic chemistry: Benefits and challenges. **R. Jeske**

9:25 Break.

9:40 225. From students to facilitators: Training learning assistants in a flipped organic chemistry course. E. CraigSmith, **L.A. Nickerson**

10:00 226. Aligning the lab: Building instructional coherence through embedded TA proffesional development. **J.K. Mahoney**

10:20 227. A safer, low-cost static headspace enrichment method for arson investigation in undergraduate teaching laboratories. **K.D. Schwartz**

10:40 228. Incorporation of green chemistry and NME contents in undergraduate curriculum. **J.J. Pak**

Matter to Megawatts: The Future of Materials in Energy III

Boise Centre East, 410A

Financially supported by APS PRX Energy
P. L. Barnes, C. M. Efaw, Organizers
H. Xiong, Presiding

8:00 Introductory Remarks.

8:05 229. Cathode design and synchrotron X-ray characterization for sodium metal batteries. **X. Zheng**

8:30 230. Molecular crystal solid electrolytes for next-generation lithium/sodium batteries. S.C. Paul, P. Prakash, M.J. Zdilla, **S.L. Wunder**

8:55 232. Electrolytes development for sodium-ion batteries. **C. Ban**

9:20 233. Synthesis and high-voltage stability of heterostructured layered transition metal oxides for sodium ion batteries. **E. Gabriel**, H. Xiong

9:40 Break.

9:50 235. Energy storage in nanoscale materials. **B. Dunn**

10:15 236. All-solid-state batteries: Materials, characterization and manufacturing. **Y. Yao**

10:40 234. Grain boundary engineering for ultra-stable sodium solid-state batteries. **B. Li**, P. Wang, H. Qing, I. Baker, W. Li

11:00 Closing Remarks.

Nanoscale Materials and Their Applications I

Boise Centre East, 400C

Cosponsored by INOR
D. Estrada, A. M. Schimpf, Organizers, Presiding

8:00 Introductory Remarks.

8:05 237. Ultrafast laser ablation of material to generate novel doping of two-dimensional materials. **N. Kandadai**

8:25 238. Mixed-coordination-engineered 2D AuPS enables giant in-plane anisotropy for polarization-sensitive photodetection. **H. Yang**, Z. Cheng, C. Han, Y. Huang

8:45 239. Atomic scale processing of MoS_2. **E.D. Graugnard**

9:05 240. Structural design of bismuth telluride nanoplates through process variables. J. Ackley, A. Weltner, K. Chinnathambi, N. McKibben, C. Francis, J. Eixenberger, **T. Valayil Varghese**, D. Estrada

9:25 Break.

9:45 241. Perfect crystals, imperfect transport under nanoconfinement: Lessons from single-crystal 2D COF membranes. J. Das, Y. Shin, B. Bartolomei, C. Johannesmeyer, A.C. Van Duin, W.R. Dichtel, **K.D. Li-Oakey**

10:05 242. Plasma-assisted processing for surface property tuning, sintering, and pattering: Towards applications in energy and electronics. **H. Subbaraman**

10:25 243. $Ti_3C_2T_x$ MXenes as nanoscale flow electrodes: Advancing seawater carbon capture via capacitive deionization. **A. Mukhopadhyay**

10:45 Closing Remarks.

Processing and Value-Enhanced Separation Strategies for Food, Dairy, and Biomass Valorization

Boise Centre East, 440

M. Fong, O. M. McDougal, Organizers
K. Johnson, Organizer, Presiding

8:00 Introductory Remarks.

8:05 244. Science and technology applied to food and dairy processing. **O.M. McDougal**

8:25 245. Pulsed electric field: Impact and emerging potential in industrial processing systems. **K. McKenzie**

8:45 246. Improved processing of terrestrial and agricultural waste using pulsed electric fields. **C. Williams**

9:05 247. Withdrawn

9:25 Break.

9:40 248. Sweet whey permeate powder production using liquified dimethyl ether and freeze drying. **J. Ogolla**

10:00 249. Upcycling potato waste into high-value food-grade starch, fiber, and protein ingredients. **R. Sadeghi**, C. Renshaw, O.M. McDougal

10:20 250. Interfacial alkaline microdomain engineering via SrO integrated carbon-based ternary nanocomposites for electrochemical detection of theobromine. **G. Meenakumari Gopakumar**, C. Hsu, M. Subramanian

10:40 251. Revolutionizing phosphorus fertilization: EPA award-winning PhoSul® technology for sustainable agriculture. **E. Gannon**, J. Samuelson, B. Uranga, P. Gannon, T. Gannon

11:00 Closing Remarks.

Therapeutics for the Treatment of Diseases in People, Plants, and Animals I

Boise Centre East, 410C

C. Jorcyk, D. L. Warner, Organizers
K. Cornell, Organizer, Presiding

8:00 Introductory Remarks.

8:05 252. Redox collapse as a therapeutic strategy: Targeting the TrxR–AhpC axis in Helicobacter pylori. **A. Gomez**, B. Redden, C. Shin, L.

Tiwari, R. Hubbard, S. Glenn, K. Franco, S. Oneida, K.V. Waynant, A. Baylink

8:25 253. Oncostatin M as a drug target for the prevention of breast cancer metastasis. **S. Haile**, C. Riley, N. Forbes, T. Engmann, S. Bones, K. Pierson, B. Gordon, H. Kwon, C. Wolf, A. Feci, C. Pruette, D. Lighter, C. McGrath, A. Nemeth, J. Tuccinardi, G. Coughlin, A. Tran, S. Randall, J. Day, M. King, L. Warner, D.L. Warner, C. Jorcyk

8:45 254. Repurposing Tobramycin for sustained local delivery in a sheep model of spinal fusion rod-related infection. **S. Lavering**, M. Lopez, H. Vu, B. Kawaguchi, R. Epperson, B. Barnum, C. Garrett, N. Ashton, D. Williams

9:05 255. Targeting streptolysin O in necrotizing infections: Evidence for epitope-dependent efficacy of antitoxin antibodies. A. Nmaju, S. Faozia, E. Price, **S. Hobdey**

9:30 Break.

