

MEETINGS

# ACS Fall 2019 National Meeting

## Divisions issue calls for papers for the Aug. 25–29 meeting in San Diego

**C**alls for papers for the ACS Fall 2019 National Meeting and Exposition (Aug. 25–29) have been issued. The preliminary program for the meeting in San Diego will be published in the June 24 issue of C&EN; the official meeting program will appear in the ACS Meetings and Events mobile app.

ACS's online Meeting Abstracts Programming System (MAPS) is now open for San Diego abstracts. Visit MAPS at [maps.acs.org](http://maps.acs.org) for abstract submission. In order to present at the meeting, presenters will be required to register for the fall 2019 national meeting. Failure to register for the meeting will result in withdrawal of abstracts from the meeting program, technical programming archive, and CAS database.

The society bylaw governing presentation of papers appears below.

### Society bylaws governing papers

Bylaw VI, section 6, governs presentation at society meetings.

a. The term "paper" shall include any scientific presentation that can be reduced to writing.

b. No paper shall be presented at a national, regional, divisional, or other major meeting unless its title and author(s) appear on the program for the meeting. However, the President, with the concurrence of either the Chair of the Board of Directors or the Vice-Chair of the Council Policy Committee, may authorize an extraordinary symposium at a national meeting provided that

(1) the symposium has as its primary focus significant scientific developments too recent for programming deadlines, and (2) the request for authorization for such a symposium has been made jointly by a member of the SOCIETY and one of the following: the Chair of a relevant Division of the SOCIETY, the Chair of the Committee on Divisional Activities, or the Chair of the Committee on Science.

c. No paper by a chemical scientist residing in the United States who is not a member of the SOCIETY shall appear on the program of a national, regional,

divisional, or other major meeting of the SOCIETY unless it be a joint paper with one or more SOCIETY members, or unless for a national, regional, or national-divisional meeting the author has been invited to present the paper at a symposium organized by a Division of the SOCIETY or by Sections of the SOCIETY, and the Chair of such Division or of the host Section has certified to the Executive Director of the SOCIETY prior to publication of the program that presentation by the author of such paper is important to the success of the symposium.

d. Rules corresponding to paragraphs a, b, and c of this section for a cooperative meeting shall be subject to agreement in advance between the organizations concerned but should conform, insofar as possible, to this Bylaw and be subject to approval by the Executive Director of the SOCIETY.

e. The SOCIETY assumes no responsibility for the statements or opinions expressed by individuals in papers or discussions thereof.

f. The President shall have authority to exclude any paper from a program at any time prior to its scheduled presentation at a meeting of the SOCIETY.

Board Regulation V, number 3, supplements Bylaw VI, section 6, as follows:

a. Authorship of papers shall be accredited only to individuals and not to companies or laboratories.

b. Therapeutic Papers. It is the policy of the SOCIETY to encourage the presentation of chemical papers with pharmacological and physiological aspects, but to discourage presentation, by other than qualified clinical investigators, of papers in which clinical interpretations are the principal contribution. All Divisions and other programming units shall adhere to this policy when determining the acceptability of papers for their meeting programs. The Divisions and other programming units also are urged to exclude from their programs, and especially from any abstracts issued, statements recommending procedures for the treatment of human disease or announcement of any "cures" not confirmed by competent medical authority. Any author contributing a paper that includes discussion of the treatment of human disease must submit for review, by representatives of the appropriate Division or other programming unit, a complete manuscript in addition to an abstract.

**Notes:** Submission of papers for presentation at an ACS meeting does not constitute submission for publication in an ACS journal. Regulations for the acceptance of

## Deadlines for abstract submission for the fall 2019 national meeting, Aug. 25–29

All dates are preliminary. The final dates approved by the divisions are on the abstract submission site, [maps.acs.org](http://maps.acs.org).

DIVISION	DATE	DIVISION	DATE	DIVISION	DATE	COMMITTEE	DATE
AGFD	March 18	CINF	March 18	INOR	March 18	CEI	a
AGRO	March 20	TOXI	March 18	MEDI	March 18	CMA	a
ANYL	March 18	CHAL	March 25	NUCL	March 18	COMSCI	March 25
BIOT	a	COLL	March 25	ORGN	March 25	IAC	n/a
BIOL	March 18	COMP	March 25	PHYS	March 18	SOCED	March 25
BMGT	March 18	ENFL	March 18	POLY	March 18	WCC	March 22
CARB	March 18	ENVR	March 18	PMSE	March 18	YCC	n/a
CATL	March 25	FLUO	a	PROF	n/a		
CELL	March 18	GEOC	March 18	RUBB	a		
CHED	March 18	HIST	March 25	SCHB	March 21		
CHAS	March 25	I&EC	March 18	MPPG	March 18		

**Note:** "a" means will not host symposia, and "n/a" means not available at press time.

papers to be presented as part of divisional meetings vary for each division. However, publication of papers in ACS journals is based on the earliest date of receipt of the complete paper by the appropriate editor.

The council has empowered division

officers to request any paper in advance so they can pass upon it and indicate to the author whether to read the entire paper or abstract it to allow time for discussion.

Special attention should be given to the misuse of trade names, secret formulas, or

secret processes in papers at national meetings of the society.

It is requested that authors avoid the use of trade names in papers presented at ACS meetings. Chairs are responsible for enforcing this policy.

## San Diego, Aug. 25–29

### MULTIDISCIPLINARY PROGRAM PLANNING GROUP

#### MEETING THEME: CHEMISTRY AND WATER

**Program chair: E. Fox, Savannah River National Laboratory, [elise.fox@srnl.doe.gov](mailto:elise.fox@srnl.doe.gov); C. Avery, National Council for Science and the Environment, [christopher.avery@gmail.com](mailto:christopher.avery@gmail.com)**

Abstracts due March 18.

**Chemistry and Water Opening Session** (cosponsored with CEI, ENVR, and PRES). E. Fox, [elise.fox@srnl.doe.gov](mailto:elise.fox@srnl.doe.gov); C. Avery, [christopher.avery@gmail.com](mailto:christopher.avery@gmail.com)

**The Fred Kavli Innovations in Chemistry Lecture** (cosponsored with PRES). B. Charpentier, [pres@acs.org](mailto:pres@acs.org); A. Collins, [a\\_collins@acs.org](mailto:a_collins@acs.org)

**The Kavli Foundation Emerging Leader in Chemistry Lecture** (cosponsored with PRES). B. Charpentier, [pres@acs.org](mailto:pres@acs.org); A. Collins, [a\\_collins@acs.org](mailto:a_collins@acs.org)

**Chemistry and Water: Poster Session** (cosponsored with CEI, ENVR, and PRES). C. McInnis, [christie.mcinnis@gmail.com](mailto:christie.mcinnis@gmail.com)

**Humanitarian Issues in Chemistry** (cosponsored with CEI, ENVR, and PRES). R. Grosse, [rondagrosse@chemistswithoutborders.org](mailto:rondagrosse@chemistswithoutborders.org)

### AGRICULTURAL AND FOOD CHEMISTRY

**Program chair: L. Yu, U of Maryland, Dept. of Nutrition and Food Science, [lyu5@umd.edu](mailto:lyu5@umd.edu); X. Fan, US Dept. of Agriculture, Agricultural Research Service, Eastern Regional Research Center, [xuetong.fan@ars.usda.gov](mailto:xuetong.fan@ars.usda.gov)**

Abstracts due March 18.

**Agnes Rimando Memorial International Student Symposium.** M. Tunick, [mht39@drexel.edu](mailto:mht39@drexel.edu); R. Tardugno, [roberta.tardugno@gmail.com](mailto:roberta.tardugno@gmail.com); M. Granvogl, [michael.granvogl@ch.tum.de](mailto:michael.granvogl@ch.tum.de); B. Gao, [gaoboyan0717@163.com](mailto:gaoboyan0717@163.com)

**Agnes Rimando Memorial Symposium.** J. Leland, [jlelandenterprises@gmail.com](mailto:jlelandenterprises@gmail.com); K. Mahattanatawee, [kanjana.mee@gmail.com](mailto:kanjana.mee@gmail.com); W. Yokoyama, [wally.yokoyama@ars.usda.gov](mailto:wally.yokoyama@ars.usda.gov); L. Yu, [lyu5@umd.edu](mailto:lyu5@umd.edu)

**Aqueous, Neat, and Organic Media for the Utilization of Agro-Based Materials.** H. N. Cheng, [hn.cheng@ars.usda.gov](mailto:hn.cheng@ars.usda.gov); M. Appell, [michael.appell@ars.usda.gov](mailto:michael.appell@ars.usda.gov); A. Biswas, [atanu.biswas@ars.usda.gov](mailto:atanu.biswas@ars.usda.gov); S. Chang, [sechin.chang@ars.usda.gov](mailto:sechin.chang@ars.usda.gov)

**Chemistry of Traditional Chinese Medicine.** W. Yokoyama, [wally.yokoyama@ars.usda.gov](mailto:wally.yokoyama@ars.usda.gov); X. Wu, [xianli.wu@ars.usda.gov](mailto:xianli.wu@ars.usda.gov); J. Guo, [guo596@163.com](mailto:guo596@163.com)

**Edible Functional Food Packaging from Agricultural Biomacromolecules.**

L. Chen, [lingyun.chen@ualberta.ca](mailto:lingyun.chen@ualberta.ca); X. Liu, [liuxh@whu.edu.cn](mailto:liuxh@whu.edu.cn)

**Food Bioactives: Chemistry and Health Effects.** C. Udenigwe, [cudenigw@uottawa.ca](mailto:cudenigw@uottawa.ca); F. Shahidi, [fshahidi@gmail.com](mailto:fshahidi@gmail.com)

**Food Phenolics: From Bitterness and Astrigency to Health-Promoting Properties.** C. O. Roa, [cosorior@unal.edu.co](mailto:cosorior@unal.edu.co); K. G. J. Lee, [kwglee@dongguk.edu](mailto:kwglee@dongguk.edu); Y. Wang, [yu.wang@ufl.edu](mailto:yu.wang@ufl.edu)

**Functional Foods: The Chemistry, Bioactivity, Bioavailability, and Biomarkers of Dietary Phytochemicals.** S. Sang, [ssang@ncat.edu](mailto:ssang@ncat.edu); Y. Zhu, [yzzhu1@ncat.edu](mailto:yzzhu1@ncat.edu); J. Daily, [jdaily3@yahoo.com](mailto:jdaily3@yahoo.com)

**General Papers** (oral and poster submissions). **Innovative Approaches to Enhancing Food Safety and Reducing Food Waste.** T. Jin, [tony.jin@ars.usda.gov](mailto:tony.jin@ars.usda.gov); M. Guo, [mingguo@zju.edu.cn](mailto:mingguo@zju.edu.cn)

**Metals and Trace Elements in Food Safety, Health, and Food Quality.** L. Jackson, [lauren.jackson@fda.hhs.gov](mailto:lauren.jackson@fda.hhs.gov); D. Redan, [benjamin.redan@fda.hhs.gov](mailto:benjamin.redan@fda.hhs.gov)

**Nanotechnology Applications for Food and Agriculture.** B. Park, [bosoon.park@ars.usda.gov](mailto:bosoon.park@ars.usda.gov); S. Nam, [sunghyun.nam@ars.usda.gov](mailto:sunghyun.nam@ars.usda.gov); T. Duncan, [timothy.duncan@fda.hhs.gov](mailto:timothy.duncan@fda.hhs.gov)

**Novel Structures from Food Biopolymers for Delivery of Bioactive Components.** Q. Wang, [wangqin@umd.edu](mailto:wangqin@umd.edu); A. Luo, [yangchao.luo@uconn.edu](mailto:yangchao.luo@uconn.edu); Y. Zhang, [yqzhang2006@sjtu.edu.cn](mailto:yqzhang2006@sjtu.edu.cn)

**Nutrition, Diet, Functional Foods in Health.** L. Liu, [linshu.liu@ars.usda.gov](mailto:linshu.liu@ars.usda.gov); M. Kobori, [kobori@affrc.go.jp](mailto:kobori@affrc.go.jp); I. Yoshihiro, [y-ito@niken.jp](mailto:y-ito@niken.jp); D. Ren, [dxren@zju.edu.cn](mailto:dxren@zju.edu.cn); W. Chen, [zjuchenwei@zju.edu.cn](mailto:zjuchenwei@zju.edu.cn)

