



254th American Chemical Society National Meeting & Exposition

August 20-24, 2017 • Washington, DC



Chemistry's Impact on the Global Economy



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www.acs.org/meetingapp



*Online version is also available for internet enabled devices

254th American Chemical Society National Meeting & Exposition

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ACS OPERATIONS OFFICES

- Grand Hyatt, Tiber Creek A: 202-637-4768
- JW Marriott Dirksen Room: 202-626-2542
- Marriott Marquis, Supreme Court: 202-842-1901
- Renaissance, Meeting Planner Office A: 202-962-4396
- The Westin Washington DC City Center: 202-249-1700, Ext. 5644
- Walter E. Washington Convention Center, Salons c: 202-249-4001
- Washington Marriott @ Metro Center, London I: 202-661-8929

INFORMATION CONTACTS

- Attendee Registration, WEW Convention Center, Salons G/H/I: 202-249-4011
- Career Fair Welcome Desk, WEW Convention Center, Halls A/B: 202-249-4016
- Exhibitor & Recruiter Registration Desk, WEW Convention Center, Salons G/H/I: 202-249-4013
- Finance Office, WEW Convention Center, Salon E: 202-249-4010
- Host Local Section Booth, WEW Convention Center, Salon B: 202-249-4018
- Housing Assistance, WEW Convention Center, Salon B: 202-249-4012
- Member Services, WEW Convention Center, Salons G/H/I: 202-249-4017
- Press Center, WEW Convention, Room 154A: 202-249-4007
- Shuttle Desk, WEW Convention Center, L Street: 202-249-4019
- Society Program Office, Marriott Marquis, Capitol: 202-824-1904
- Governance Office, Marriott Marquis, Archives: 202-824-1902

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The American Chemical Society is a self-governed individual membership organization of members at all degree levels and in all fields of chemistry. The Society provides a broad range of opportunities for peer interaction and career development, regardless of professional or scientific interests. The programs and activities conducted by ACS today are the products of a tradition of excellence in meeting member needs that dates from the Society's founding in 1876.

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ACS
Chemistry for Life®

Welcome to Washington and the 254th ACS National Meeting

Welcome to Washington, DC, the Nation's capital and the site of the 254th ACS National Meeting. It is my pleasure to join all of you in this bustling metropolis.

"Chemistry's Impact on the Global Economy" will be the theme of this meeting. Twenty-nine technical divisions and five committees are programming, including over 1,035 half-day oral sessions and 146 poster sessions. More than 9,370 papers and 2,720 posters will be presented at the meeting. My Presidential symposia will focus on areas of significant importance: advocacy and communications, the chemistry of our planet, and the safe practice of science.

On Sunday afternoon, in conjunction with the Royal Society of Chemistry, **Science Communications: The Art of Developing a Clear Message** will help members share stories on how to positively and effectively communicate chemistry. It will also include an opportunity for audience members to develop and practice an elevator pitch on their chemical research (Marriott Marquis, Liberty Salon M). All-day on Monday, **Building a Safety Culture Across the Chemistry Enterprise** will feature top-down approaches in the morning session, followed by grassroots efforts in the afternoon (Marriott Marquis, Marquis Salon 1/2). **Understanding the Chemistry of our Planet** will be a highlight symposium all-day Tuesday, showcasing renowned researchers discussing the transforming power of chemistry that is ubiquitous to life on Earth. Scientists will present their innovative research on chemistry's role in our Earth System and the human impacts to the chemistry of our environment (Washington Convention Center, Room 145A). The nine *President Recommended* symposia focus on issues of sustainability, highlighting up-and-coming graduate researchers, and celebrating diverse practitioners of chemistry.



Allison A. Campbell
ACS President

On Monday afternoon, Prashant Jain from the University of Illinois – Urbana Champaign will present the Kavli Foundation Emerging Leader in Chemistry Lecture on **Turning Photons into Chemical Bonds**. Following his presentation, Joanna Aizenberg of Harvard University will give the Fred Kavli Innovations in Chemistry Lecture on **Multifunctionality of liquid-filled nanostructured materials: From encryption to anti-fouling** (Washington Convention Center, Ballroom A&B).

