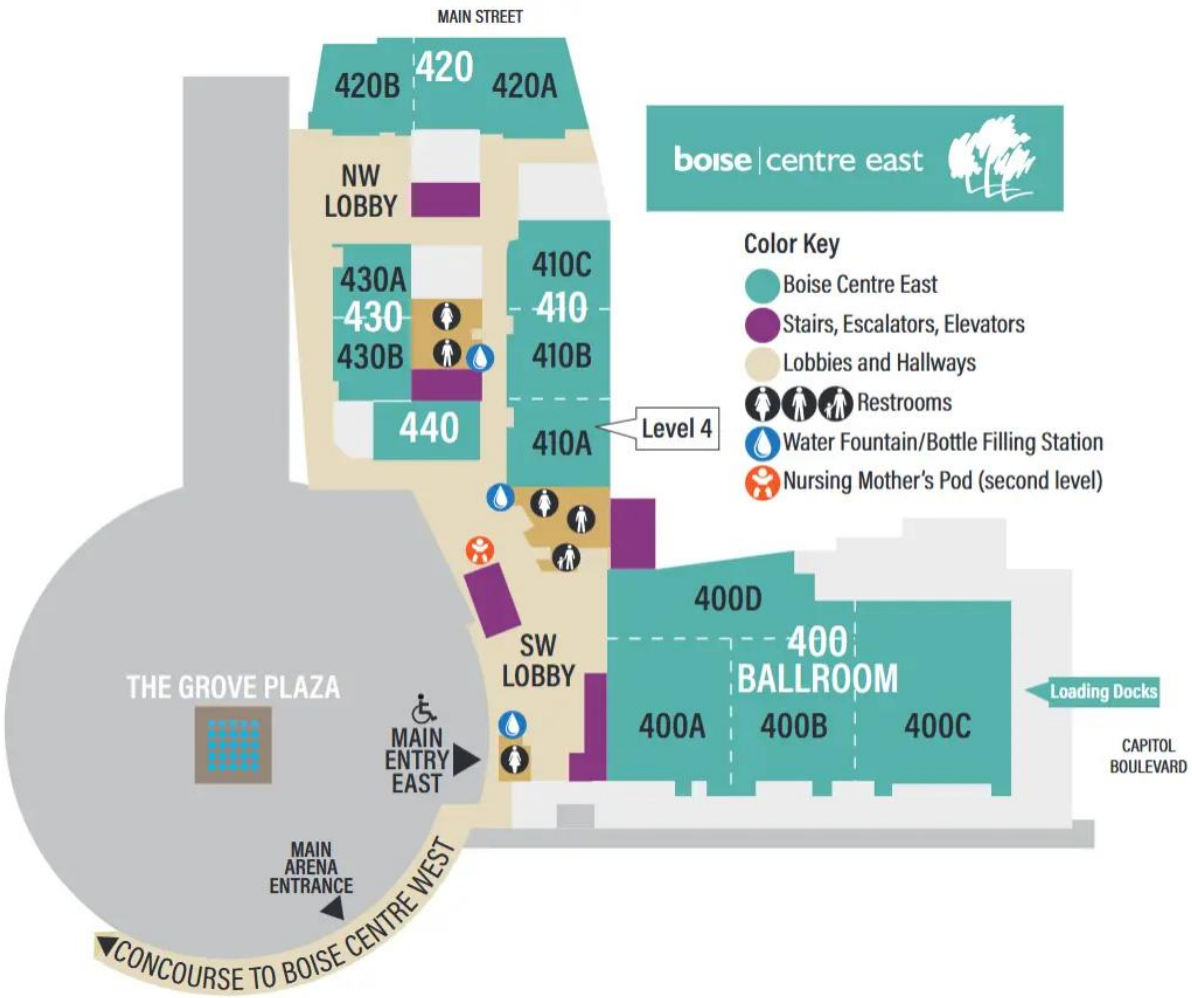
NORM 2026 Meeting at a Glance

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



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.

NORM 2026 Author Index

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