**Proposition 65 on Food Safety.** M. Granvogl, [michael.granvogl@ch.tum.de](mailto:michael.granvogl@ch.tum.de); S. MacMahon, [shaun.macmahon@fda.hhs.gov](mailto:shaun.macmahon@fda.hhs.gov)

**Teaching and Learning Food Chemistry and Analysis.** M. Tunick, [mht39@drexel.edu](mailto:mht39@drexel.edu); E. Choe, [ericchoe88@gmail.com](mailto:ericchoe88@gmail.com)

**The Chemistry of Aged Beer and Spirits.** N. Flynn, [nflynn@wtamu.edu](mailto:nflynn@wtamu.edu); B. Schneider, [bmschnei@hotmail.com](mailto:bmschnei@hotmail.com)

**The Flavor of Water: Chemistry, Quality, and Sensory.** L. Kreger, [liz.kreger@pepsico.com](mailto:liz.kreger@pepsico.com); T. Shao, [tony.shao@pepsico.com](mailto:tony.shao@pepsico.com); G. K. Jayaprakasha, [gkjp@tamu.edu](mailto:gkjp@tamu.edu); Y. Wang, [yu.wang@ufl.edu](mailto:yu.wang@ufl.edu); K. Cadwallader, [cadwllr@illinois.edu](mailto:cadwllr@illinois.edu)

**The Role of the Microbiome in Mediating Health Effects of Dietary Components.** H. Xiao, [hangxiao@foodsci.umass.edu](mailto:hangxiao@foodsci.umass.edu); G. Zhang, [guodongzhang@umass.edu](mailto:guodongzhang@umass.edu)

### AGROCHEMICALS

**Program chair: C. B. Cleveland, BASF, Global Consumer Safety, [cleveland@basf.com](mailto:cleveland@basf.com)**

Abstracts due March 20.

**2019 ACS International Award for Research in Agrochemicals: Advances in the Physiology and Biochemistry of Insect Control** (cosponsored with BIOL and MEDI). M. David, [michael.david@basf.com](mailto:michael.david@basf.com); K. Wing, [kdw85@verizon.net](mailto:kdw85@verizon.net)

**Advances in Analytical Technologies Supporting Environmental Fate, Metabolism, and Residue Analysis** (cosponsored with ENVR; oral and poster submissions). K. Kuppannan, [kkuppannan@dow.com](mailto:kkuppannan@dow.com); M. Ma, [mma3@dow.com](mailto:mma3@dow.com); Y. Yuan, [yang.yuan@fmc.com](mailto:yang.yuan@fmc.com)

**Advances in Exposure Modeling for Human Health Assessments** (cosponsored with TOXI; oral and poster submissions). A. Z. Szarka, [arpad.szarka@syngenta.com](mailto:arpad.szarka@syngenta.com); J. Tang, [jane-zhenxu.tang@bayer.com](mailto:jane-zhenxu.tang@bayer.com)

**Advances in Spray Drift Deposition Characterization and Measurement** (cosponsored with ENVR; oral and poster submissions). D. Perkins, [perkinsd@waterborne-env.com](mailto:perkinsd@waterborne-env.com); G. Goodwin, [goodwing@waterborne-env.com](mailto:goodwing@waterborne-env.com); J. Perine, [jeff.perine@syngenta.com](mailto:jeff.perine@syngenta.com); G. Kruger, [greg.kruger@unl.edu](mailto:greg.kruger@unl.edu)

**Agrochemical Residue and Metabolism Chemistry** (oral and poster submissions). J. J. Johnston, [john.j.johnston@aphis.usda.gov](mailto:john.j.johnston@aphis.usda.gov); K. Mastovska, [katerinamastovska@eurofinsus.com](mailto:katerinamastovska@eurofinsus.com); D. Smith, [david.j.smith@ars.usda.gov](mailto:david.j.smith@ars.usda.gov); X. Zhou, [xzhou5@dow.com](mailto:xzhou5@dow.com)

**Agrochemicals and Water: Advances in Prevention, Monitoring, and Treatment** (cosponsored with ENVR; oral and poster submissions). S. Mathys, [smathys@eag.com](mailto:smathys@eag.com); H. Irrig, [heidi.irrig@syngenta.com](mailto:heidi.irrig@syngenta.com)

**Analytical Methodologies for Process Chemistry and Formulation Research** (cosponsored with ENVR; oral and poster submissions). D. Kneuppel, [daniel.kneuppel@corteva.com](mailto:daniel.kneuppel@corteva.com); M. Evenson, [mary.evenson@corteva.com](mailto:mary.evenson@corteva.com); N. Y. Shi, [nancy.shi@syngenta.com](mailto:nancy.shi@syngenta.com)

**Analytical, Environmental and Regulatory Challenges with Legalized Cannabis** (cosponsored with MEDI; oral and poster submissions). J. M. Clark, [jclark@vasci.umass.edu](mailto:jclark@vasci.umass.edu); K. L. Armbrust, [armbrust@isu.edu](mailto:armbrust@isu.edu); T. Vu, [thuyvuconsulting.com](mailto:thuyvuconsulting.com); L. Engelking, [lezli@focusstandards.org](mailto:lezli@focusstandards.org)

**Biostimulants in Agriculture: Chemistry and Regulatory Aspects** (cosponsored with BIOL, MEDI, and TOXI; oral and poster submissions). M. Koivunen, [meikoivunen@gmail.com](mailto:meikoivunen@gmail.com); P. Halarnkar, [phalarnkar@chbio.com](mailto:phalarnkar@chbio.com); K. Wing, [kdw85@verizon.net](mailto:kdw85@verizon.net)

**Breaking Chemistry Barriers to Feed the World** (oral and poster submissions).

H. Irrig, [heidi.irrig@syngenta.com](mailto:heidi.irrig@syngenta.com); L. Rossi, [rluisa1@aol.com](mailto:rluisa1@aol.com); C. Tiu, [tcarmen@dow.com](mailto:tcarmen@dow.com)

**Challenges and Opportunities Facing Early-Career Scientists: Early-Career Scientist Symposium** (cosponsored with BIOL; oral and poster submissions). S. Whiting, [whiting@eag.com](mailto:whiting@eag.com); X. Zhou, [xzhou5@dow.com](mailto:xzhou5@dow.com)

**Characterizing the Nature of Biphasic Sorption and Implications for Water-Quality Risk Assessment** (cosponsored with ENVR; oral and poster submissions). S. Z. Cohen, [ets@ets-md.com](mailto:ets@ets-md.com); W. Chen, [wenlin.chen@syngenta.com](mailto:wenlin.chen@syngenta.com); P. Sharma, [prasesh.sharma@dupont.com](mailto:prasesh.sharma@dupont.com); W. M. Williams, [williamsm@waterborne-env.com](mailto:williamsm@waterborne-env.com)

**Creative Thinking in Designing E fate Studies and Data Analysis to Meet Agrochemical Regulatory Challenges** (cosponsored with ENVR; oral and poster submissions). C. Fang, [chengwei.fang@dupont.com](mailto:chengwei.fang@dupont.com); A. Sharma, [ashok.k.sharma@dupont.com](mailto:ashok.k.sharma@dupont.com); M. Zhang, [minli.zhang@fmc.com](mailto:minli.zhang@fmc.com)

**CRISPR/Gene Editing and RNAi: Utilization for Enhanced Crop Production** (cosponsored with BIOL; oral and poster submissions). P. Reibach, [preibach@smithers.com](mailto:preibach@smithers.com); M. Ruebelt, [martin.ruebelt@bayer.com](mailto:martin.ruebelt@bayer.com)

**Development of Novel Vector Control Technologies** (cosponsored with MEDI; oral and poster submissions). E. Norris, [ej.norris@ufl.edu](mailto:ej.norris@ufl.edu); A. D. Gross, [adgross@vt.edu](mailto:adgross@vt.edu); D. Swale, [dswale@agcenter.lsu.edu](mailto:dswale@agcenter.lsu.edu)

**Development of Residue Analytical Methods: Regulatory Trends and Phases from Metabolism to Residue Analysis** (oral and poster submissions). M. Saha, [manasi.saha@basf.com](mailto:manasi.saha@basf.com); S. Perez, [sp@adpen.com](mailto:sp@adpen.com)

**Distributed and Spatially Explicit Exposure Modeling: Advances, Techniques, and Frameworks** (cosponsored with COMP; oral and poster submissions). A. Jacobson, [jacobsona@waterborne-env.com](mailto:jacobsona@waterborne-env.com); D. Perkins, [perkinsd@waterborne-env.com](mailto:perkinsd@waterborne-env.com)

**Environmental Fate, Transport, and Modeling of Agriculturally Related Chemicals** (oral and poster submissions). R. Warren, [ralph.warren@basf.com](mailto:ralph.warren@basf.com); S. Jackson, [scott.jackson@agrodiv.org](mailto:scott.jackson@agrodiv.org)

**Flooded Agriculture: Field Studies and Modeling** (cosponsored with ENVR; oral and poster submissions). A. Ritter, [rittera@waterborne-env.com](mailto:rittera@waterborne-env.com); W. M. Williams, [williamsm@waterborne-env.com](mailto:williamsm@waterborne-env.com)

**Formulating Complex Agrochemical Mixtures** (oral and poster submissions). J. Whitteck, [john.whitteck@bayer.com](mailto:john.whitteck@bayer.com); R. Acosta, [racostaamado@dow.com](mailto:racostaamado@dow.com); B. Rauzan, [bmrauzan@dow.com](mailto:bmrauzan@dow.com)

Researchers supported by grants or contracts from the US Department of Defense are required to submit proposal abstracts and manuscripts for review by DOD if so specified in the grant or contract. It is the responsibility of the authors to secure approval when necessary and to indicate to program chairs that approval has been obtained or is expected.

**High-Throughput Approaches to Support Pesticide Discovery and Development** (oral and poster submissions). K. Lynn, kari.lynn@corveva.com; L. Ritter, leah.ritter@bayer.com; M. Zhang, minli.zhang@fmc.com

**Higher-Tier Exposure Modeling in Groundwater within the Regulatory Framework** (cosponsored with ENVR; oral and poster submissions). P. Sharma, prashesh.sharma@dupont.com; S. Qiu, sqiu@knoll.com

**Incorporating the Benefits of Vegetative Filter Strips into Risk Assessment and Risk Management of Pesticides** (cosponsored with ENVR; oral and poster submissions). L. McConnell, laura.mcconnell@bayer.com

**Innovative Approaches to Managing the Interface between Pesticide Use and Nontarget Species Habitat Protection** (cosponsored with ENVR; oral and poster submissions). A. Frank, afrank@complianceservices.com; L. Moreno, pmoreno@cdpr.ca.gov; A. Beeher, angela@mosquitocontrol.org

**Interpreting, Communicating, and Managing Risk in the FIFRA/ESA Regulatory Setting** (oral and poster submissions). B. McGaughey, bmcgaughey@complianceservices.com

**Legal Challenges and Landmark Lawsuits in Agrochemicals** (oral and poster submissions). R. Bennett, rodbennett@aol.com; J. V. Emon, vanchemist1@netzero.net; A. Coates, awecoates@gmail.com

**Linking Risk to Regulatory, Stewardship, and Agriculture Production Outcomes: A Paradigm Shift** (cosponsored with ENVR; oral and poster submissions). J. L. Bickel, bickelj@waterborne-env.com; W. White, whitew@waterborne-env.com; B. Monaghan, bmonaghan@heronpacific.com

**Metabolomics and Metabolite Identification in Agricultural Research** (oral and poster submissions). J. Balcer, jesse.balcer@corveva.com; A. Chen, amanda.chen1@bayer.com; J. Ferguson, jferguson@smithers.com; P. Wei, pu.wei@bayer.com

**New Herbicides and Their Modes of Action** (oral and poster submissions). S. O. Duke, stephen.duke@ars.usda.gov; F. Dayan, frank.dayan@colostate.edu; T. Stevenson, thomas.stevenson@fmc.com