Many education-focused programs for high school teachers, undergraduate and graduate students, postdocs, and chemical professionals will be offered. For job seekers and

employers, the career fair will provide opportunities for on-site interviews, one-on-one career assistance, and career-related workshops. The exposition will feature more than 250 companies showcasing services, instruments, books, and lab equipment in more than 300 booths.

My personal thanks go to our hosts at the Chemical Society of Washington, and the divisional program chairs and symposium chairs responsible for organizing the technical sessions. I know this will be a tremendously successful meeting, and I thank you all for your contributions.



Allison A. Campbell
ACS President

Welcome Message from Nancy B. Jackson, Washington Thematic Chair

The Fall 2017 ACS National Meeting will be held August 20–24 in our nation's capital, Washington, DC. The theme is *Chemistry's Impact on the Global Economy*.

Chemists from around the world were invited to showcase the future of chemistry and its impact on the economy. Included subtopics include energy, chemical waste, feeding the world, vaccination, clean water, environment, global collaboration, and preventing the use of chemicals in war.

Sunday, August 20, the plenary session will inaugurate the meeting theme with an invited lecture from Professor Joe DeSimone of Carbon, Inc., the University of North Carolina at Chapel Hill and North Carolina State University. Prof. DeSimone will discuss an economically competitive advancement in additive manufacturing. There will be a question and comments period immediately following.

On Monday, August 21, the Kavli Foundation Lecture Series will feature the Emerging Leader in Chemistry Lecture by Dr. Prashant K. Jain titled "Turning photons into chemical bonds" and will highlight a bold venture into artificial photosynthesis accomplished through nanostructured catalysts engineered for trapping photons. The Innovations in Chemistry Lecture by Prof. Joanna Aizenberg of Harvard University is titled "Multifunctionality of liquid-filled nanostructured materials: From encryption to anti-fouling" and will highlight two new classes of materials that show the emergence of unprecedented properties and unique behaviors due to the entrapment of a liquid into a structured solid.



Nancy B. Jackson
Thematic Chair

The technical program constructed by ACS Technical Divisions includes many symposia that will touch on *Chemistry's Impact on the Global Economy*. Divisions and committees with symposia supporting the theme include COLL, CATL, PHYS, ENVR, ENFL, I&EC, CHAS, AGFD, SCHB, YCC, AGRO, CINF, PROF, SOCED and YCC. Washington, DC is an important place to have the Chemistry's Impact on the Global economy. I hope that you can make it to these important talks.

The program for the meeting and other information is available online at www.acs.org/wdc2017.

I am very grateful to the members of the local section, the program chairs of the divisions and committees listed above, the thematic symposia chairs, and the ACS staff for their essential help in making the theme of this meeting cogent and coordinated. I look forward to meeting you in the District of Columbia!



Nancy B. Jackson
Thematic Chair

**JOIN US FOR THE
ACS BOARD OF DIRECTORS
REGULAR SESSION**



**Sunday, August 20, 2017
Noon - 1:00 p.m.**

Walter E. Washington Convention Center - Ballroom
Doors open at 11:45 a.m.