9:45 256. Modifications on a chalcone scaffold producing fluorescent molecules with broad-spectrum cancer cell line activity. **S.D. Warren**, C.C. Andrade, M.E. Cremeens, G. D'Ambruoso, S.K. Devine, L.A. Diaz-Martinez, M. Matsumoto

10:10 257. Targeting cyclin-dependent kinases in cancer: from selective inhibition to targeted cyclin degradation. **S.T. Zeleke**

10:35 258. Effects of Doxorubicin on extracellular matrix regulation in mouse fibroblasts: Insights into cardiotoxicity mechanisms. **S. Pu**, C. Patricelli, C. Skaggs, S. Nick, J. Oxford

11:00 Closing Remarks.

Undergraduate-Driven Organic Chemistry: Research Excellence at PUIs

Boise Centre East, 430B

Financially supported by Organic Syntheses
N. A. Yakelis, Organizer, Presiding

8:00 Introductory Remarks.

8:05 259. Coordination polymers derived from tetrazole derivatives: Synthesis, characterization and potential utility. **S. Rayat**, E. Cox, C. Newmark, K. Peterson

8:30 260. Lessons learned from a course-based undergraduate research experience in organic chemistry at a private undergraduate institution. **D.M. Hitt**

8:55 261. Total synthesis of guaipyridine alkaloids. **J. Vyvyan**

9:20 Break.

9:40 262. Water-soluble antioxidant-functionalized chitosan derivatives: Synthesis, radical quenching, and mechanistic studies. **A.P. Duncan**, M. Bihrle, R. Dreiling, L. Salinas, R. Pashek, I. Lilly, D. Aubert-Vasquez, b. houska

10:05 263. Nanoparticle formation during metal-catalyzed organic reactions: Continuous centrifugation as

a potential alternative to the hot filtration test. B. Nunley, B. Petrich, R. McGraw, P. Schuldheiss, G. Cooper, Y. Bao, **M.L. Scheuermann**

10:30 264. Carbostyril journey — from luminescent biosensors to antimicrobial natural products. **N.A. Yakelis**, F. del Toro, G. Lemma, A. Donnelly, M. Turchaninov, M. Rizzo

10:55 Closing Remarks.

Unraveling Structure and Dynamics in Molecules and Materials with Advanced Nonlinear Spectroscopy, Microscopy, and Photophysical Studies II

Boise Centre East, 410B

Cosponsored by PHYS
Financially supported by Light Conversion
R. D. Pensack, Organizer
J. D. Cyran, Organizer, Presiding

8:00 Introductory Remarks.

8:05 265. Surface chemistry of iron oxide minerals: From buried mineral interfaces to nanoparticle model systems. **A.L. Mifflin**

8:25 266. Magnetic-field-induced reorganization of hydroxyl groups at dysprosium-loaded alumina/aqueous interfaces. **M.D. Boamah**, E. Nakouzi, Z. Molnar, H. Park, E. Mondarte, D. Nguyen, S. Zhang, K. Thangaraj, A. Ritchhart, Z. Wang, K. Rosso, B. Legg, M. Sushko

8:45 267. PFAS adsorption to lipid films: Interesting science, concerning consequences. **R.A. Walker**

9:05 268. Stressed out materials: Use of nonlinear spectroscopy for material state awareness. **J.E. Patterson**

9:25 Break.

9:50 269. Photophysics and light-matter interactions for enhanced optical and optoelectronic properties of organic and hybrid materials. R. Lamug, K. Dimmitt, M. Chase, A. Ullah, T. Sarker, B. MacGill, S. Robinson, J.E. Anthony, L. Cheng, **O. Ostroverkhova**

10:10 270. Understanding and controlling spin injection dynamics in dye-sensitized solar cell architectures. **M.K. Gish**, N. Pompetti, N.R. Neale, A. Greenaway, J.C. Johnson

10:30 271. Illuminating domain boundaries in organic thin films using darkfield transient absorption. **A. Paulson**, R. Fisher, C.Y. Wong

10:45 Closing Remarks.

TUESDAY AFTERNOON – June 30

Future of Food in the Mountain West: Examining Priority Research Questions and Funding Opportunities

Boise Centre East, 440

C. Frost, L. Kowaleski-Jones, J. Morris, Organizers, Presiding

1:30 Introductory Remarks.

1:35 272. A horizon scan to identify priority questions in food research for the Mountain West. **J. Morris**, L. Kowaleski-Jones, C. Frost

1:55 273. How do enabling activities influence food practices and policies?. **L. Kowaleski-Jones**, J. Morris, C. Frost

2:15 274. Food, economic systems and governance institutions. **L. Kowaleski-Jones**, C. Frost, J. Morris

2:35 275. Food process systems. **O.M. McDougal**

2:55 Break.

3:15 276. The future of food in the Mountain West: Examining priority research questions and funding opportunities. **C. Frost**, J. Morris, L. Kowaleski-Jones

4:45 Closing Remarks.

Nanoscale Materials and Their Applications II

Boise Centre East, 400C

Cosponsored by INOR
D. Estrada, A. M. Schimpf, Organizers, Presiding

1:30 Introductory Remarks.

1:35 277. Epitaxial nitrides: A toolbox for development of new materials. **B. May**

1:55 278. Automated aerosol assisted chemical vapor deposition (AAVCD) for high-throughput screening of perovskite thin films. **J.R. McNamee**, L. Nawab, L. Becerril, C.Y. Wong

2:10 279. Magnetic porous perovskites. **D. Reed**

2:30 280. Molecular beam epitaxy synthesis of metastable H-Scfeo$_3$ films with high Néel temperature. **J.R. Wright**, D.A. Tenne, N.A. Parker, A. Hansen, C. Fologea, D. Schlom

2:45 Break.