**Next-Generation Watershed Modeling of Agrochemicals** (cosponsored with ENVR; oral and poster submissions). N. Peranganin, natalia.peranganin@syngenta.com; N. Thurman, thurman.nelson@epa.gov; M. Winchell, mwinchell@stone-env.com

**Novel Applications of Mathematics, Statistics, and Modeling to Agrochemical Problems** (cosponsored with COMP; oral and poster submissions). J. Purdy, john@abacuscscl.com; W. Chen, wenlin.chen@syngenta.com; K. Schnelle, kschnelle@dow.com; W. Al-Akhdar, walid.al-akhdar@basf.com

**Off-Target Transport of Field-Applied Agricultural Chemicals: Study Designs, Monitoring, Modeling, and Risk Assessment** (cosponsored with ENVR; oral and poster submissions). S. Grant, shanique.grant@syngenta.com; A. Ritter, rittera@waterborne-env.com; Q. Yao, qiyao17@umd.edu

**Pest Management Economics: Present and Future Considerations** (cosponsored with BMGT; oral and poster submissions). L. Duzy, lduzy@complianceservices.com; M. Dobbs, michael.dobbs@bayer.com

**Plant-Insect-Microbe Communications in Agriculture Part 1: Early-Career Scientist Symposium** (oral and poster submissions). N. Tabanca, nurhayat.tabanca@ars.usda.gov; P. E. Kendra, paul.kendra@ars.usda.gov; J. Niogret, niogret.ecology.consulting@gmail.com

**Plant-Insect-Microbe Communications in Agriculture Part 2: General Session** (cosponsored with BIOL; oral and poster submissions). N. Tabanca, nurhayat.tabanca@ars.usda.gov; P. E. Kendra, paul.kendra@ars.usda.gov; J. Niogret, niogret.ecology.consulting@gmail.com

**Pollinators in Agroecosystems: Current Science Issues and Risk Assessment Approaches** (cosponsored with ENVR; oral and poster submissions). J. Purdy, john@abacuscscl.com; C. Douglass, douglass.cameron@epa.gov; V. Kramer, vince.kramer@corveva.com; A. Krueger, annie.krueger@huskers.unl.edu

**Process Research and Development in Crop Protection** (oral and poster submissions). Q. Yang, qyang1@dow.com; K. Gray, kgray@dow.com; W. Su, wen.su@bayer.com

**Simulating Fumigant Transport and Emissions: The Evolving Role of Modeling in California Regulations** (cosponsored with ENVR; oral and poster submissions). E. Vidrio, edgar.vidrio@cdpr.ca.gov; S. Krepich, scottk@phenomenex.com

**Sink or Swim: Chemical Mobility at the Water-Sediment Interface** (cosponsored with ENVR; oral and poster submissions). W. M. Williams, williamsm@waterborne-env.com; A. K. Sharma, ashok.k.sharma@dupont.com; W. Chen, wenlin.chen@syngenta.com; R. Lomax, rlomax@eag.com

**Spencer Award Winner and Related Presentations**. S. Leibowitz, sarah.leibowitz@delaval.com

**Successes, Failures, and Lessons Learned in Agrochemical Exposure and Risk Assessment Communication** (cosponsored with CINF; oral and poster submissions). D. Barrett, barrett.dena@epa.gov; M. Sharpe, michelle.joanne.sharpe@basf.com; W. M. Williams, williamsm@waterborne-env.com

**Surfactant and Colloid Science Applied to Formulations** (oral and poster submissions). R. Acosta, racostaamado@dow.com; B. Rauzan, bmrauzan@dow.com; S. Sumulong, solito.sumulong@cpsagu.com

**To GLP or Not? How-Tos for the AGRO Professional** (cosponsored with COLL; oral and poster submissions). K. Watson, kwatson@stone-env.com; C. Lee, leecomplianceassessments@gmail.com

**To Infinity and Beyond: The Dangers of Hyperconservative Exposure Modeling in Risk Assessment** (oral and poster submissions). S. Teed, steed@intrinsik.com; D. Moore, dmoore@intrinsik.com

**Transfer of Analytical Methods: The Good, the Bad, and the Ugly** (oral and poster submissions). L. Ritter, leah.ritter@bayer.com; R. M. Bennett, rodbennett@aol.com; K. Clark, kclark@eag.com; J. Foster, james.foster@valent.com

**Unmanned Aerial Vehicles (aka Drones): Pesticide Spraying and Other Agricultural Applications** (cosponsored with ENVR; oral and poster submissions). J. Perine, jeff.perine@syngenta.com; A. Jacobson, jacobsona@waterborne-env.com

**Water Scarcity: Challenges for Agriculture** (cosponsored with ENVR; oral and poster submissions). J. Carvalho, jcarvalho@knoll.com; J. Seiber, jseiber@ucdavis.edu; T. Moate, tmoate@gplabs.com

**What Does Nanotechnology Have to Do with Agriculture?** (cosponsored with COLL; oral and poster submissions). S. J. Kweskin, sasha.kweskin@bayer.com; J. Hughes, jeffrey.hughes1@bayer.com

## ANALYTICAL CHEMISTRY

**Program chair: K. Agnew-Heard, Altria Client Services, Innovative Product Services, kimberly@acsanalytical.org; M. F. Bush, U of Washington, Dept. of Chemistry, mattbush@acsanalytical.org**

Abstracts due March 18.

**Advances in Electrochemistry.**

**Advances in Fluorescence and Bioluminescence Imaging Probes.** H. Ai, huiwang.ai@gmail.com

**Advances in Mass Spectrometry.**

**Advances in Spectroscopy.**

**Advances in Wearable and Implantable Sensors.** L. Deravi, lderavi@northeastern.edu; M. Daniele, mdaniel6@ncsu.edu

**Analytical Division Poster Session.** K. Agnew-Heard, kimberly@acsanalytical.org

**Biosensing: New Strategies and Latest Development** (oral and poster submissions). Q. J. Cheng, quan.cheng@ucr.edu

**Chemometric Analysis for Aqueous Sample.** Y. Xu, xuy56@crimson.ua.edu; X. Liang, xliang19@crimson.ua.edu; T. Mako, tmako17@uri.edu; X. Yao, xyao6@crimson.ua.edu

**Connecting Safety, Education, Training, and Productivity in Analytical Laboratories** (cosponsored with CHAS). J. Maclachlan, pidgirl@gmail.com; C. Incarvito, chris.incarvito@yale.edu

**Exploration of the Nano-Bio Interface with Analytical Tools.** W. Zhong, wenwan.zhong@ucr.edu

**From Antibody-Based to Mass Spectrometry-Based Analysis of Emerging Contaminants in Water: Advances and Future Trends** (oral and poster submissions). R. Schneider, rudolf.schneider@bam.de; D. S. Aga, dianaaga@buffalo.edu

**Groundwater Contamination, Remediation, and Treatment Approaches** (oral and poster submissions). T. Jindal, tjindal@amity.edu

**Identification and Design of Catalytic Sites in Electrochemical Reactions.** H. Wang, hailiang.wang@yale.edu; Y. Liang, liang.yy@sustc.edu.cn; C. Liu, chongliu@chem.ucla.edu

**Interface between Experiments and**

**Modeling in Unraveling the Physical and Chemical Properties of Charged Droplets.** S. Constas, sconstas@uwo.ca; S. Xantheas, sotiris.xantheas@pnnl.gov

**Mass Spectrometry of Biomolecular Assemblies.** J. Prell, jprell@uoregon.edu; M. Marty, mtmarty@email.arizona.edu

**Measuring Protein Conformations and Folding inside the Cell.** J. Genereux, josephg@ucr.edu

**Metabolomics in Forensics: Applications, Technical Barriers, and Emerging Approaches for Chemical Identification Using In Silico Reference Libraries.** D. Wunschel, david.wunschel@pnnl.gov; T. Metz, thomas.metz@pnnl.gov

**Nanozymes for Bioanalysis and Beyond** (oral and poster submissions). H. Wei, weihui@nju.edu.cn

**Structure at Solid-Liquid Interfaces: Effects of Confinement and Chemical Patterning.** T. Davis, davis946@purdue.edu; T. R. Hayes, hayes110@purdue.edu

**Study of Circulating, Cell-Free Biomarkers with Analytical Tools.** W. Zhong, wenwan.zhong@ucr.edu

**The Origins and Future of Metabolite Identification in Discovery Omics.** G. Siuzdak, siuzdak@scripps.edu; R. Plumb, rob\_plumb@waters.com

**Theoretical and Experimental Investigations of Water Interactions with Porous Materials.** T. Guo, tguo@ucdavis.edu; D. Donadio

## BIOCHEMICAL TECHNOLOGY

Will not be hosting symposia at this meeting.

## BIOLOGICAL CHEMISTRY

**Program chair: P. Bevilacqua, Pennsylvania State U, Dept. of Chemistry, pcb5@psu.edu; M. Distefano, U of Minnesota, Dept. of Chemistry, diste001@umn.edu**

Abstracts due March 18.

## BUSINESS DEVELOPMENT AND MANAGEMENT

**Program chair: A. Demasi, Lanxess Solutions US, Product Compliance and Regulatory Affairs, anne.demasi@lanxess.com; J. Bryant, BMGT Program Administrator, janetsbliss@hotmail.com**

Abstracts due March 18.

**Chemical Angel Network.** J. Bryant, janetsbliss@hotmail.com

## CARBOHYDRATE CHEMISTRY

**Program chair: S. Sucheck, U of Toledo, steve.suchek@utoledo.edu**

Abstracts due March 18.

**Carbohydrate Synthesis for CARB's Next Century.** D. Crich, dcrich@chem.wayne.edu; T. L. Lowary, tlowary@ualberta.ca

**Centennial Celebration of ACS Carbohydrate Chemistry: Chairs' Perspective.** P. Andreea, peter.andreea@utoledo.edu

**General Posters.** S. Sucheck, steve.suchek@utoledo.edu

**Glycans in Context.** H. F. Azurmendi, hugo.azurmendi@fda.hhs.gov; D. I. Freedberg, daron.freedberg@fda.hhs.gov; P. C. McCarthy, pumtiwitt.mccarthy@morgan.edu

**Japanese-American Symposium on Applied and Translational Glycosciences.** A. V. Demchenko, demchenkoa@msx.umsl.edu; Y. Ito, yukito@riken.jp

**Uncovering the Biological Roles of Protein O-GlcNAcylation with Chemistry.** M. Pratt, matthew.pratt@usc.edu; J. Jiang, jiaoyang.jiang@wisc.edu

## CATALYSIS SCIENCE AND TECHNOLOGY

**Program chair: S. Crossley, U of Oklahoma, Dept. of Chemical, Biological, and Materials Engineering, stevencrossley@ou.edu; A. Savara, Oak Ridge National Laboratory, Surface Chemistry and Catalysis, savaraa@ornl.gov**

Abstracts due March 25.