Sandwiches and soft drinks while supplies last

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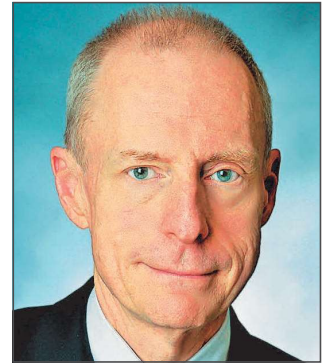
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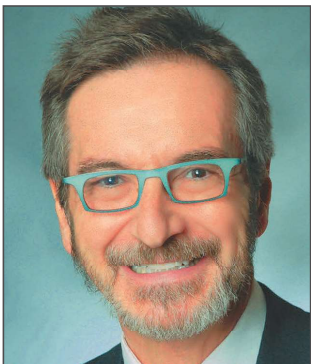
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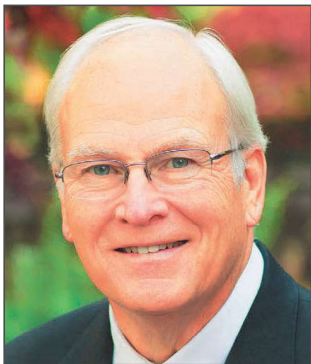
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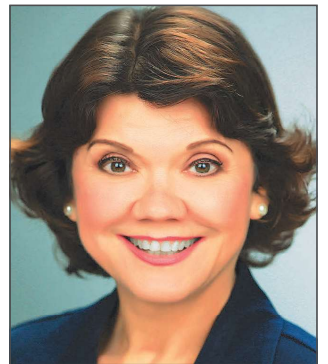
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Greetings

American Chemical Society 254th National Meeting

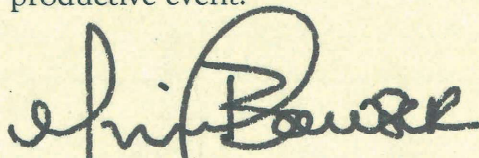
August 20, 2017

As Mayor of Washington, DC, it is my pleasure to extend greetings to the American Chemical Society (ACS), on the occasion of your 254th National Meeting.

The ACS is the leading source of authoritative scientific information and one of the world's largest scientific societies. Headquartered right here in Washington, the ACS is at the forefront of the evolving worldwide chemical enterprise and the premier professional home for chemists, chemical engineers and related professions around the globe.

This year's theme focuses on "Chemistry's Impact on the Global Economy." I applaud the American Chemical Society for your dynamic and visionary commitment to improving the lives of others through the transforming power of chemistry.

On behalf of the residents of Washington, DC, I wish you a productive event.


Muriel Bowser
Mayor, District of Columbia





Allison A. Campbell, Ph.D.
ACS President



PRESIDENTIAL SYMPOSIA AND EVENTS

SATURDAY, AUGUST 19, 2017

12:00 PM - 4:00 PM

Presidential Outreach Event: Exploring Our World Through Chemistry

Cosponsored by CCA
American Chemical Society
1155 16th Street, NW
Washington, DC 20036

SUNDAY, AUGUST 20, 2017

1:00 PM - 4:30 PM

Science Communications: The Art of Developing a Clear Message: A Joint Symposium with the Royal Society of Chemistry

(Cosponsored by BIOL, CARB, CEI, CELL, CEPA, CINF, COLL, CPRC, CTA, DAC, I&EC, INOR, ORGN, PROF, SCHB & YCC)
Marriott Marquis Washington, DC; Liberty Salon M

2:00 PM - 5:00 PM

The Road Less Traveled: Career Opportunities in the Government Sector

(Sponsored by YCC and Cosponsored by PRES and PROF)
Marriott Marquis Washington, DC; Union Station

Presidential Workshop: ACS Chemistry on the Hill Advocacy Workshop [INVITATION ONLY]

Walter E. Washington Convention Center, Room 147B

MONDAY, AUGUST 21, 2017

8:30 AM - 4:00 PM

Chemistry in an Evolving Political Climate: Research Priorities and Career Pathways in Public Policy

(Sponsored by YCC and Cosponsored by PRES, BIOL, CARB, CCPA, CEI, CELL, CEPA, CHED, CINF, COLL, COMSCI, CPRC, DAC, GEOC, IAC, I&EC & SCHB)
Marriott Marquis Washington, DC; Chinatown

8:30 AM - 4:30 PM

Building a Safety Culture Across the Chemistry Enterprise

(Cosponsored by BIOL, BMGT, CARB, CCS, CEI, CELL, CEPA, CHAS, CINF, COLL, CPRC, CTA, DAC, ETHX, I&EC, INOR, ORGN, PROF, SCHB & YCC)
Marriott Marquis Washington, DC; Marquis Salon 1/2