3:00 281. Nanoscale conversion mechanisms in iron oxides used for energy storage and ironmaking. **P. Kempler**, R. Shekhar

3:20 282. Single crystalline (Ba,Sr)TiO$_3$ membranes studied by ultraviolet Raman spectroscopy. **C. Fologea**, A. Hansen, B. Zuber, S. Varshney, S. Choo, D. Lee, B. Jalan, D.A. Tenne

3:35 283. Ultraviolet Raman spectroscopy characterization of epitaxial oxide thin film heterostructures. **A. McLeish**, C. Fologea, A. Hansen, B. Zuber, D. Sotir, D. Schlom, V. Harbola, J. Mannhart, D.A. Tenne

3:50 Break.

4:05 284. High-entropy oxide thin films: Epitaxial growth at the edge of order and disorder. **Y. Du**

4:25 285. Epitaxial control of nanoscale heterogeneity and topotactic phase evolution in spinel high-entropy oxide thin films. **J. Shi**, E. Hershkovitz, H. Kao, D. Peng, G. Bejger, C. Rost, M. Bowden, B. Ravel, Z. Zhu, C. Wang, H. Zhou, l. wang, Y. Du

4:40 286. Probing cation distribution in high entropy oxide thin films by ToF-SIMS. **H. Kao**, C. Chang, Z. Zhu, Y. Du

4:55 287. Metastable structures in thin films of complex oxides. **P.V. Sushko**

5:10 Closing Remarks.

Nuclear Chemistry in the Northwest

Boise Centre East, 430B

Cosponsored by NUCL
R. Cox, N. E. Uhnak, Organizers, Presiding

1:30 Introductory Remarks.

1:35 288. Understanding the role of actinide (An) valence electrons: Structural assignment of $[An, O, H]^+$ from inductively coupled plasma tandem mass spectrometry collision induced dissociation reactions. **R. Cox**, A. Bubas, A. French

1:55 289. The chemically reducing environment found in liquid nuclear wastes. **J. Ferrer**, J.T. Reiser, M. Asmussen

2:15 290. Effect of ionizing radiation on hexavalent plutonium in nitric acid systems. **T.S. Grimes**, A. Cook, G.P. Holmbeck, A.E. Kynman

2:35 291. Assessing ASTM C749 for fine-grain nuclear graphite Grade 2114. **A.E. Lupercio**

2:55 292. Investigation of moisture and oxygen in hygroscopic chloride salts for nuclear applications. **K. Tolman**

3:15 Break.

3:30 293. NMR and NQR probes of high valent actinide chemistry in the solid state. **K. Anand**, S. Park, K. Rana, R.G. Surbella, S. Sinkov, A. Gelis, H. Cho

3:50 294. Understanding strain fields in nuclear graphite using digital image correlation. **A.B. Cunningham**

4:10 295. Spectroscopic characterization of actinide-containing materials across scales: From U-238 to Am-243. **D. Schnable**, C. Nizinski, A. Williams, C. Hilton, H. Cho, R.G. Surbella

4:30 296. Heptamethine dyes for novel actinide separations via photoirradiation-induced macromolecular aggregation. **S. Rehbein**

4:50 297. Nuclear data in nuclear forensics: Where nuclear physics meets chemistry. **N.E. Uhnak**

5:10 Closing Remarks.

Organometallics: Ligand Design, Catalysis, and Other Applications II

Boise Centre East, 410A

R. R. Thompson, K. V. Waynant, Organizers, Presiding

1:30 Introductory Remarks.

1:35 298. Computational studies of N-heterocyclic carbene-ligated ruthenium catalysts for ethenolysis reactions. **B.L. Taylor**, G. Morrow, S. Koehler, A. Trouette

1:55 299. Tuning metal–CO Bonding through ligand electronics: A predictive framework for covalency and reactivity. **A. Elora**, L. Nickerson

2:15 300. Exploring oxidative catalysis with first-row metal complexes of a pentadentate phosphine chalcogenide scaffold. **R. Chilcott**, A.N. Desnoyer

2:35 301. Design and synthesis of heterobimetallic complexes for dual metal catalysis. **G.H. Villarreal**, M.D. Kotter, N. Kempton, S.J. Smith, D.J. Michaelis

2:55 Break.

3:15 302. Bis(bidentate) N-heterocyclic carbene silver complexes for reduction of captured CO_2 sources. **B. Goka**, C. Stieber, C.C. McCrory, A. Hernandez, L. Filien

3:35 303. Tunable metal nuclearity in phosphine functionalized heterometallic complexes for the transformation of carbon oxides. **C.A. Rummelhart**, E. Zacharia, A.N. Desnoyer

3:55 304. Hierarchically porous metal–organic frameworks: A versatile platform for catalysis and adsorption. **Q. Zhang**

4:15 Closing Remarks.

Scanning Probe Microscopy for Physical & Chemical Characterization of Materials

Boise Centre East, 420B

Financially supported by Bruker Nano Surfaces

P. H. Davis, Organizer
C. M. Efaw, E. D. Graugnard, M. Hurley, Organizers, Presiding

1:30 Introductory Remarks.

1:35 305. Ultrafast nano-imaging – probing structure, coupling, and dynamics of matter on its natural length and time scales. **M.B. Raschke**

2:15 306. Tip-enhanced Raman and infrared spectroscopic imaging to image chemical dynamics and heterogeneity with few nanometer spatial resolution. **B. O'Callahan**

2:55 307. Practical applications of photothermal atomic force microscopy-infrared spectroscopy (AFM-IR). **C.M. Efaw**

3:15 Break.