**Advances in Catalysis with Ceria and Other Reducible Oxides** (cosponsored with ENFL, PHYS, ENVR, and INOR). F. Wang, wangfeng@dicp.ac.cn; Z. Wu, wuz1@ornl.gov; M. Cargnello, mcargn@stanford.edu

**Ambient Pressure Spectroscopy in Complex Environments** (cosponsored with COLL). A. Head, ahead@bnl.gov; B. Eren, baran.eren@weizmann.ac.il

**Amorphous Materials: Challenges and Opportunities** (cosponsored with ENFL). N. Brunelli, brunelli.2@osu.edu; A. Kulkarni, arulkarni@ucdavis.edu

**Catalysis at Metal-Support Interfaces** (cosponsored with ENFL). P. Christopher, pchristopher@ucsb.edu; S. Crossley, stevencrossley@ou.edu

**Catalytic Conversion of Biomass-Derived Oxygenates** (cosponsored with ENFL). J. A. Faria, j.a.faria@banese@utwente.nl; X. Zhu, xinlizhu@tju.edu.cn; S. Crossley, stevencrossley@ou.edu

**CATL Division Awards.** S. Crossley, stevencrossley@ou.edu; D. Resasco, resasco@ou.edu

**Electrocatalysis for Energy Generation and Storage** (cosponsored with ENFL). A. Holewinski, adam.holewinski@colorado.edu; L. Seitz, linsey.seitz@northwestern.edu; K. Manthiram, karthik@mit.edu;

J. Resasco, jresasco@ucsb.edu

**Fundamentals of Catalysis in Nanoporous Materials** (cosponsored with ENFL). O. Abdelrahman, abdel@umass.edu; M. Orazov, orazov@udel.edu; M. Sarazen, msarazen@princeton.edu

**Future Insights into Syngas Conversion Catalysis: Symposium in Honor of Burtron H. Davis** (cosponsored with ENFL, PHYS, ENVR, and INOR). B. Demirel, belma.demirel@bp.com; H. Kung, hkung@northwestern.edu; M. Gnanamani, muthu.gnanamani@uky.edu; W. Shafer, wilson.shafer@asbury.edu

**General Catalysis** (oral and poster submissions). S. Crossley, stevencrossley@ou.edu

**Hybrid Biological and Chemocatalytic Processes for Biomass Upgrading to Fuels and Chemicals** (cosponsored with ENFL). D. Vardon, derek.vardon@pnnl.gov; K. Ramasamy, karthi@pnnl.gov

**In Situ and Operando Spectroscopy** (cosponsored with ENFL and PHYS). B. Xu, bxu@udel.edu; M. Orazov, orazov@udel.edu

**Solvent Effects in Metal-Catalyzed Reactions** (cosponsored with ENFL and PHYS). B. Wang, wang\_cbme@ou.edu; D. Resasco, resasco@ou.edu

**Understanding the Role of Water in Solid Acid-Base Catalysis** (cosponsored with ENFL, PHYS, and INOR). J. L. White, jeff.white@okstate.edu; T. Xu, teng.xu@exxonmobil.com; S. Crossley, stevencrossley@ou.edu

## CELLULOSE AND RENEWABLE MATERIALS

**Program chair: G. Larkin, Michigan Tech U, School of Forest Resources and Environmental Science, gmlarkin@mtu.edu; W. Thielemans, KU Leuven, Dept. of Chemical Engineering, wim.thielemans@kuleuven.be**

Abstracts due March 18.

**Advances in Characterizing Modified and Degraded Wood.** G. Larkin, gmlarkin@mtu.edu; M. Aro, maro@d.uminn.edu

**General Posters.** G. Larkin, gmlarkin@mtu.edu  
**Influence of Inorganic Content on Wood Industrial Properties.** A. Asamoah, asamoah38@icloud.com; A. Atta-Boateng, acheboate@gmail.com

**Lignin-Based Bioproducts.** M. Nejad, nejad@msu.edu

**Materials Advances in Nanocellulose Research for Engineered Functionality** (cosponsored with PMSE and POLY). L. Pal, lpal@ncsu.edu; L. Lucia, llucia@ncsu.edu; H. Jameel, jameel@ncsu.edu

## CHEMICAL EDUCATION

**Program chair: I. Black, James Madison U, Dept. of Chemistry, diblack4@gmail.com; P. Daubenmire, Loyola U Chicago, Dept. of Chemistry and Biochemistry, pdauben@luc.edu; L. Q. Wang, Brown U, Dept. of Chemistry, li\_qiong\_wang@brown.edu; I. Levy, Gordon College, Dept. of Chemistry, irv.levy@gordon.edu**

Abstracts due March 18.

**3-D Printing in Chemistry Education: Where, Wherefore, and Whereto.** J. K. Klosterman, jkk@ucsd.edu; A. Leontyev, alexleontyev@adams.edu

**Academic Lab Safety** (cosponsored with CHAS). S. D. Wiediger, swiedig@sue.edu

**Adapting Authentic Research to the Teaching Lab: Challenges and Rewards.** B. McFarland, bjmc@spu.edu; D. Wood, woodd1@spu.edu

**Assessment and Measurement in Research and Practice.** J. Trate, jtrate@uwm.edu; K. Murphy, kmurphy@uwm.edu; J. Raker, jraker@usf.edu; T. Pentecost, pentecot@gsu.edu; K. Marek, kmarek@bemidjistate.edu

**Avoiding the Focus Drought: Novel Water Demonstrations and Lectures to Keep Student Focus.** A. Neybert, crazy4chemistry@att.net

**Chemistry Teachers' Day.** S. C. Rukes, scrukes@comcast.net

**Citizens First!** R. D. Sheardy, rsheardy@twu.edu; R. Bishop, rbishop@belhaven.edu

**Engaging Students in Physical Chemistry** (cosponsored with PHYS). C. M. Teague, cteague@cornellcollege.edu; D. E. Gardner, dgardner@lander.edu

**General Papers.** S. Fleming, sfleming@temple.edu

**General Posters.** P. L. Daubenmire, pdauben@luc.edu

**Get the Facts Out: Faculty and Student Perceptions of K-12 Teaching Careers.** T. Taylor, t\_taylor@acs.org; K. Thompson, k\_thompson2@acs.org

**Green and Sustainable Chemistry Theory and Practice: Chemistry and Water** (cosponsored with CEI and I&EC). E. J. Brush, ebrush@bridgew.edu; J. E. Wissinger, jwiss@unm.edu

**Hands-on Chemistry beyond the Classroom: Chemical Education in Informal Settings.** S. Raposo, sara.raposo@msichicago.org

**Highlighting ACS International Volunteers: Outreach within and outside the Scientific Community.** L. Raines, l\_raines@acs.org; L. Brown, l\_brown2@acs.org

**Implementing Case Study Methods in Undergraduate Chemistry Teaching and Learning.** L. Q. Wang, li\_qiong\_wang@brown.edu

**Leveraging Collaborative Research for Collaborative Outreach.** M. Krause, mkrause@umn.edu; D. Watt, dwatt@uci.edu

**Nano Chemistry in Undergraduate Laboratory Courses.** J. Kim, jihyun.kim@guttman.cuny.edu

**Novel Water-Testing Methodologies for High Schools in Sub-Saharan Africa.** E. M. Govere, emg900@psu.edu

**Process Oriented Guided Inquiry Learning (POGIL).** R. S. Moog, rick.moog@fandm.edu

**Programs Designed to Promote Greater Retention in STEM and Chemistry.** C. Cox, ctcoc@stanford.edu; J. Schwartz-Poehlmann, jks425@stanford.edu

**Putting CER into Practice: Using Chemistry Education Research to Improve Student Learning Experiences.** M. Stains, mstains2@unl.edu; S. Lewis, slewis@usf.edu

**Research in Chemistry Education.** T. J. Bussey, tbussey@ucsd.edu; R. Komperda, rkomperda@sdsu.edu

**State of the Art: Diversity and Inclusion in Chemistry Education** (cosponsored with CEI and PROF). P. L. Daubenmire, pdauben@luc.edu; C. H. Middlecamp, chmiddle@wisc.edu

**Successful Student Chapters.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Technology in Chemical Education.**

C. Rezsnyak, crezsnyak@tntech.edu

**Twenty-First Century Innovative Assessments in Chemistry and Other STEM-Related Courses.** C. A. Supalo, csupalo@ets.org

**UN Sustainable Development Goals: Unique Opportunities for the Chemical Enterprise.** E. J. Brush, ebrush@bridgew.edu; J. E. Wissinger, jwiss@unm.edu

**Undergraduate Research Papers.** C. V. Gauthier, cgauthier@flsouthern.edu; N. Snyder, nsnyder@snyderglycosciencegroup.org; J. Ruppel, jruppel@uscupstate.edu

**Undergraduate Research Posters: Agricultural and Food Chemistry.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters: Analytical Chemistry.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters: Biochemistry.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters: Biotechnology.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters: Chemistry Education.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters: Computational Chemistry.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters: Environmental Chemistry.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters: Geochemistry.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters:**

**Green Chemistry and Sustainability.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters: Inorganic Chemistry.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters: Medicinal Chemistry.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters: Nanochemistry.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters: Organic Chemistry.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters: Physical Chemistry.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Undergraduate Research Posters: Polymer Chemistry.** J. Roberts, j\_roberts2@acs.org; N. DiFabio, n\_difabio@acs.org

**Water Education Providing Protection to Water-Dependent Systems throughout the World.** A. Nalley, annn@cameron.edu

## CHEMICAL HEALTH AND SAFETY

**Program chair: J. Pickel, Oak Ridge National Laboratory, pickeljm@ornl.gov; D. Decker, U of California, Davis, Dept. of Chemistry, dmdecker@ucdavis.edu; I. Black, James Madison U, Dept. of Chemistry, diblack4@gmail.com**

Abstracts due March 25.

**Cannabis and Hemp Analytical Science: The Glass is (More Than) Half-Full.** T. Astill, toby.astill@perkinelmer.com

**Cannabis and Water: Formulations That Create a Splash.** M. Vialpando, monica@vialpando-llc.com

**Cannabis and Water: Merging the Insoluble.** N. Arora, nbarora90@gmail.com

**Cannabis Production: Streamlining the Flow.** T. Towle, tyrell@medpharmholdings.com

**CHAS 40th Anniversary Symposium** (cosponsored with CCS and HIST). R. Stuart, ralph.stuart@keene.edu

**CHAS Poster Session** (cosponsored with CCS). J. Pickel, pickeljm@ornl.gov

**Connecting Professionalism, Safety, and Ethics: The Opportunities and Challenges** (cosponsored with CIN, ETHX, and CCS). R. Stuart, ralph.stuart@keene.edu

**Graduate Students' Perspective on Safety Education** (cosponsored with CCS and YCC). K. Miller, kalim863@gmail.com; R. Stuart, ralph.stuart@keene.edu

**The European Cannabis Research and Industry Leadership Symposium.** M. Roggen, markus@complexbiotech.com

**Water and Ice: Modern Advances on Traditional Cannabis Processing.** T. Trah, tlortrah@gmail.com; B. Grauerholz, bgrauerholz@gmail.com

**Water Safety Issues** (cosponsored with CCS). R. Izzo, rriizzo@princeton.edu

## CHEMICAL INFORMATION

**Program chair: S. Cardinal, U of Rochester, River Campus Libraries, scardinal@library.rochester.edu**

Abstracts due March 18.

**Artificial Intelligence and Deep Learning in QSAR Modeling.** T. Robertson, tim.robertson@schrodinger.com

**Biologic Informatics.** R. Bienstock, rachelleb1@gmail.com

**Chemical Nomenclature and Representation: Past, Present, and Future** (cosponsored with NTS). L. McEwen, lrm1@cornell.edu; M. Rogers, michelle.m.rogers@gmail.com; B. Lawlor, chescot@aol.com

**CINF Scholarships for Scientific Excellence: Student Poster Competition.** E. Alvaro, elsa.alvaro@northwestern.edu; M. Qiu, m\_qiu@acs.org

**Connecting Professionalism, Safety, and Ethics: Opportunities and Challenges** (cosponsored with CHAS). C. Nitsche, carmen@cinformaconsulting.com; R. Stuart, ralph.stuart@keene.edu

**Driving Drug Discovery via Innovative Data Visualization.** P. Beroza, beroza.paul@gene.com; D. Ortwin, ortwin.daniel@gene.com

**Drug Discovery: Informatics Approaches.** E. Davis, erinsdavis@gmail.com

**Extended Reality (XR) in Libraries and Beyond.** S. K. Cardinal, scardinal@library.rochester.edu; N. Ruhs, nruhs@fsu.edu; M. Qiu, m\_qiu@acs.org

**Herman Skolnik Award Symposium Honoring Dr. Kimito Funatsu.** K. Funatsu, funatsu@chemsys.t.u-tokyo.ac.jp; S. K. Cardinal, scardinal@library.rochester.edu

**Importance of Collaboration to Create Student Success in the Laboratory and Beyond.** S. Kuhn, skuhn@cas.org

**Material Informatics.** A. Tropsha, alex\_tropsha@unc.edu; H. Senderowitz, hsenderowitz@gmail.com

**One Million Crystal Structures: A Wealth of Structural Chemistry Knowledge.** I. Bruno, bruno@ccdc.cam.ac.uk; H. Abourahma, abourahm@tcnj.edu

**Solubility Prediction: Data Sets and Modeling.** S. Chalk, schalk@unf.edu

**Successful Projects Fueled by Open-Source Tools.** R. Bienstock, rachelleb1@gmail.com

**Text Mining and Natural Language Processing for Chemical Information: From Documents to Knowledge.** J. Nauss, jeff.nauss@linguamatics.com; R. Bienstock, rachelleb1@gmail.com

**Web-Based Chemistry Databases.** A. Williams, tony27587@gmail.com

## CHEMICAL TOXICOLOGY

**Program chair: T. Spratt, Pennsylvania State U, Dept. of Biochemistry and Molecular Biology, tspratt@pennstatehealth.psu.edu**

Abstracts due March 18.