1:00 PM - 5:00 PM

Working in the Public Sector: Running for Elected Office

(Sponsored by SCHB and Cosponsored by PRES, BIOL, CARB, CCPA, CEI, CELL, CEPA, CINF, COLL, CPRC, DAC, ETHX & YCC)
Marriott Marquis Washington, DC; Magnolia

TUESDAY, AUGUST 22, 2017

8:30 AM - 5:00 PM

Understanding the Chemistry of Our Planet

(Cosponsored by BIOL, BMGT, CARB, CEI, CELL, CEPA, CINF, COLL, CPRC, DAC, GEOC, I&EC, INOR, ORGN, SCHB & YCC, the Chemical Sciences Roundtable [CSR], and the Society for Science at User Research Facilities [SSURF])

Walter E. Washington Convention Center, Room 145A

8:00 AM - 12:00 PM

The World of Funding Opportunities in Chemistry

(Sponsored by The National Science Foundation and Cosponsored by PRES and ACS President-Elect Peter K. Dorhout)

Walter E. Washington Convention Center, Ballroom C

11:30 AM - 3:00 PM

ACS Town Hall: National Academies' Frontiers of Materials Research Decadal Survey

(Sponsored by The National Academies of Sciences, Engineering, and Medicine and Cosponsored by PRES and ACS President-Elect Peter K. Dorhout)

Marriott Marquis Washington, DC; George Washington University Room

1:00 PM - 2:30 PM

Federal Funders Town Hall Meeting

(Sponsored by the National Science Foundation and Cosponsored by PRES)

Walter E. Washington Convention Center, Ballroom C

3:00 PM - 5:00 PM

Speed Coaching with Federal Funders

(Sponsored by the National Science Foundation and Cosponsored PRES)

Walter E. Washington Convention Center, Ballroom C

5:30 PM - 7:30 PM

LGBTQ+ Presidential Reception

(Cosponsored by ACS President-Elect Peter K. Dorhout, BIOL, BMGT, CARB, CEI, CELL, CEPA, CINF, CMA, COLL, CPRC, CTA, DAC, GEOC, INOR, NOGLSTP, ORGN, PA&PR, PROF, SCC & YCC)

W Hotel, Altitude Room (Roof Level)

A very special thank you to our financial sponsors ACS President-Elect Peter K. Dorhout, CARB, CEI, CEPA, CONC, PA&PR, BIOL, CMA, CPRC & SCC

OTHER SYMPOSIA RECOMMENDED BY THE ACS PRESIDENT

ACS Pharma Leaders: Working Together to Make a Difference

(Sponsored by MPPG and Cosponsored by PRES)

Walter E. Washington Convention Center, Room 146C

Advancing Graduate Education: Opportunities & Challenges

(Sponsored by CHED and Cosponsored by PRES)

Grand Hyatt Washington, Independence Ballroom C

Biomass to Fuels & Chemicals: Research, Innovation & Commercialization

(Sponsored by ENFL and Cosponsored by PRES, ENVR, MPPG, SCHB & WCC)

Walter E. Washington Convention Center, Room 141

GSSPC: Standing on the Shoulders of Giants: Developing Chemistries for Improved Global Health

(Sponsored by CHED and Cosponsored by PRES, ANYL, BIOT, BMGT, CARB, CELL, COLL, GEAB, MEDI, and POLY; Virginia Tech Institute for Critical Technology and Applied Sciences, Department of Chemistry, College of Science, and the Department of Materials Science and Engineering; BASF; and Accounts of Chemical Research, ACS Biomaterials Science & Engineering, ACS Chemical Biology, ACS Infectious Diseases, ACS Macro Letters, ACS Synthetic Biology, Biochemistry, Bioconjugate Chemistry, Biomacromolecules, The Journal of Organic Chemistry, Journal of Medicinal Chemistry, Macromolecules, ACS Central Science, and Acta Biomaterialia)

Grand Hyatt Washington, Independence Ballroom D/E

Earle B. Barnes Award for Leadership in Chemical Research Management Symposium in Honor of Laurie Locascio: Why Not Me? Changing the Face of Leadership in Science