3:30 308. Designing, synthesizing, and characterizing biopolymer assemblies on van der Waals materials. **S. Zhang**, W. Zhou, D. Kong, G.E. Johnson, C. Chen, J. De Yoreo

3:50 309. Scanning Probe Microscopy on Advanced NAND and DRAM Structures. **L. You**, F. Muramutsa, E. Ng, Y. Liu

4:30 310. Cross sectional potential profile dependent on device architecture in reverse bias for perovskite diodes. **H. Contreras**, R. Giridharagopal, F. Jiang, D.S. Ginger

4:50 311. Understanding the influence of electrolyte and electrode surface on sodium SEI by In Situ atomic force microscopy. **J. Russell**, S. Eskender, H. Xiong

5:10 Closing Remarks.

Student Learning and Success in STEM

Boise Centre East, 430A

Cosponsored by CHED
Financially supported by W.W. Norton, Inc.
C. Saunders, Organizer
J. Meredith, Organizer, Presiding

1:30 Introductory Remarks.

1:35 312. Integrating pedagogical content knowledge and chemistry expertise: Five decades of evidence-based strategies for student success. **T.J. Greenbowe**

2:15 313. STEM student success, chemistry teaching, and learning science: The time is now. **E. Landrum**

2:55 314. Science identity development in the nuclear science research & training (NSRT) Program. K. Wright, **R.M. Kelly**, N.E. Esker

3:15 Break.

3:35 315. Course-integrated undergraduate research experiences (CUREs) in organic chemistry: A model for rural satellite campuses. **M.A. Christiansen**, B. Diaz, K. Zager, B. Holmes, T. Carter, M. Colver

3:55 316. Making the invisible visible: Use of thermography in general and organic chemistry. **S.J. Donnelly**

4:15 317. Science practices engagement: Promoting meaningful learning in the general chemistry lab. **N.S. Stephenson**, L. Dahlberg, T. Huynh, K. Hunter, L. Spring, E. Worline, J. Weaver, K. Bolland, E. Carney, L. Clark

4:35 318. FiRE and ICE: A pedagogical hook for complex equilibrium calculations. **K.D. Revell**

4:55 Closing Remarks.

Therapeutics for the Treatment of Diseases in People, Plants, and Animals II

Boise Centre East, 410C

Cosponsored by MEDI
C. Jorcyk, D. L. Warner, Organizers
K. Cornell, Organizer, Presiding

1:30 Introductory Remarks.

1:35 319. Turning cold tumors hot. **S.G. Warner**

2:00 320. Development of nonthermal plasma therapeutics for viral disease. **K. Cornell**

2:25 321. Genetic and mechanistic determinants of variability in sacubitril/valsartan response in heart failure. **K.A. Mitchell**

2:50 322. In silico identification of mechanotransduction modulators used for the prevention of aminglycoside-induced ototoxicity. **C. Nicolet**, D. Xu

3:10 Break.

3:25 323. Epitope editing non-mutated antigens for Th1 selective cancer vaccines. **M. Disis**

4:00 324. Identifying a pharmacological inhibitor of IL-13RA1. A. Pugel, G. Koirala, J. Holmes, A. Schoenfeld, S. Alsaifi, O. Schuldt, S. Leitch, L. Jones, P. Buckley, D. Xu, **B. Morrison**

4:25 325. Predicting wound healing: A machine-learning partial least squares discriminant analysis model utilizing microbiome, metabolome, and clinical marker data sets. **C. Anders**, H.L. Smith, J. Boyd, M.C. Davis, T.M. Lawton, C. Hwang, M.M. Doucette, M.B. Ammons

4:50 326. Identification of novel molecular entities towards the prevention of aminoglycoside-induced hearing loss. **E. Kara**, D. Xu

5:10 Closing Remarks.

Unraveling Structure and Dynamics in Molecules and Materials with Advanced Nonlinear Spectroscopy, Microscopy, and Photophysical Studies III

Boise Centre East, 410B

Cosponsored by PHYS
Financially supported by Light Conversion
J. D. Cyran, R. D. Pensack, Organizers
K. Wittmeyer, Presiding

1:30 327. Morphology-dependent interplay between singlet fission and photodegradation in TIPS-pentacene thin films. **M. Chase**, J.E. Anthony, O. Ostroverkhova

1:45 328. Esterification and polymerization of Rose Bengal photosensitizer to improve physical and photophysical properties in oxidation reaction. **S. Oakrest**, T. McCormick, M. Wolkenhauer

2:00 329. Elucidating collective excitonic behavior in aggregates of conjugated organic molecules via DNA self-assembly. N. Wright, K. Wittmeyer, P.H. Davis, D. Turner, **R.D. Pensack**

2:20 Closing Remarks.

WEDNESDAY MORNING – July 1

Chemical and Lab Safety

Boise Centre East, 410B

R. Devanathan, A. Pemberton, M. Smith, Organizers, Presiding

8:00 Introductory Remarks.

8:05 330. AI as a safety aid, not a replacement: Practical uses for the lab. **J.K. Paul**

8:25 331. Hazardous waste management for laboratories: Insights and experiences from the regulator. **J. Thomas**

8:45 332. Combining human performance improvement and integrated safety management: Practical systems to strengthen laboratory safety culture. **R. Swaner**

9:05 333. Safe conduct of research at Idaho National Laboratory: Incorporating integrated safety management system

into Hazard analysis and research work control. **D. Baek**, S. Fox

9:25 334. A chemical safety elective course for upper division undergraduate and master's students. **M.L. Scheuermann**

9:45 Break.

10:05 335. Chemical and Lab Safety at Boise State University. **T. Truong**

10:25 336. The role of organizational culture in safe operations. **R. Devanathan**

10:45 337. The role of human performance improvement on a laboratory fire. **M. Case**

11:05 338. Research safety for pregnant lab users. **A. Pemberton**

11:25 Closing Remarks.