**Chemical Research in Toxicology Young Investigator Award Symposium.** S. Sturla, shana.sturla@agr1.ethz.ch

**Current Approaches to Discovery-Phase Safety Assessment in the Industry.** F. P. Guengerich, fguengerich@vanderbilt.edu; N. Meanwell, nicholas.meanwell@bms.com

**Emerging Topics in Chemical Carcinogenesis.** T. E. Spratt, tes13@psu.edu

**Epigenetic Response to Endogenous and Exogenous Toxins.** N. Tretyakova, trety001@umn.edu; Y. Wang, yinsheng.wang@ucr.edu

**Founders' Award Symposium.** P. Dedon, pcdedon@mit.edu

**Keynote Lecture.** T. E. Spratt, tes13@psu.edu

**Student and Postdoctoral Scholar Symposium.** E. Prestwich, erin.prestwich@utolelo.edu; U. Sarkar, ujjal.sarkar@astrazeneca.com

**Topics in Chemical Toxicology.** L. Zhao, zhao5l@cmich.edu; P. Beuning, p.beuning@neu.edu

**TOXI Poster Session.** T. E. Spratt, tes13@psu.edu

**Translation Aspects of DNA Repair.** S. Shuck, sshuck@coh.org

## CHEMISTRY AND THE LAW

**Program chairs: K. Bianco, Finnegan, Henderson, Farabow, Garrett & Dunner LLP, krista.bianco@finnegan.com; K. McIntyre, Finnegan, Henderson, Farabow, Garrett & Dunner LLP, kristi.mcintyre@finnegan.com**

Abstracts due March 25.

**The Many Faces of CHAL: Where Chemistry Meets the Law.** K. Bianco, krista.bianco@finnegan.com; K. McIntyre, kristi.mcintyre@finnegan.com

## COLLOID AND SURFACE CHEMISTRY

**Program chair: R. Nagarajan, Natick Soldier Research, Development and Engineering Center, ramanathan.nagarajan.civ@mail.mil**

Abstracts due March 25.

**Adsorption and Reaction at Surfaces: Symposium in Honor of Charles T. Campbell** (oral and poster submissions). S. L. Tait, tait@indiana.edu; J. Rodriguez, rodriguez@bnl.gov; D. Starr, david.starr@helmholtz-berlin.de

**Basic Research in Colloids, Surfactants and Interfaces** (oral and poster submissions). R. Nagarajan, ramanathan.nagarajan.civ@mail.mil

**Biomaterials and Biointerfaces** (oral and poster submissions). S. R. V. Castrillon, sromerov@umn.edu

**Colloid and Surface Chemistry in Industry: Applications and Career Opportunities** (oral and poster submissions). N. Falk, nancy.falk@clorox.com; R. MacCuspie, rob@n-icorp.com

**Colloidal Quantum Dots for Emerging Technologies** (oral and poster submissions). F. Rosei, rosei@emt.inrs.ca; A. Vomiero, alberto.vomiero@ltu.se

**Colloids and Nanomaterials for Water Purification** (oral and poster submissions). C. P. Drew, christopher.p.drewphd.civ@mail.mil

**Confined Dynamics of Molecules and Particles at Interfaces, in Pores, and under Crowded Conditions** (oral and poster submissions). D. K. Schwartz, daniel.schwartz@colorado.edu; J. C. Conrad, jconrad@uh.edu

**Dynamics and Mechanisms of Surface Catalyzed Reactions** (oral and poster submissions). D. Killelea, dkillelea@luc.edu; S. Roy, sharani.roy@utk.edu

**Formulation Strategies to Control the Physicochemical Parameters of Drug and Nucleic Acid Delivery Systems** (oral and poster submissions). K. Sakurai, sakurai@kitakyu-u.ac.jp; M. A. Iliis, mailies@temple.edu

**Frontiers and Challenges in Nanoparticle-Mediated Chemical Transformations** (oral and poster submissions). O. Chen, ouchen@brown.edu; J. He, jie.he@uconn.edu; Y. Sun, ygsun@temple.edu; H. Fan, hfan@sandia.gov

**Fundamental Research in Colloids, Surfaces, and Nanomaterials.** R. Nagarajan, ramanathan.nagarajan.civ@mail.mil

**Hierarchical Assembly of Peptide and Protein: From Interaction and Structure to Application** (oral and poster submissions). M. Dong, dong@nano.au.dk; S. Zhang, shuai.zhang@pnnl.gov

**Langmuir Lectures, Nano Letters Award Lecture, ACS Materials and Interfaces Award Lecture.** R. Nagarajan, ramanathan.nagarajan.civ@mail.mil

**Nanoinformatics: Information and Data Sciences Applied to Nanomaterials Synthesis, Properties, and Biological Effects** (oral and poster submissions). D. A. Heller, hellerd@mskcc.org; J. E. Dahlman, james.dahlman@bme.gatech.edu; S. Jiang, sjiang1@iastate.edu; A. Schroeder, avids@technion.ac.il

**Nanomaterials** (oral and poster submissions). J. A. Hollingsworth, jenn@lanl.gov; R. Nagarajan, ramanathan.nagarajan.civ@mail.mil

**Surface Chemistry** (oral and poster submissions). S. Tait, tait@indiana.edu

**Surfaces and Interfaces in the Environment: Symposium in Honor of Vicki Grassian** (cosponsored with ENVR; oral and poster submissions). A. Ault, aulta@umich.edu; J. Baltrusaitis, job314@lehhigh.edu

**Targeted Delivery of Nanomedicines In Vivo** (oral and poster submissions). W. Parak, wolfgang.parak@uni-hamburg.de; N. Feliu, nfelu@physnet.uni-hamburg.de; P. Pino, pablo.delpino@usc.es

**Theoretical and Experimental Investigations of Water Interactions with Materials** (oral and poster submissions). T. Guo, tguo@ucdavis.edu; D. Donadio, ddonadio@ucdavis.edu

**Water and Tribological Interfaces** (oral and poster submissions). F. Mangolini, filippo.mangolini@austin.utexas.edu; M. Ruths, marina\_ruths@umsl.edu

## COMPUTERS IN CHEMISTRY

**Program chairs: L. Woodcock, U of South Florida, Dept. of Chemistry, hlw@usf.edu; J. Shen, U of Maryland School of Pharmacy, Dept. of Pharmaceutical Sciences, jana.shen@rx.umaryland.edu**

Abstracts due March 25.

**Advances in Multiscale Computational Modeling of Biomass Conversion Processes.** S. Kim, seonah.kim@nrel.gov; R. S. Assary, assary@anl.gov; V. A. Glezakou, vanda.glezakou@pnnl.gov

**Advances in Multiscale Modeling.** J. Li, jianing.li@uvm.edu; W. Noid, wgn1@psu.edu; J. C. Shelley, john.shelley@schrodinger.com

**Chemical Computing Group Graduate Student Travel Awards.** K. Kirschner, k.n.kirschner@gmail.com; C. Simmerling, carlos.simmerling@gmail.com

**COMP Poster Session.** H. L. Woodcock, hlw@usf.edu

**Computational Studies of Water.** D. Sindhikara, sindhikara@gmail.com

**Drug Design.** Y. J. Tseng, yjtseng@csie.ntu.edu.tw; M. Landon, lissland@gmail.com

**Exploring Transition-Metal Chemistry and Spectroscopy with Quantum Chemistry.** H. P. Hratchian, hratchian@ucmerced.edu; C. Aikens, cmaikens@ksu.edu; A. E. DePrince III, deprince@chem.fsu.edu

**Immersive Virtual Reality for Molecular Design.** L. Whitehead, lewis.whitehead@me.com; R. Paton, robert.paton@colostate.edu

**Material Science.** C. Aikens, cmaikens@ksu.edu

**Molecular Mechanics.** J. Shen, jana.shen@rx.umaryland.edu

**Molecular Mechanics: Conformational Dynamics of Ion Channels and Transporters.** J. Shen, jana.shen@rx.umaryland.edu

**Molecular Mechanics: Molecular Simulations for Materials Design.** J. Shen, jana.shen@rx.umaryland.edu; C. Aikens, cmaikens@ksu.edu

**NVIDIA GPU Award.** C. Simmerling, carlos.simmerling@gmail.com; M. Berger, mberger@nvidia.com

**OpenEye Outstanding Junior Faculty Award.** C. Simmerling, carlos.simmerling@gmail.com

**ProTAC Computational Design.** L. Xiao, li.xiao2@merck.com

**Quantum Mechanics.** A. E. DePrince III, deprince@chem.fsu.edu; H. P. Hratchian, hratchian@ucmerced.edu

**Recent Advances in Kinase Drug Discovery: A Joint Venture between Medicinal, Biological, and Computational Chemists.** J. Shen, jana.shen@rx.umaryland.edu; L. Whitehead, lewis.whitehead@me.com

**Role of Water Phase in Molecular Biology: Importance of Water in Folding, Binding, and Transport Phenomena.** C. Chang, chiaenc@ucr.edu; E. Alexov, ealexov@clemson.edu; R. Luo, rluo@uci.edu

**Use of Predictive Computational ADME Tools to Enable Drug Discovery.** D. Ortwin, ortwin.daniel@gene.com; F. Broccatelli, broccatelli.fabio@gene.com

**Wiley Computers in Chemistry Outstanding Postdoc Award.** C. Simmerling, carlos.simmerling@gmail.com; M. Cavalleri, matteo.cavalleri@wiley.com

**Women Make COMP.** G. Palermo, gpalermo@engr.ucr.edu; M. Nagan, mnagan@adelphi.edu

## ENERGY AND FUELS

**Program chair: H. Lin, Washington State U, Gene and Linda Voiland School of Chemical Engineering and Bioengineering, hongfei.lin@wsu.edu**

Abstracts due March 18.