(Sponsored by ANYL and Cosponsored by PRES)

Grand Hyatt Washington, Constitution Ballroom E

Journey to Mars: Materials, Energy & Life Sciences

(Sponsored by POLY and Cosponsored by PRES & MPPG)

Marriott Marquis Washington, DC; Shaw and Independence Salon D/E

Ladies in Waiting for Nobel Prizes: Overlooked Accomplishments of Women Chemists

(Sponsored by HIST and Cosponsored by PRES & PROF)

Grand Hyatt Washington, Declaration A/B

Sustaining Water Resources: Environmental and Economic Impact

(Sponsored by MPPG and Cosponsored by PRES, ENVR, GEOC, I&EC)

Walter E. Washington Convention Center, Room 203A/B

Transformative Research & Excellence in Education [TREE] Award Symposium

(Sponsored by COMSCI and Cosponsored by PRES, BIOL, COLL, COMP, ENFL, INOR & PHYS)

Walter E. Washington Convention Center, Room 155

- 2:35 INOR **494**. Driving synthesis by oxidation. J. Lumb
- 3:05 Intermission.
- 3:20 INOR **495**. Fundamental redox processes in model platforms for Cu-catalyzed C-heteroatom bond forming transformations. X. Ribas
- 3:50 INOR **496**. Copper-catalyzed amino difunctionalization of alkenes. Q. Wang
- 4:20 INOR **497**. Revealing the mechanisms of copper-catalyzed synthetic methods. J.F. Hartwig

Section F

Renaissance Washington, DC Downtown
Grand Ballroom Central

Center for Enabling New Technologies through Catalysis: Transforming Catalysis through Collaboration

A. Goldman, N. E. Gruhn, E. Ison, S. W. Kraska, L. T. Thompson, *Organizers*

W. D. Jones, M. S. Sanford, *Presiding*

1:30 Introductory Remarks.

- 1:35 INOR **498**. Hydrogenolysis of carbon-oxygen bonds. D.M. Heinekey, K.I. Goldberg, J.M. Goldberg, B. Bark
- 2:05 INOR **499**. Aldehyde water shift reaction: Integrating theory and experiment to deconvolute a catalytic transformation. T.R. Cundari, T. Brewster, W. Ou, J.C. Tran, W. Wen, J.M. Goldberg, K.I. Goldberg, S.K. Hanson, D. Thorn, D.M. Heinekey, L.T. Thompson
- 2:35 INOR **500**. Synthesis and characterization of bifunctional transition metal complexes. T. Brewster, T.J. Yokley, C.E. O'Connell, T.H. Nguyen, M.M. Reynolds
- 2:55 INOR **501**. Details towards the mechanism of base-free transfer hydrogenation catalyzed by Cp*Ir(pyridinesulfonamide) Cl complexes. A.R. O'Connor, T.M. Townsend, A. Ruff, G.L. Heard, C. Goldberg
- 3:15 INOR **502**. Enabling new technology with catalysis at Eastman Chemical. R.T. Hembre
- 3:35 Intermission.
- 3:45 INOR **503**. Cheaper by the Baker's dozen: Towards base-metal Guerbet catalysts for selective butanol production. C.E. Hayes, N. Kukarni, W.D. Jones, R.T. Baker
- 4:15 INOR **504**. Towards biomass as sustainable feedstock: Understanding mechanisms in halide and solid acid catalysis. M. Emmert
- 4:35 INOR **505**. Production of long chain alcohols through the '+1' pathway: Combining enzyme engineering, strain development and fermentation optimization to accelerate development. P. Bhosale, S. Delaplane, M. Devarapalli, S. Greenwalt, R. Hill, P. Sanghani, C. Stowers, D.C. Rosenfeld
- 4:55 INOR **506**. Apeel Sciences: Going with the flow... (but not really). R. Alamillo, M. Aronson, L. Perez
- 5:15 Concluding Remarks.