Chemical Frontiers in Imaging: From Biomolecules to Semiconductors

Boise Centre East, 410A

L. Warner, Organizer, Presiding
O. A. Mass, Presiding

8:00 Introductory Remarks.

8:05 339. Disseminating advanced volumetric imaging: Modular light-sheet, ASLM, and direct-view OPM systems. J. Haug, T. Ngo, M. Faiyazuddin, **K.M. Dean**

8:40 340. Withdrawn

9:05 341. Tunable and modular gold nanoparticles for advanced bioimaging and molecular detection. **J. Goelzer**, C. Velasquez

9:30 Break.

9:50 342. Nanometer-scale data matrix codes stored in DNA origami and retrieved by super-resolution microscopy. **E.J. Hayden**

10:15 343. Biomolecular kinetics in the retina support spatially-aware color correction in images and displays. **S. Pooretemad**, D.K. Roper

10:40 344. Tuning chlorophyll to pass the rainbow: Engineering water-soluble chlorophyll proteins for pH sensing and near-infrared absorption. **N. de Cordoba**, J.H. Wat, S. Rain Holt, A.A. Phadkule, M. Reppert

11:05 345. Frontiers in the chemical and photophysical properties of De Novo bacteriochlorins for advanced biological imaging. **O.A. Mass**

11:30 Closing Remarks.

From Access to Legibility: New Frontiers in Research Experiences for Students and Teachers

Boise Centre East, 440

Cosponsored by CHED
Financially supported by ACS Project SEED
L. Atkins, D. L. Warner, Organizers
N. Chodkowski, Presiding

8:00 Introductory Remarks.

8:05 346. Project SEED: Supporting exploration, engagement, and discovery in the Chemical Sciences. **E.A. Smith**, K. Muñoz

8:30 347. Expanding access to chemistry: Two decades of Project SEED impact at The University of Southern Mississippi. **D.S. Masterson**

8:55 348. Mentors, students, and scholars: engaging younger students and their educators in active research opportunities. **L. Bittleston**, **D. Bolen**

9:20 349. Utilizing phage platform for narrow functionality of the sole glycoprotein of pathogenic viruses and tools for students training. **A. Bopda Waffo**

9:45 Break.

10:00 350. Students in a general chemistry CURE course generating new scientific knowledge iteratively. **T.A. Vannelli**

10:25 351. Vertically Integrated Projects (VIPs): A model for engaging undergraduate students in research. **N. Chodkowski**

10:50 352. Creating research experiences for undergraduates at Meridian Community College. **A. Carraway**, J.A. Pigza

11:15 353. Effects of a research faculty workshop and student support modules on the research experience. **N.O. Flynn**, E. Crosman, C. Eichler, M. Shrestha, K. Shrestha

11:40 354. High school teacher's research journey in a physical chemistry lab and its impact on pedagogy. **C.D. Cooper**

12:05 Closing Remarks.

Medical Devices, Sensors, and Systems

Boise Centre East, 420B

K. Cornell, Organizer, Presiding

8:00 Introductory Remarks.

8:05 355. Development of nonthermal plasma treatment for decontamination of crop seeds. **S. Rood**

8:20 356. Cold atmospheric pressre plasma reduces bacterial and viral burden in ex vivo porcine models. **T. Hudok**

8:35 357. Self-powered MXene-coated PVBVA nanofiber e-tattoos for triboelectric energy harvesting, capacitive storage, and bio signal detection. **A. Pratap**, H. Burgoyne, T. Valayil Varghese, J. Eixenberger, D. Estrada

8:50 358. Printable and flexible piezoelectric sensor tattoos for human health monitoring. **M. Zuzelski**, Z. Deng

9:05 359. Low-cost 32-channel bioelectronic platform for simultaneous ExG recording and current-mode stimulation. **A. Lakatos**, M. Riley, B. Johnson

9:20 360. Investigation of self-assembled water chains in biomolecular

interactions. **B. Kim**, R. Boehm, S. Heydendahl, D. Haemmerle, A. Curley

9:40 Break.

9:55 361. Personalization improves detection of altered responses in neurodegenerative and retinal disease. **D.K. Roper**, S. Pooretemad

10:15 362. Transcranial radio frequency stimulation for non-invasive Deep Brain neuromodulation. **O. Yaghmazadeh**

10:35 363. Microscale electrochemical sensors enhanced with nanoparticles and magnetic thin films for multi-drug detection. R. Whynman, C. Webster, K. Rasmor, J. Reeck, C. Baumbauer, **K. Srinivasan**

10:55 364. Longitudinal measurement of extracellular matrix remodeling in engineered tissues. **J. Reeck**

11:15 365. STRIDE: A flexible, depth-controlled intramuscular EMG platform for small-animal studies. **M. Riley**, A. Lakatos, B. Johnson

11:35 366. Cold atmopsheric pressure plasma for reactive species generation. **J. Browning**, K. Cornell, M. Pearlman

11:55 Closing Remarks.

Nanoscale Materials and Their Applications III

Boise Centre East, 420A

Cosponsored by INOR
D. Estrada, A. M. Schimpf, Organizers, Presiding

8:00 367. Photocatalysis using silicon-molecular catalyst hybrids. **N.R. Neale**

8:20 368. Understanding the nanoscale structure of rare earth element adsorbates at mineral-water interfaces. **B. Legg**

8:40 369. Nanomaterials dynamics and growth at solid-liquid interfaces. **S. Zhang**, J. De Yoreo, C. Mundy, V. Prabhakaran, G.E. Johnson, D. Baker, H. Pyles, E. Mondarte

9:00 370. AutoREACTER: Automated generation of LAMMPS-ready reaction Templates for polymerization simulations. **J.J. Mahanthe**, J. Gissinger

9:15 Break.