**2-D Materials and Beyond: Innovative Materials, Assemblies, and Devices for Energy and Fuel.** Y. Zhu, yzhu@uakron.edu; L. Hu, binghu@umd.edu; M.-K. Song, minkyu.song@wsu.edu; V. Barone, v.barone@cmich.edu; Y. Lin, yi.lin-1@nasa.gov

**7th International Symposium on Mesoporous Zeolites.** J. G. Martinez, j.garcia@ua.es; K. Li, eric.li@rivettechnology.com

**Accelerating Scientific Breakthroughs at the Energy-Water Nexus in Engineered and Natural Environment** (cosponsored with WCC). A. A. Park, ap2622@columbia.edu; G. Gadikota, gadikota@wisc.edu; A. E. V. Gorden, anne.gorden@auburn.edu; L. Tribe, lut1@psu.edu

**Advances in Fundamental Research for Energy Storage beyond Lithium-Ion: In Honor of Dr. Larry A. Curtiss.** R. S. Assary, assary@anl.gov; B. Narayanan, badri.narayanan@louisville.edu; L. Cheng, leicheng@anl.gov

**Advancing Innovative Battery Technologies.** B. Liu, bin.liu@pnnl.gov; H. Pan, huilin.pan@pnnl.gov; K. Xu, conrad.k.xu.civ@mail.mil; D. Wang, dwang@psu.edu

**Atomic-Level Understanding and Design of Materials and Processes for Energy Applications.** Y. Liu, yuanyue.liu@ust.hk; H. Zhang, yunlong.zhang@exxonmobil.com

**Cross-Scale Science for Energy and Resource Recovery.** G. Gadikota, gadikota@wisc.edu

**Eco-Friendly Derived Nanostructured Materials and Characterization for Renewable Energy Applications.** F. M. Yurtsever, fmyurtsever@ualr.edu; S. Ravula, sravula1@lsu.edu

**Energy-Conversion Technologies Based on Solid Oxide Electrolyte Electrochemical Cells.** S. Ha, suha@wsu.edu; K. Zhao, k.zhao@wsu.edu

**ENFL General Posters.** H. Lin, hongfei.lin@wsu.edu

**Hybrid Energy Techniques: Catalysts to Vehicle.** V. Liu, vanadiumli@bjut.edu.cn; Q. Zhen, qzhen@staff.shu.edu.cn; S. Bashir, br9@tamuk.edu; J. L. Liu, jingbo.liu@tamuk.edu

**Hybrid Functional Porous Materials: MOFs, Silica, and Conductive Polymers.** S. K. Nune, satish.nune@pnnl.gov; J. L. Lutkenhaus, jodie.lutkenhaus@che.tamu.edu; S. V. Patwardhan, s.patwardhan@sheffield.ac.uk

**Hybrid Organic-Inorganic Semiconductors for Energy.** Y. Yan, yong.yan@sdsu.edu; M. Beard, matt.beard@nrel.gov

**Innovative Chemistry and Materials for Electrochemical Energy Storage.** H. Chen, hailong.chen@me.gatech.edu; F. Lin, fenglin@vt.edu; R. Clement, rclement@ucsb.edu; J. Kan, jackkan.chem@gmail.com

**Photocatalysis for Energy and Environment.** Y. Lin, linyan2002@sjtu.edu.cn; M. Long, long\_mc@sjtu.edu.cn

**Remediating Water from the Production or Extraction of Fuels.** M. Reynolds, mike.reynolds@shell.com; R. Weber, robert.weber@pnnl.gov

**Remediation of Wastewater from Energy Usage.** J. J. Ren, kfj000@tamuk.edu; Y. Li, yingli@tamuk.edu; Q. Zhen, qzhen@staff.shu.edu.cn; J. L. Liu, jingbo.liu@tamuk.edu

**Sustainable Biofuels and Biobased Products.** H. Wang, huamin.wang@pnnl.gov; A. Padmameruma, asanga.padmameruma@pnnl.gov; J. Fu, jiefu@zju.edu.cn; Y. Yang, yhyang@njtech.edu.cn; H. Lin, hongfei.lin@wsu.edu

**Sustainable Energy and Water via Innovative Electrocatalytic, Photocatalytic and Hybrid Catalytic Systems.** Y. Cheng, ycheng@niu.edu; C. Liu, chongliu@chem.ucla.edu; G. Wu, gangwu@buffalo.edu; Y. Shao, yuyan.shao@pnnl.gov; F. Jiao, jiao@udel.edu

**Understanding of Energy Materials with Advanced Computation and Characterization.** T. Li, tli4@niu.edu; H. Zhao, haiyanz@uidaho.edu; L. Cheng, leicheng@anl.gov

## ENVIRONMENTAL CHEMISTRY

**Program chair: J. Goldfarb, Cornell U, College of Agriculture and Life Sciences, goldfarb@cornell.edu**

Abstracts due March 18.

**Artificial Water Channels for Water Purification and Desalination** (oral and poster submissions). B. Mi, mib@berkeley.edu; M. Barboiu, mihaile-dumitru.barboiu@umontpellier.fr; J. L. Hou, houjl@fudan.edu.cn

**Biochar and Hydrochar for Energy, Environmental, and Agricultural Applications** (cosponsored with AGRO; oral and poster submissions). A. Shah, shah.971@osu.edu; J. Goldfarb, goldfarb@cornell.edu; N. Berge, berge@enr.sc.edu; R. Volpe, r.volpe@qmul.ac.uk

**C. Ellen Gontier Environmental Graduate Student Award Symposium.** K. O'Shea, osheak@fju.edu; D. Dionysiou, dionysios.d.dionysiou@uc.edu

**Catalysis for Environmental and Energy Applications** (oral and poster submissions). Y. Wang, wang292@uwmm.edu; A. Savara, savara@ornl.gov; A. Orlov, alexander.orlov@stonybrook.edu

**Chemistry and Applications of Free Radical-Based Technologies for Water Treatment and Purification** (cosponsored with AGRO; oral and poster submissions). D. Minakata, dminakat@mtu.edu; D. Aga, dianaaga@buffalo.edu; W. Song, wsong@fudan.edu.cn; G. Li Puma, g.lipuma@lboro.ac.uk; K. O'Shea, osheak@fju.edu; D. Dionysiou, dionysios.d.dionysiou@uc.edu

**Chemistry of Water Reuse Processes toward Water Sustainability** (cosponsored with AGRO; oral and poster submissions). C. P. Huang, huang@udel.edu; R. A. Doong, radoong@mx.nthu.edu.tw; W.-C. Hou, whou@mail.ncku.edu.tw; Z. Qiang, qiangz@rcees.ac.cn; V. K. Sharma, vsharma@sph.tamhsc.edu

**Chemistry of Waterless Fracturing Fluids: Improving Produced Water Use, Minimizing the Need for Water Treatment in the Oil and Gas Industry** (oral and poster submissions). R. Barati, reza.barati@ku.edu; S. Mukhopadhyay, sumitra.mukhopadhyay@superiorenergy.com

**Current Advances in Water Analysis: From Citizen Scientists to Laboratory Breakthroughs** (cosponsored with AGRO; oral and poster submissions). S. Lingenfelter, sclingen28@gmail.com; C. Steary, christopher.steary@glwater.org; J. Vachon, jessica.vachon@glwater.org; B. Elias, benoy.elias@glwater.org

**Division of Environmental Chemistry General Poster Session.** J. Goldfarb, goldfarb@cornell.edu

**Emerging Contaminants in Wastewater** (oral and poster submissions). A. Adeleye, adeyemi.adeleye@uci.edu; Y. Huang, yhuang@bren.ucsb.edu; P. Cervantes, pcervantes@bren.ucsb.edu

**Environmental Data Visualization to Enable Effective Communication across Audiences** (cosponsored with AGRO; oral and poster submissions). M. J. M. Wells, mjmwells@tntech.edu; T. H. Boles, tboles@tntech.edu

**Fundamental Chemical Processes Common to Dissolved Organic Matter and Atmospheric Organic Aerosols** (oral and poster submissions). N. Borduas-Dedekind, nadine.borduas@usys.ethz.ch; S. Nizkorodov, nizkorod@uci.edu

**Green Chemistry and the Environment** (oral and poster submissions). S. Obare, sherine.obare@wmich.edu; R. Luque, q62alsor@uco.es

**Legacy and Emerging Per- and Polyfluoroalkyl Substances: Identification, Fate, Transport, Exposure, and Removal** (oral and poster submissions). F. Xiao, feng.xiao@und.edu; K.-H. Chu, kchu@civil.tamu.edu; J. Liu, jinxia.liu@mcgill.ca; M. Sun, msun8@uncc.edu

**Nanomaterials and Sustainability** (oral and poster submissions). S. Ahuja, satahuja@atmc.net

**Nontargeted Analysis to Understand Fate and Effects of Pharmaceuticals and Emerging Contaminants in Agriculture and Natural Environments** (cosponsored with AGRO; oral and poster submissions). J. B. Sallach, brett.sallach@york.ac.uk; D. Aga, dianaaga@buffalo.edu

**Plastics in Aquatic Environments, Part II: Transport, Fate, and Global Impacts** (cosponsored with POLY; oral and poster submissions). J. A. Glaser, glaser.john@epa.gov; K. Ikehata, keisuke.ikehata@yahoo.com; M. Pasquinelli, melissa\_pasquinelli@ncsu.edu; S. Orski, sara.orski@nist.gov; R. Mathers, rmt11@psu.edu

**Safeguarding Water Quality in a Climate of Change** (oral and poster submissions). J. Moerman, jessica.moerman@science.doe.gov; J. Saleem-Arrigo, jsaleem-arrigo@usgcrp.gov

**Sensors and Biosensors for Widespread Environmental Monitoring** (cosponsored with AGRO; oral and poster submissions). P. Schorr, schorr@njit.edu; T. Li, li.tao@usepa.gov; M. Romero-González, m.romero-gonzalez@qmul.ac.uk; V. Rajasekharan, vrajasek@hach.com; W. Zhang, wen.zhang@njit.edu

**Sensors for Water-Quality Assessment in Resource-Limited Environments** (cosponsored with AGRO; oral and poster submissions). E. Brack, eric.m.brack.civ@mail.mil; M. Wiederoder, michael.s.wiederoder.ctr@mail.mil; E. McLamore, emclamor@ufl.edu; C. Gomes, carmen@iastate.edu

**Showcasing Emerging Investigators and Future Perspectives: A Symposium by the RSC Environmental Science Journals.** S. Neil, neils@rsc.org; K. McNeill, kristopher.mcneill@env.ethz.ch; P. Novak, novak010@umn.edu; P. Vikesland, pvikes@vt.edu; D. Cwiertny, david-cwiertny@uiowa.edu

**Stormwater Treatment and Green Infrastructure: From Research to Practice** (oral and poster submissions). H. Liu, haizhou@enr.ucr.edu; P. Holden, holden@bren.ucsb.edu; P. Vikesland, pvikes@vt.edu; J. Jay, jennyayla@gmail.com; L. Levin, llevin@ucsd.edu; R. Ambrose, rambrose@ucla.edu

**Wastewater-Based Epidemiology: Opportunities, Challenges, and Applications to Public Health and Safety** (oral and poster submissions). B. Subedi, bsbedi@murraystate.edu; D. A. Burgard, dburgard@pugetsound.edu; M. Matus, mariana@biobot.io

**Water, Health, and Environmental Justice in Marginalized Communities** (oral and poster submissions). J. Kearns, jpkearns@ncsu.edu; F. de los Reyes, fldelosr@ncsu.edu; A. Harris, aharris5@ncsu.edu

**Water in the Solid State: Reactions and Interactions with Impurities** (oral and poster submissions). E. Asenath-Smith, emily.asenath-smith@usace.army.mil; W. Choi, wchoi@postech.edu; K. Kim, ktkim@kopri.re.kr

## FLUORINE CHEMISTRY

Will not be hosting symposia at this meeting.

## GEOCHEMISTRY

**Program chair: A. Rouff, Rutgers U—Newark, Dept. of Earth and Environmental Sciences, ashaki.rouff@rutgers.edu**

Abstracts due March 18.

**Advancing the Understanding of Mineral-Water Interfacial Processes through Synergy between Theory and Experiment.** A. Koishi, akoishi@princeton.edu; K. Yuan, kyuan@anl.gov

**Biomineralization and the Environment.** P. Gilbert, pupa@physics.wisc.edu; J. McKittrick, jmckittrick@eng.ucsd.edu

**Clathrate Hydrate Geochemistry: Nucleation, Molecular Structures, and Microscopic Properties.** S. S. Lee, ssllee@anl.gov; D. Wu, dwu@mines.edu

**Engaging Students in Chemistry and Geochemistry with Environmental Issues and Career Pathways.** K. Nagy, knagy@uic.edu; D. Morales-Doyle, moralesd@uic.edu

**General Geochemistry** (oral and poster submissions). A. Rouff, ashaki.rouff@rutgers.edu

**Geochemistry of the Urban and Lived Environment.** A. Rouff, ashaki.rouff@rutgers.edu; O. Goswami, og74@scarletmail.rutgers.edu

**Geogenic and Anthropogenic Sources of Trace Elements within Surface and Groundwater Systems and Their Effects on Water Quality.** C. M. Hamilton, meilinghamilton@yahoo.com

**Impacts of Wetland Hydro-Biogeochemistry on Water Quality.** T. M. Flynn, theodore.flynn@water.ca.gov; E. J. O'Loughlin, oloughlin@anl.gov

**Second Symposium on Applied Geochemical Modeling.** R. M. Santos, santos@uoguelph.ca; E. Y. W. Chiang, chiange@uoguelph.ca

**Sorption and Redox at Mineral-Water Interfaces and the Impact on the Biogeochemical Cycling of Trace and Major Elements.** E. Elzinga, elzinga@andromeda.rutgers.edu

## HISTORY OF CHEMISTRY

**Program chair: N. Tsarevsky, Southern Methodist U, Dept. of Chemistry, nvt@smu.edu**

Abstracts due March 25.