Section G

Renaissance Washington, DC Downtown
Congressional A

Chemistry of Materials

Synthesis & Properties

C. G. Lugmair, *Organizer*

E. Doud, *Presiding*

- 1:30 INOR **507**. One-pot synthesis of gold microbars for optical circuitry applications. E. Hobbs, M. Devadas
- 1:50 INOR **508**. Metal coordination complexes in mechanically responsive systems. K. Hall, M.H. Horst, S.W. Telford, K.J. Franz
- 2:10 INOR **509**. In-situ structure-tracking aided design in synthesis of energy-storage materials. F. Wang, J. Bai
- 2:30 INOR **510**. Aerosol assisted chemical vapor deposition of WS₂ from a single source precursor. N. Richey, L. McEwee-White
- 2:50 INOR **511**. Exfoliation and doping of layered two-dimensional rhenium and molybdenum chalcogenide networks. B. Choi
- 3:10 Intermission.
- 3:25 INOR **512**. Conductance of NHC-based single-molecule junctions formed in situ via (NHC)AuCl complexes. E. Doud, M. Inkpen, G. Lovat, L. Venkataraman, X. Roy
- 3:45 INOR **513**. Design and synthesis of fluorinated tungsten (VI) oxo-alkoxide complexes bearing β -diketonate and β -ketoesterate ligands for chemical vapor deposition of WO₃. D.C. Bock, N. Ou, T.J. Anderson, L. McEwee-White
- 4:05 INOR **514**. Synthesis and Luminescent behavior of lanthanide thiophenemionocarboxylate-based materials. R. Batrice, A.K. Adcock, R.L. Ayscue, P. Cantos, J.A. Bertke, K.E. Knope
- 4:25 INOR **515**. Synthesis and characterization of photoluminescent bismuth organic materials. K.E. Knope

Section H

Renaissance Washington, DC Downtown
Congressional B

Lanthanide & Actinide Chemistry

A. De Bettencourt Dias, *Organizer*

C. G. Gianopoulos, M. Nippe, *Presiding*

- 1:30 INOR **516**. Heterometallic lanthanide-transition metal complexes: Synthesis, magnetism, and redox properties. T.P. Latendresse, C. Dickie, C. Burns, M. Nippe
- 1:50 INOR **517**. Probing crystal chemistry properties that impact flotation selectivity: Collector-mineral interaction experiments in synthetic REE-orthophosphate systems. J. Gamage McEvoy, Y. Thibault
- 2:10 INOR **518**. Thermal charge-transfer reduction of uranyl UO₂(VI) to UO₂(IV) by methanol and other functionalized organic compounds. X. Sun, D. Kolling, S. Deskins
- 2:30 Intermission.
- 2:45 INOR **519**. Description of uranium-halogen bonding based on charge-density studies at 20 K. C.G. Gianopoulos, V.V. Zhurov, S.G. Minasian, E.R. Batista, C. Jelsch, A.A. Pinkerton

- 3:05 INOR **520**. Luminescent behavior of bismuth halide organic complexes and their lanthanide doped analogs. R.L. Ayscue, J.A. Bertke, K.E. Knope
- 3:25 INOR **521**. Magnetic resonance imaging contrast agent for in-vivo copper imaging. N.N. Paranawithana, A.F. Martins, G. Meloni, D. Sherry
- 3:45 INOR **522**. Lanthanide podand complexes as potential bioimaging agents based on multidentate poly-acac motifs. T.L. King, G. Ibarra, R.A. Jones, E.L. Que
- 4:05 INOR **523**. Investigation of the electronic structure and evaluation of the covalency of cerocene, (C₈H₈)₂Ce, using carbon K-edge X-ray absorption spectroscopy. D.E. Smiles, S.G. Minasian, J.M. Keith, E.R. Batista, S.A. Kozimor, R.L. Martin, D.K. Shuh

Understanding the Chemistry of Our Planet

Human Impacts to our Planet

Sponsored by PRES, Cosponsored by BIOL, BMGT, CARB, CEI, CELL, CEPA, CINF, COLL, CPRC, DAC, GEOC, I&EC, INOR, ORGN, SCHB and YCC