9:30 371. Surface engineering of gold nanorods for enhanced Mercury sensing via amalgamation. **Y. Bao**

9:50 372. Synthesis of fisheye nanocage composed of intact Ag nanocubes with interior gaps. **T.E. Ogunrinola**, A. Talbott, D. Haro, Y. Bao

10:05 373. Hybrid lipid-shielded silver nanotriangles enable shape stability and subcellular targeting. **A. Nagar**, M.R. Mackiewicz

10:20 374. Towards understanding the role of reducing agents in nanoparticle synthesis. **L.M. Moreau**

10:40 375. Metal ion exchange reactions and dopant internalization in ZnS magic size clusters. **K.R. Kittilstved**

11:00 Break.

11:15 376. In situ transient absorption spectroscopy during nanomaterials formation. **C.Y. Wong**

11:35 377. External and Internal Surfaces of MOF Nanoparticles: Applications in Processing and Spectroscopic Probes. F. Khaliq, A. Davenport, **C. Brozek**

11:55 378. Single particle spectroscopy of defects in porphyrinic MOF crystals. **B. Rifore**, E. Grumstrup

12:10 379. MOF chemistry: Design strategies to applications. **K. Stylianou**

Therapeutics for the Treatment of Diseases in People, Plants, and Animals III

Boise Centre East, 410C

Cosponsored by MEDI
K. Cornell, C. Jorcyk, D. L. Warner, Organizers
J. D. Harris, Presiding

8:00 Introductory Remarks.

8:05 380. Chimeric fusions of cholera toxin to Staphylococcus aureus surface antigens as vaccines to prevent disease in humans and animals. **J. Tinker**

8:30 381. Finding therapeutic targets to treat patients with severe lower respiratory tract viral infections. **J. Radke**

8:55 382. Mesobiliverdin (MBV): An omnipotent natural anti-inflammatory agent and applications of Aggiefeed (AF). **C.T. Chang**

9:20 383. Innovations in small peptide conjugate synthesis and targeted therapeutic delivery. **A.A. Habashi**

9:45 Break.

10:05 384. Medicinal chemistry of nickel-doped and cinnamate-capped ZnO nanoparticles with enhanced antimicrobial properties. **J.D. Harris**, C. Leach, K. Cornell

10:30 385. Hit identification using chiral pool applications in developing anticancer Sphingolipid natural product mimics and Ion-channel potentiators. **S. Pashikanti**, J. Oman, S. Mateen, P. Sapkota, K. Sharma, M.K. Schulte

10:50 386. 3D cell culture improves chondrogenic stability and drives extracellular matrix production. **J. Gunnell**

11:10 387. Rapid loading of liposomes with anti-cancer drugs and drug simulators. **A. Gonzalez**, A. Sorapuru, J. Legare, J. Aballay-Kelly, D. Fologea

11:30 Closing Remarks.

WED. AFTERNOON – July 1

Topics in Analytical, Environmental, and Inorganic Chemistry

Boise Centre East, 410A

O. A. Mass, D. L. Warner, Organizers
K. Wittmeyer, Presiding

1:30 Introductory Remarks.

1:35 388. Chemical analysis of archaeological artifacts recovered from

the historic Assay Office in Boise, Idaho. **A. Spooner**, R. Von Wandruszka

1:55 389. UVU algae harvesting boat project: Preventing and mitigating harmful algal blooms. **J.K. Shurtleff**

2:15 390. Tracking oxidation rate in grout waste forms to improve performance predictions. **M. Valdes**

2:35 391. Temperature dependent biomass oxidation: Consequences for combustion emission factors. **K. Fesomade**, R.A. Walker

2:55 392. Withdrawn

3:10 Break.

3:25 393. Stripping voltammetric determination of tellurium using bare indium tin oxide working electrode. **K. Ojo**, N. Tran, J. Tran, D. Macklin-Jackson, J. Bailey, S. Rasul

3:45 394. Defect-rich hierarchically porous UiO-66 for 3D-visualized iodine diffusion and conversion. **S. Yu**, Q. Zhang

4:05 395. Development of electrochemical in-situ room Temperature flow EPR techniques. **S.F. Jauregui**, F. Gebresilassie, J.Y. Yang, R. Jones, C. Stieber

4:20 396. Lanthanide-based materials: Effects of metal and ligand variation on structure. **J. Steinle**, S. Oliver

4:35 87. Photoredox spectroscopy for understanding interfacial reaction dynamics. **E. Sprague Klein**

Topics in Organic Chemistry

Boise Centre East, 410B

D. L. Warner, Organizer
O. A. Mass, Organizer, Presiding

1:30 Introductory Remarks.

1:35 397. Curious case of organic azides in the solid state. **D. Decato**, S. Peintner, M. Jahnke, O.B. Berryman

1:55 398. Synthesis and analysis of a thiazole and bisthiazole-based small molecule inhibitor library for metastatic breast cancer. **S. Bones**, C. Jorcyk, D.L. Warner

2:15 399. Withdrawn

2:35 400. Design, synthesis, and structure-activity relationship study of novel nictoninonitrile analogs as IL-1 pathway immunostimulants. **A. Kelly**, M.T. Livesay, T. Elwaie, A. Riel, K. Siram, H. Amin, W. Abdelwahab, R. Close, S. Lathrop, B. Debuysscher, J. Evans, B. Johnson-Weaver, H. Staats, K.T. Ryter

2:55 401. Development of PROTACs to target osteoporosis - alternative approach to combat osteoporosis. **A. Buchholz**, A. Gineste, C. Zanato, J. Pytkowicz, E. Chelain

3:15 Break.