**150 Years of the Periodic Table.** G. Girolami, ggirolam@illinois.edu; C. Giunta, giunta@lemoyne.edu; V. Mainz, mainz@illinois.edu

**150 Years of the Publication of the First Issue of Zhurnal Russkogo Fiziko-Khimicheskogo Obshchestva.** D. Lewis, lewisd@uwec.edu; N. Tsarevsky, nvt@smu.edu

**Bibliography of Chemistry.** G. Paterson, gp9a@andrew.cmu.edu

**HIST Award.**

**Tutorial and General Papers.** N. Tsarevsky, nvt@smu.edu

## INDUSTRIAL AND ENGINEERING CHEMISTRY

**Program chair: C. Abney, ExxonMobil Research and Engineering, Corporate Strategic Research, carter.w.abney@exxonmobil.com; R. Mayes, Oak Ridge National Laboratory, Chemical Sciences Division, mayesrt@ornl.gov**

Abstracts due March 18.

**I&EC General Papers.** C. Abney, carter.w.abney@exxonmobil.com; R. Mayes, mayesrt@ornl.gov

**I&EC General Posters.** C. Abney, carter.w.abney@exxonmobil.com; R. Mayes, mayesrt@ornl.gov

**I&EC Graduate Student Award**

**Symposium.** M. Matthews, matthews@cec.sc.edu; G. Stanley, gstanley@lsu.edu; P. Savage, psavage@engr.psu.edu

**Keeping Water Safe** (cosponsored with CHAS). J. Pickel, pickeljm@ornl.gov

**Molten Salt Chemistry** (cosponsored with NUCL). R. Mayes, mayesrt@ornl.gov

**Ocean Plastic Abatement.** P. Smith, smithpm@westminster.edu

**Water Desalination Breakthroughs in Materials and Processes.** S. Mahurin, mahurinsm@ornl.gov; D. Birdsall, david.birdsall@meridanmt.com

**INORGANIC CHEMISTRY**

**Program chair:** N. Radu, DuPont, nora.s.radu@gmail.com; S. Koch, Stony Brook U, Dept. of Chemistry, koch.stephen@gmail.com

Abstracts due March 18.

**Bioinorganic Chemistry: DNA, RNA, and Inorganic Drugs** (oral and poster submissions). S. Koch, koch.stephen@gmail.com

**Bioinorganic Chemistry: Proteins and Enzymes and Model Systems** (oral and poster submissions). S. Koch, koch.stephen@gmail.com

**Celebrating the 150th Anniversary of Mendeleev's Periodic Table.** V. Mainz, mainz@illinois.edu

**Charge and Substrate Transport in 3-D Electrochemical Materials.** C. McCrory, cmccrory@umich.edu; S. Thoi, sarathoi@jhu.edu; S. Hall, shoji@jhu.edu

**Chemistry of Materials.** C. Lugmair, claus.lugmair@clariant.com

**Chemistry of Materials: Materials for Energy and Catalytic Applications.** C. Lugmair, claus.lugmair@clariant.com

**Chemistry of Materials: Metal-Organic Frameworks.** C. Lugmair, claus.lugmair@clariant.com

**Chemistry of Materials: Nanomaterials.** C. Lugmair, claus.lugmair@clariant.com

**Chemistry of Materials: Synthesis and Properties.** C. Lugmair, claus.lugmair@clariant.com

**Coordination Chemistry: Characterization and Applications** (oral and poster submissions). A. Larsen, alarsen@ithaca.edu

**Coordination Chemistry: Synthesis and Characterization** (oral and poster submissions). A. Larsen, alarsen@ithaca.edu

**Electrochemistry** (oral and poster submissions). N. Radu, nora.s.radu@gmail.com

**Emerging Research in Molecular Synthesis.** J. Yang, jyang@uci.edu; J. Hoover, jessica.hoover@mail.wvu.edu; V. Schmidt, schmidt@ucsd.edu; A. Campbell, campbell\_alison\_nicole@lilly.com

**Environmental and Energy-Related Inorganic Chemistry** (oral and poster submissions). S. Koch, koch.stephen@gmail.com

**Inorganic Catalysts** (oral and poster submissions). S. Koch, koch.stephen@gmail.com

**Inorganic Chemistry for Sustainable Energy and Environment.** L. Berben, lberben@ucdavis.edu

**Inorganic Chemistry Lectureship.** W. Tolman, wtolman@umn.edu

**Inorganic Nanoscience Award Symposium.** J. Milstone, jem210@pitt.edu

**Inorganic Spectroscopy** (oral and poster submissions). C. Popescu, cpopescu@colgate.edu

**Inorganic Young Investigator Awards.** A. de Bettencourt-Dias, abd@unr.edu

**Lanthanide and Actinide Chemistry** (oral and poster submissions). A. de Bettencourt-Dias, abd@unr.edu

**Main-Group Chemistry** (oral and poster submissions). T. Hudnall, hudnall@txstate.edu

**Nanoscience** (oral and poster submissions). B. Trewyn, btrewyn@mines.edu

**Organometallic Chemistry: Catalysis.** N. Radu, nora.s.radu@gmail.com

**Organometallic Chemistry: Catalysis—Early Transition Metals.** N. Radu, nora.s.radu@gmail.com

**Organometallic Chemistry: Catalysis—Late Transition Metals.** N. Radu, nora.s.radu@gmail.com

**Organometallic Chemistry: Applications to Materials and Polymer Science** (oral and poster submissions). N. Radu, nora.s.radu@gmail.com

**Organometallic Chemistry: Applications to Organic Transformations** (oral and poster submissions). N. Radu, nora.s.radu@gmail.com

**Organometallic Chemistry: New Ligand Platforms** (oral and poster submissions). N. Radu, nora.s.radu@gmail.com

**Organometallic Chemistry: Synthesis and Characterization—Early Transition Metals** (oral and poster submissions). N. Radu, nora.s.radu@gmail.com

**Organometallic Chemistry: Synthesis and Characterization—Late Transition Metals** (oral and poster submissions). N. Radu, nora.s.radu@gmail.com

**Organometallics Distinguished Author Symposium.** P. Chirik, pchirik@princeton.edu

**Solid-State Inorganic Chemistry** (oral and poster submissions). V. Poltavets, vpoltave@uno.edu; C. Lugmair, claus.lugmair@clariant.com

**Surface Chemistry and Structure in Ligand Protected Nanoparticles.** C. Johnson, chris.johnson@stonybrook.edu

**Understanding Research at the Frontiers of Inorganic Chemistry.** C. Nataro, nataroc@lafayette.edu; S. Poland, poland@rose-hulman.edu

**MEDICINAL CHEMISTRY**

**Program chair:** J. Schwarz, FLX Bio, jschwarz@flxbio.com

Abstracts due March 18.

**Approaches to the Treatment of NAFLD/NASH.** K. Currie, kevin.currie@gilead.com

**Catastrophic Epilepsies: How Medicinal Chemists Can Help.** M.-J. Blanco, maria-jesus.blanco@sagerx.com

**Discovery of Therapeutic Agents for Chronic HBV Infection.** H. Shen, hong.shen.hs1@roche.com; M. R. Mish, mmish@gilead.com

**Disease-Modifying Approaches for the Treatment of Neurodegeneration.** H. D. Zhang, hongjun\_zhang@merck.com; E. DiMauro, erin\_dim Mauro@merck.com

**Drug Discovery beyond the Rule of Five.** D. DeGoe, david.degoey@abbvie.com

**Emerging Targets for Drug Abuse Therapy.** C. Hopkins, corey.hopkins@unmc.edu

**First-Time Disclosure of Clinical Candidates.** E. DiMauro, erin\_dim Mauro@merck.com

**General Orals.** J. Schwarz, jschwarz@flxbio.com

**General Posters.** J. Schwarz, jschwarz@flxbio.com

**Machine Learning in Medicinal Chemistry.** S. Patel, sej.al.patel@novartis.com; J. Stec, jstec@ketchum.edu

**MEDI Awards Symposium.** J. Schwarz, jschwarz@flxbio.com

**No Linker Required: Non-PROTAC**

**Degraders.** G. Wang, wang.gina@gene.com; J. Liang, liang.jun@gene.com

**Optimizing Brain Penetration.** A. Dounay, adounay@coloradocollege.edu

**Pharma Leaders Symposium.** K. Briner, karin.briner@novartis.com

**Privileged and Underprivileged Functional Groups in Drug Design.** K.-S. Yeung, kapsun.yeung@bms.com; P. Scola, paul.scola@bms.com; N. Meanwell, nicholas.meanwell@bms.com

**Rising Stars: Women in Medicinal Chemistry.** A. L. Garner, algarner@umich.edu

**NUCLEAR CHEMISTRY AND TECHNOLOGY**

**Program chair:** J. Auxier, Los Alamos National Laboratory, Chemistry, jdauxier2@gmail.com

Abstracts due March 18.

**Celebration of the Centennial of**

**Rutherford's First Nuclear Reaction.**

T. Bredeweg, toddb@lanl.gov; D. Porterfield, dporterfield@lanl.gov

**Computational Methods for Lanthanides**

**and Actinides: Theory and Applications** (cosponsored with COMP; oral and poster submissions). D. Penchoff, dpenchoff@utk.edu; C. Peterson, charles.peterson@unt.edu

**General Topics in Radiochemistry.** J. Schafer, jschafer@mines.edu; G. Surbella, robert.surbella@pnnl.gov

**Molten Salt Reactor Chemistry.** K. Myhre, myhrek@ornl.gov; J. McFarlane, mcfarlane@ornl.gov

**Nuclear Forensics.** J. Auxier, jdauxier2@gmail.com; N. Vanagas, nv137@georgetown.edu; G. Bull, geoffrey.bull@usma.edu

**Water Behavior in Concentrated Electrolytes.** S. Clark, sue.clark@pnnl.gov; A. Clark, auclark@wsu.edu

**ORGANIC CHEMISTRY**

**Program chairs:** S. Silverman, Merck & Co., Process Research and Development, steven.silverman@merck.com; E. McLaughlin, Bard College, Dept. of Chemistry and Biochemistry, mclaughl@bard.edu

Abstracts due March 25.

**Artificial Intelligence in Organic Synthesis.**

A. A. Shah, akshay.shah@merck.com; V. W. Shurtleff, valerie.shurtleff@merck.com

**Asymmetric Reactions and Syntheses** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**Biologically Related Molecules and Processes** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**C-H Activation** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**Chemistry and Water** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**Chemistry of Fullerenes, Carbon Nanotubes, and Graphene** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**Cope Award Symposium.**

**Copper-Catalyzed C-Element Bond Cross-Coupling with Arylboronic Acids: 20th Anniversary of Chan-Lam Reaction Discovery.** A. Watson, aw260@st-andrews.ac.uk; Y. Du, yanming.du@bblumberg.org

**Development of New Strategies for the Synthesis and Functionalization of Strained Rings for Applications as Bioisoteres in Biologically Active Compounds.** J. J. Mousseau, james.mousseau@pfizer.com

**First-Generation Academic Faculty: Research Talks and Panel Discussion.** S. Zultanski, susan\_zultanski@merck.com

**Flow Chemistry and Continuous Processes** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**From Lab to Commercial Scale: The Challenges to Scaling Up Flow Chemistry in the Pharmaceutical Industry.** J. Naber, john.naber@merck.com; K. Maloney, kevin\_maloney@merck.com

**Heterocycles and Aromatics** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**JOC/OL Lectureship.**

**Materials, Devices, and Switches** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**Metal-Mediated Reactions and Syntheses** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**Molecular Recognition and Self-Assembly** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**New Reactions and Methodology** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**Organic Chemistry at Self-Assembling and Biological Interfaces.** D. Bong, bong.6@osu.edu

**Organic Chemistry for Next-Generation Therapeutics.** R. M. Franzini, raphael.franzini@utah.edu

**Organometallics Distinguished Author Award.** P. Chirik, pchirik@princeton.edu

**Peptides, Proteins, and Amino Acids** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**Photoredox Chemistry** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**Physical Organic Chemistry: Calculations, Mechanisms, Photochemistry, and High-Energy Species** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**Remarkable Women in Organic Chemistry.** R. Ruck, rebecca\_ruck@merck.com; N. Goodwin, nicole.c.goodwin@gsk.com

**Sustainable Catalysis: Discovery through Application.** D. K. Leahy, david.leahy@takeda.com

**Technical Achievements in Organic Chemistry.**

**Tetrahedron Prize.** S. Martin, sfmartin@mail.utexas.edu

**Total Synthesis of Complex Molecules** (oral and poster submissions). S. Silverman, steven.silverman@merck.com; E. McLaughlin, mclaughl@bard.edu

**Young Academic Investigator Symposium.** L. McElwee-White, lmwhite@chem.ufl.edu; H. Davies, hmdavie@emory.edu

**Young Investigator Symposium.** J. Aubé, jaube@unc.edu

## PHYSICAL CHEMISTRY

**Program chair: A. McCoy, U of Washington, Dept. of Chemistry, abmccoy@uw.edu**

Abstracts due March 18.