Chemistry Past Curium

Sponsored by NUCL, Cosponsored by INOR

Non-Conventional Building Blocks in Conjugated Materials: Innovative Designs & New Applications

Heteroatom Systems

Sponsored by POLY, Cosponsored by INOR and PMSE#

TUESDAY EVENING

Section A

Walter E. Washington Convention Center
Hall D

Chemistry of Materials

C. G. Lugmair, *Organizer*

5:30 - 7:30

INOR **524**. Aqueous sol-gel route towards selected quaternary metal oxides with single and double perovskite type structure containing tellurium or tungsten. I. Derd, B. Markovic, J. Bijelic, N. Filipovic, B. Matasovic, E. Kovac Andric, J. Popovic, Z. Skoko, Z. Jaglicic, D. Pajic, S. Mal, T. Weller, R. Marschall, P. Voepel, C. Suchomski, B. Smarsly

INOR **525**. Synthesis of hafnium oxide and its thermal treatment. I.B. Polovov, Y.S. Bataev, V.A. Volkovich, A. Chukin, Y.D. Afonin, A.I. Rakhmatullin, M. Boca

INOR **526**. Phase transfer directed synthesis of hollow metal-organic frameworks nanocages. B. Yu, J. Gong

INOR **527**. Electrochemical etching for MXene. W. Sun

INOR **528**. Magnetic diluted semiconductors in 2D nanosheet crystals. S. Hsu, T. Hsieh, T.S. Lin, Y. Liu

INOR **529**. Sized controlled synthesis of hollow sphere metal oxides for metastable intermolecular composites. A.M. Morey, S.T. Iacono

INOR **530**. New methods to fabricate anti-fouling Ag@silica catalyst for the reduction of 4-nitrophenol. J. Hou, J. Gong

INOR **531**. Bimetallic amino acid complexes as precursors for nickel molybdate. F. Alqahtani, A.W. Apblett

INOR **532**. Withdrawn.

INOR **533**. Stability of metal-organic frameworks for high pressure confined chemical vapor deposition. B. Laubacker, J.V. Badding

INOR **534**. Aerosol route to various iodine oxide/iodic acid microparticles, and their performance as oxidizers in thermite systems. T. Wu, X. Wang, M.R. Zachariah

INOR **535**. Light absorption and energy transfer in thin film metal-organic frameworks. J. Rowe, A.J. Morris, E.M. Soderstrom

INOR **536**. Growths of highly ordered mesoporous graphene-oxide thin films (MGTFs). Z. Dai, H. Chang, Y. Liu

INOR **537**. Withdrawn.

INOR **538**. Effect of molecular dipole on phase behavior of pyridinium derivatives of [closo-1-CB₁₁H₁₁]⁻. A.C. Friedli, B.D. Lukaski, M.O. Ali, K.L. King, P. Kaszynski

INOR **539**. Study of nanostructured composites Nd(Ti,Zr)O/Si(B)CO for optical and nuclear waste storage application. V. Proust, T.E. Albrecht-Schmitt

INOR **540**. Synthetic deconvolution of interfaces and material components in hybrid nanoparticles. J.L. Fenton, R.E. Schaak

Section B

Walter E. Washington Convention Center
Hall D

Main Group Chemistry

T. W. Hudnall, *Organizer*

5:30 - 7:30

INOR **541**. Luminescent azepane-substituted β -diketonates and difluoroboron complexes. F. Wang, C.A. DeRosa, M. Daly, D. Song, C.L. Fraser

INOR **542**. Difluoroboron β -diketonates for ratiometric oxygen imaging with a color camera. M. Zhuang, C.A. DeRosa, F. Wang, C.L. Fraser

INOR **543**. Luminescent piperidine-substituted dibenzoylmethane derivatives and their difluoroboron complexes. D. Song, F. Wang, C.A. DeRosa, C.L. Fraser

INOR **544**. Radiosyntheses of [¹⁸F] fluoroarenes via hypervalent iodoarene precursors. J. Chun, J. Son, J. Park, M. Yun

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