3:35 402. Decoding Mincle-ligand interactions through structure and signaling. **A. Freeman**, L. Garrick, T. Elwaie, A. Riel

3:55 403. Synthetic ligand design and application in first-row transition metal catalysis. **J.N. Evenson**

4:10 404. Structural modifications of 2-phosphinoimidazole ligands and speciation of Pd complexes to access challenging substrates in the Suzuki-Miyaura reaction. **M. Kotter**, G. Villarreal-Quiroga, R. Cole, M. Setelin, J. Evenson, T. Ferrin, G. Lund, A. Merrill, S. Smith, D. Michaelis

4:25 405. Design and synthesis of heterobimetallc Pt-Pd complexes and their utility in facilitating M-M bonded, dual-catalytic processes that employ both metals. **J.L. Corey**, T. Hilton, J. Whipple, A. Merrill, A. Lam, D.J. Michaelis

4:40 406. Phytochemical investigation, characterization, haematological and histopathological studies of cancer induced Wistar rat fed with Piper nigrum extracts. **V.O. Okodugha**, G.A. Emuokhonun

Nanoscale Materials and Their Applications IV

Boise Centre East, 420A

Cosponsored by INOR
D. Estrada, A. M. Schimpf, Organizers, Presiding

2:00 Introductory Remarks.

2:05 407. Closing the sequence–structure–function loop in peptoid materials: A multi-scale toolkit. **M.D. Baer**

2:25 408. Withdrawn

2:40 409. In situ darkfield spectroscopy during the formation of domain boundaries in organic thin films. **R.V. Fisher**, M. Yellowtail, C.Y. Wong

2:55 Break.

3:15 410. Agentic frameworks for characterization of irradiation damage in AlGaN/GaN. **J. Pope**, B. Matthews, K. Yano, M. Holden, S. Supakul

3:35 411. Nanocarbons in Bioanalytical Sensors to Support Human Exploration Missions. **J.E. Koehne**

4:25 Closing Remarks.

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Using Simulations to Teach Electrochemical Cells: Galvanic and Electrolytic Cells

Description: This workshop will demonstrate how digital tools are used to provide students with a) opportunities for experimental design and to b) visualize complex dynamic atomic and molecular processes within galvanic and electrolytic cells, making abstract concepts accessible. Learn to effectively use the four simulations to understand and visualize oxidation and reduction half-reactions occurring at the electrodes, ion movement in the salt-bridge and aqueous solution, and electron movement in wires, potential generation in galvanic cells, the effect of changing the concentration of the solutions (Nernst Cells), current and time used to plate mass on an electrode in an electrolysis cell. The activities will bridge the particle and symbolic levels of representation views of electrochemical cells. Tom Greenbowe will share pedagogical strategies for integrating these visualizations into your curriculum, enhancing conceptual understanding and addressing common misconceptions.

Facilitators: Dr. Tom Greenbowe, University of Oregon and Marian DeWane, Retired Teacher

Date & Location: Sunday, June 28th at Boise State University, Chemistry Department

Laboratory Experiments Involving Electrochemical Cells: Galvanic and Electrolytic Cells

Description: This workshop will have teachers working laboratory experiments involving galvanic cells, Nernst Cells, and electrolysis cells. Teachers will measure $E°_{cell}$ for three galvanic cells, then determine the identity of an unknown half-cell. Teachers will use the Nernst equation to predict E_{cell} potentials of two galvanic cells not having 1.00 M solutions. Teachers will use a D.C. power generator and vary current, and time used to plate a mass of metal on an electrode in an electrolysis cell. Teachers will have the opportunity to engage in experimental design. Teachers will diagram each cell and indicate the oxidation and reduction half-reactions occurring at the electrodes, the overall cell reaction, ion movement in the salt-bridge and aqueous solution, and electron movement in wires, potential generation in galvanic cells, E° and E calculations.

Facilitators: Dr. Tom Greenbowe, University of Oregon and Marian DeWane, Retired Teacher

Date & Location: Sunday, June 28th at Boise State University, Chemistry Department

Interactive Science Demonstrations

Description: This workshop is designed for high school chemistry and physics teachers and highlights the use of engaging, safe demonstrations to explore the behavior of gases. Participants will investigate key concepts such as the Universal Gas Law and the Kinetic Molecular Theory through a series of simple, hands-on activities—many of which use everyday materials—that can be performed either by students or as instructor-led demonstrations. The session includes practical suggestions for implementing these demonstrations in the classroom and incorporating them into effective lesson plans, helping make abstract ideas more concrete and accessible. Attendees will leave with ready-to-use ideas and select materials to support bringing these interactive and approachable experiences into their own classrooms.

Facilitator: Dr. Henry Charlier Jr., Boise State University

Date & Location: Sunday, June 28th at Boise State University, Chemistry Department

NORM 2026 H. S. Teacher Program Workshops

Green Chemistry and Benign Chemicals

Description: Discover how green chemistry can transform traditional labs into safer, lower-cost, and more engaging learning experiences for students. In this workshop, participants will explore practical replacement labs that use household or less hazardous materials while still teaching core chemistry concepts such as reactions, equilibrium, thermochemistry, and spectroscopy. Attendees will leave with ready-to-use resources, classroom-tested activities, and strategies for reducing waste, improving safety, and increasing student access to hands-on science. Whether you teach high school or college chemistry, this session will provide meaningful ways to make chemistry more sustainable and student-centered.

Facilitator: Tanya Elmer, Borah High School

Date & Location: Sunday, June 28th at Boise State University, Chemistry Department

Physics with Phones

Description: This hands-on session explores how smartphones, equipped with powerful built-in sensors and the free PhyPhox app, can transform the way physics is taught and learned. Participants will use their own devices to collect, visualize, and analyze real-time data, revealing the remarkable measurement and computational capabilities students already carry in their pockets. The workshop highlights inquiry-based investigations that leverage accelerometers, gyroscopes, sound sensors, and more to make abstract physics concepts tangible and engaging. Attendees will leave with ready-to-use activities and strategies for integrating smartphone-based experimentation into their physics or STEM classrooms.