**At the Interfaces of Experimental and Theoretical Nonlinear Optical Molecular Spectro-Imaging.** W. Xiong, wxiong@ucsd.edu; L. Wang, lwang@chem.rutgers.edu

**Chemistry in Real Space and Time.** V. A. Apkarian, aapkaria@uci.edu; E. Potma, epotma@uci.edu

**Computational Quantum Chemistry: From Promise to Prominence: A Symposium in Honor of Henry F. Schaefer** (cosponsored with COMP). E. Valeev, valeev76@vt.edu; T. D. Crawford, crawdad@vt.edu; D. Sherrill, sherrill@gatech.edu; P. R. Schreiner, prs@uni-giessen.de

**Getting to the Bottom: Optical and Electron Imaging of Reactive Chemical Systems.** J. Biteen, jsbiteen@umich.edu; E. Ringe, erl2@rice.edu; J. Sambur, jsambur@rams.colostate.edu

**Hydration from the Gas to the Condensed Phase.** E. Backus, backus@mpip-mainz.mpg.de; M. Bonn, bonn@mpip-mainz.mpg.de; F. Paesani, fpaesani@ucsd.edu

**Molecular, Electronic, and Ionic Transport in Materials for Energy.** X. Roy, xr2114@columbia.edu; L. Madsen, lmadsen@vt.edu

**Nanoscale and Molecular Assemblies: Designing Matter to Control Energy Transport.** J. Foley, foleyj@wpunj.edu; J. Caram, jcaram@chem.ucla.edu; D. Hayes, dugan@uri.edu

**PHYS Division Awards.** A. B. McCoy, abmccoy@uw.edu

**PHYS Poster Session.** A. B. McCoy, abmccoy@uw.edu

**Physical Chemistry of the Atmosphere.** A. Asa-Awuku, asaawuku@umd.edu; M. Freedman, maf43@psu.edu; J. Kroll, jhkroll@mit.edu

**Recent Developments in Biomaterials.** T. Xu, tingxu@berkeley.edu; L. Yang, lhyang@ustc.edu.cn; A. Alexander-Katz, aalexand@mit.edu

**Water in the Universe.** G. A. Blake, gab@gps.caltech.edu; S. Loppolo, sloppolo@qmul.ac.uk

## POLYMER CHEMISTRY

**Program chairs: T. Epps, U of Delaware, Dept. of Chemical and Biomolecular Engineering, thepps@udel.edu; B. Helms, Lawrence Berkeley National Laboratory, bahelms@lbl.gov; H. Brown, Dow Chemical, hbrown1@dow.com**

Abstracts due March 18.

**Biomacromolecules/Macromolecules Young Investigator Award** (cosponsored with PMSE). P. Majumder, pmajumder@acs.org

**Characterization of Plastics in Aquatic Environments** (cosponsored with ANYL, BIOL, ENVR, I&EC, PMSE, and CEI). R. Mathers, rtm11@psu.edu; S. Orski, sara.orski@nist.gov; M. Pasquini, melissa\_pasquini@ncsu.edu

**DSM Graduate Student Award.** J. van Gorp, judith.gorp-van@dsm.com

**Eco-Friendly Polymerization** (oral and poster submissions). D. Konkolewicz, d.konkolewicz@miamioh.edu; C. Boyer, cboyer@unsw.edu.au

**Future of Biomacromolecules at a Crossroads of Polymer Science and Biology** (cosponsored with BIOL, CARB, CELL, COLL, ENVR, MEDI, PHYS, and PMSE; oral and poster submissions). A.-C. Albertsson, biomac@polymer.kth.se; S. Percec, simona.percec@temple.edu

**General Topics: New Synthesis and Characterization of Polymers** (oral and poster submissions). D. Garcia, dana.garcia@arkemagroup.com

**Henkel Outstanding Graduate Research in Polymer Chemistry.** M. Mahanthappa, maheshkm@umn.edu

**Herman F. Mark Award.** Industrial Innovations in Polymer Science. S. Eastman, scott.eastman@utrc.utc.com

**Industrial Polymer Young Scientist Award.** Overberger International Prize. R. Lane, talsdad@umich.edu; J. Pollak, jpollak@umich.edu

**Paul Flory's "Statistical Mechanics of Chain Molecules: The 50th Anniversary of Polymer Chemistry"** (oral and poster submissions). A. Tonelli, atonelli@ncsu.edu; G. Patterson, gp9a@andrew.cmu.edu

**Polymeric Materials for Water Purification** (cosponsored with PMSE; oral and poster submissions). N. Lynd, lynd@che.utexas.edu; B. Freeman, freeman@che.utexas.edu; R. Segalman, segalman@engineering.ucsb.edu; L. Katz, lynnkatz@mail.utexas.edu

**Polymerization-Induced Nanostructural Transitions.** A. Magenau, ajm496@drexel.edu; R. Hickey, rjh64@psu.edu; S. Armes, s.p.ames@sheffield.ac.uk

**Polymers for Defense Applications** (oral and poster submissions). R. Lambeth, robert.h.lambeth2.civ@mail.mil; T. Pruy, timothy.pruyn.1@us.af.mil; P. Zarras, peter.zarras@navy.mil; A. Savage, alice.m.savage2.civ@mail.mil; D. Poree, dawanne.e.poree.civ@mail.mil

## POLYMERIC MATERIALS: SCIENCE AND ENGINEERING

**Program chairs: J. Schaefer, U of Notre Dame, Dept. of Chemical and Biomolecular Engineering, jennifer.l.schaefer.43@nd.edu; T. Bunning, Air Force Research Laboratory, timothy.bunning@us.af.mil; C. Snyder, National Institute of Standards and Technology, Materials Science and Engineering Division, chad.snyder@nist.gov**

Abstracts due March 18.

**Advances in Bioconjugate Materials for Biomedical Applications.** V. M. Rotello, rotello@chem.umass.edu; C. G. England, c\_england@acs.org; E. Lavik, lavik-office@bioconj.acs.org; B. Smith, smith-office@bioconj.acs.org; J. van Hest, vanhest-office@bioconj.acs.org; G. Zheng, zheng-office@bioconj.acs.org; D. McDaniel, dmcdanie@chem.umass.edu

**Bioconjugate Chemistry Lectureship and Award Symposium.** V. M. Rotello, rotello@chem.umass.edu; C. G. England, c\_england@acs.org; E. Lavik, lavik-office@bioconj.acs.org; B. Smith, smith-office@bioconj.acs.org; J. van Hest, vanhest-office@bioconj.acs.org; G. Zheng, zheng-office@bioconj.acs.org; D. McDaniel, dmcdanie@chem.umass.edu

**Chemistry of Materials Lectureship and Award Symposium.** J. Buriak, jburiak@ualberta.ca; C. Toro, c\_toro@acs.org; C. Soles, csoles@nist.gov

**Eastman Chemical Student Award.** J. Gilmer, jwgilmer@king.edu; J. Jenkins, jjenkins@eastman.com

**Emulsification and Encapsulation by Soft-Matter Techniques** (cosponsored with POLY). R. K. Prud'homme, prudhomm@princeton.edu; F. Ganachaud, francois.ganachaud@insa-lyon.fr; R. D. Priestley, rpriestl@princeton.edu

**General Papers/New Concepts in Polymeric Materials.** T. Bunning, timothy.bunning@us.af.mil

**Innovations in Drug Delivery Systems: Recent Breakthroughs and New Approaches in Formulation, Drug-Delivery Mechanisms, and Advanced Delivery Systems.** A. Kulshrestha, ankur.kulshrestha@bms.com; S. Sridharan, srini.sridharan@bms.com

**Journal of Polymer Science Innovation Award Symposium.** C. Hawker, hawker@chem.ucsb.edu; J. Mahoney, jmahoney@wiley.com

**PMSE Future Faculty.** E. Pentzer, ebp24@case.edu; C. DeForest, profcole@uw.edu

**PMSE Young Investigator Symposium.** A. Esser-Kahn, aesserkahn@uchicago.edu; D. Watkins, dwatkins@olemiss.edu

**PMSE/POLY Plenary Lecture and Awards Symposium** (cosponsored with POLY). M. Becker, becker@uakron.edu; S. Morgan, sarah.morgan@usm.edu

**PMSE/POLY Poster Session.** T. Bunning, timothy.bunning@us.af.mil

**Polymer Science and Engineering in Microelectronics.** Q. Lin, qinghuang.lin@asml.com

**Roy W. Tess Award.** T. Provder, tprovder@att.net

**Toughening of Networks and Gels through Molecular Design** (cosponsored with POLY). B. Vogt, vogt@uakron.edu; H.-J. Chung, chung.hj13@ualberta.ca; C. Bowman, christopher.bowman@colorado.edu

**Unique and Complex Polymer Architectures.** K. C. Bentz, kbentz@ucsd.edu; D. A. Savin, savin@chem.ufl.edu

## PROFESSIONAL RELATIONS

**Program chair: R. Libby, Moravian College, Dept. of Chemistry, libbyr@moravian.edu**

Abstract due date unavailable at press time.

## RUBBER

Will not be hosting symposia at this meeting.

## SMALL CHEMICAL BUSINESSES

**Program chair: J. Sabol, Chemical Consultant, jsabol@chem-consult.com**

Abstracts due March 21.

**Advancing Innovation and Entrepreneurship: Launch, Leverage, and Lead.** M. Chorghade, chorghade@gmail.com

**Chemical Business Poster Session.** G. Ruger, gruger04@yahoo.com

**Gerry Meyer: The First 100 Years.** W. F. Carroll Jr., wcarroll@indiana.edu; J. L. Liu, jingbo.liu@chem.tamu.edu

**Global Entrepreneurship Establishes Businesses and Collaborations.** M. Chorghade, chorghade@gmail.com

**Holistic Approaches to Sustainability in Chemical Businesses.** J. Tanir, jentanir@towardsafer.com; A. Paradise, allison@nygreenlab.org

**Liquid Assets: The Business of Water** (cosponsored with ANYL). V. Rajasekharan, vrajasek@hach.com

## COMMITTEE ON ENVIRONMENTAL IMPROVEMENT

Will not be hosting symposia at this meeting.

## COMMITTEE ON MINORITY AFFAIRS

Will not be hosting symposia at this meeting.

## COMMITTEE ON SCIENCE

**Program chair: M. Fisher, Saint Vincent College, Depart. of Chemistry, matt.fisher@stvincent.edu**

Abstracts due March 25.

## INTERNATIONAL ACTIVITIES COMMITTEE

Abstract due date not available at press time.

## SOCIETY COMMITTEE ON EDUCATION

**Program chair: V. Goss, Chicago State U, vgoss@csu.edu**

Abstracts due March 25.

## WOMEN CHEMISTS COMMITTEE

**Program chair: R. Cole, U of Iowa, Dept. of Chemistry, renee-cole@uiowa.edu**

Abstracts due March 22.

**Eli Lilly: Supporting Women in Chemistry.** M. Jeffries-El, malikaj@bu.edu

## YOUNGER CHEMISTS COMMITTEE

**Program chair: D. Williams, Stony Brook U, williamsde20@gmail.com**

Abstract due date unavailable at press time.