Facilitators: Cait McGraw, Idaho National Laboratory; Greg Losinski, Idaho National Laboratory

Date & Location: Monday, June 29th at Boise Centre East

POGIL Fundamentals

Description: POGIL Fundamentals: An introductory workshop designed for those with limited or no previous exposure to POGIL (Process Oriented Guided Inquiry Learning). Participants will have the opportunity to engage in POGIL activities, observe facilitation strategies firsthand, and learn about POGIL classroom implementation. After attending this session, participants will be able to a) list the essential elements of POGIL pedagogy and philosophy, b) list desirable student learning outcomes supported by POGIL pedagogy and c) collect strategies to begin implementing POGIL in the classroom.

Facilitator: Dr. Shawn Simonson, Boise State University

Date & Location: Monday, June 29th at Boise Centre East

ChipWorks Series: Electrify Your Class

Description: Join us for the ChipWorks Series: Electrify Your Class, where you will explore a free, accessible semiconductor curriculum designed for easy classroom integration. This workshop introduces key semiconductor concepts and connects them to practical strategies for teaching circuits and microelectronics. Participants will use Arduinos and components such as jumper wires, LEDs, and photoresistors to explore real-world applications and the role of semiconductors in modern technology.

Facilitators: Hailey Lynch, Boise State University Microelectronics Education and Research; Camille Platts-McPharlin, Boise State University Microelectronics Education and Research

Date & Location: Monday, June 29th at Boise Centre East

Cellulose and the Paper Industry

Description: This session examines the chemistry and engineering behind paper as a sustainable, renewable material designed for the circular economy. Topics include pulping chemistry, process engineering, recycling, and emerging research that converts biomass and industrial waste streams into bioplastics, bioenergy, and other high-value products. The lecture highlights how chemistry and engineering enable paper-based materials to replace plastics while advancing sustainability and the circular bioeconomy.

Facilitator: Ed Drapher, Executive Director of Washington Pulp and Paper Foundation

Date & Location: Monday, June 29th at Boise Centre East

Student Misconceptions and Analysis of the 2025 and 2026 AP Chemistry Exam

Description: This workshop will involve AP Chemistry teachers in an analysis and discussion of the 2025 and 2026 AP Chemistry Exam Free-Response Questions (FRQs). The workshop leaders have extensive experience as AP Chemistry Exam Readers, Table Leaders and Question Leaders and will provide their insights about scoring FRQs. Select FRQs will be discussed in detail, including the scoring guidelines, statistics, student samples, and the AP Chemistry Chief Reader Reports. The workshop leaders will discuss ten chemistry content errors and ten writing mistakes exhibited by students on the FRQs.

Facilitators: Dr. Tom Greenbowe, University of Oregon and Marian DeWane, Retired Teacher

Date & Location: Monday, June 29th at Boise Centre East 430A

Python for Educators Workshop

Description: This workshop introduces college and high-school instructors to practical strategies for developing course and laboratory materials using Python and Google Colab notebooks. Participants will explore how interactive notebooks can support data analysis, modeling, and visualization in science education, and how emerging AI tools can assist with content creation, coding support, and student engagement. No prior programming experience is required; examples will be adaptable across disciplines. The workshop will occur on Wednesday, July 1 from 1:00 - 5:00 PM.

Facilitator: Dr. Oliviero Andreussi, Boise State University

Date & Location: Wednesday, July 1st at Boise Centre East 420B

NORM 2026 H. S. Teacher Program Workshops

Lunchtime Presentation Descriptions

It's Not Magic, It's Biology

Description: Dr. Allan Albig, Boise State University and author of the book titled "It's Not Magic, It's Biology: A Guided Tour Through Your Molecular World" will give a presentation during lunch. Have you ever stopped to wonder how your eyes can convert light into nerve impulses? Or maybe how your ears translate sound waves into brain waves? What about your sense of touch...? How do your fingers sense pressure? How does your body tell you when you need to pee? These are mysteries that many people never stop to think about, but they should. Without a background in science, the answers might seem so complex that only a specialist could understand them. The truth however is that the answer to all these questions is simply, molecular biology. It's Not Magic, It's Biology!
Presenter: Dr. Allan Albig, Boise State University
Date and Location: Sunday, June 28th in Science 332 (Boise State University)

Science Teacher Resources Available Through the Idaho Department of Education

Description: Andrea Baerwald, Idaho State Department of Education Science Coordinator, will provide a presentation during lunch. The Idaho Department of Education provides various resources to support science teachers in implementing the state's science standards.
Presenter: Andrea Baerwald, Idaho State Department of Education
Date and Location: Monday, June 29th in 430A (Boise Centre East)

NORM 2026 Parking Garage and Downtown Map

Private garages are available for public parking. Signage will direct you to rates.

= Boise Centre East

= Basque Museum

= Hotel Renegade

= Micron Tour Bus Loading Zone

NORM 2026 Campus Bus Route

The Bronco Shuttle Orange Line offers free, convenient transportation between the Boise State campus and the Boise Centre. This service is open to the public and is especially convenient for Syringa Hall residents and Boise State workshop attendees.

- **Hours:** Monday – Friday, 7:00 AM – 7:00 PM (No weekend service)
- **Live Tracking:** View real-time shuttle locations on the ETA Spot website (https://boisestate.etaspot.net/).

Alternative Transportation Options:

- **Rideshare:** Both **Uber** and **Lyft** operate heavily throughout the campus and downtown area for quick, on-demand trips.
- **E-Scooters & E-Bikes: Lime e-scooters** and **e-bikes** are available across campus and the city. You can locate and unlock them using the Lime or Uber apps.
- **Walking:** The Boise Centre is a straightforward, scenic walk from campus (roughly 1 to 1.5 miles, depending on your starting point).

Save the Date: NORM 2027