CALL FOR PAPERS

Program Chair: Dionysios (Dion) D. Dionysiou, Ph.D., Professor of Environmental Engineering, School of Energy, Environmental, Biological, and Medical Engineering (SEEBME), University of Cincinnati, 705 Engineering Research Center, Cincinnati, OH 45221-0012; Phone (513) 556-0724; Email: dionysios.d.dionysiou@uc.edu

Advances in Understanding the Aquatic Fate of Metals: Nanomaterials and Natural Organic Materials

This symposium will focus on studies that advance our understanding of the fate of metals in aquatic environments. Contributions are invited from field, laboratory, and in silico studies of aquatic behavior of metal-based nanomaterials, abiotic and biotic transformation involving metals, effects on metal bioavailability and toxicity, and the use of isotope signatures to study metal fate and transformations.

Elizabeth Carraway, *Clemson University*, ecarraw@clemson.edu

Air Monitoring

Invited and contributed abstracts on advancements in monitoring air quiality in natural and engineered environments.

Jennifer Maclachlan, *PID Analyzers, LLC*, pidgirl@gmail.com

Biogeochemical Interactions Affecting Bioavailability and Remediation of Hazardous Substances in the Environment

A symposium featuring advanced imaging technologies, analytical methodologies, and empirical evidence of the biological, geological, and chemical processes that alter the availability and/or toxicity of environmental contaminants to living systems.

Heather Henry, *NIEHS Superfund Research Prog.*, henryh@niehs.nih.gov
Mark Maddaloni, *US EPA*, maddaloni.mark@epa.gov
Jon Chorover, *University of Arizona*, chorover@cals.arizona.edu

Chemistry and Application of Green Catalysts for Energy Transformation and Emission Control

Cosponsored with ACS Committee on Environmental Improvement

Development of alternative energy for transportation and the reduction of pollution emission from vehicles are the major challenges for environmental sustainability. Green catalysis is at the heart of the industrial and environmental challenges. Therefore, we invite presentations addressing the most advanced research topics in the fabrication and application of environmentally friendly catalysts for energy conversion and emission control.

Virender Sharma, *Florida Institute of Technology*, vsharma@fit.edu
Ruey-An Doong, *National Tsing Hua University (Taiwan)*, radoong@mx.nthu.edu.tw
Sue-Min Chang, *National Chiao Tung University (Taiwan)*, chang@mail.nctu.edu.tw

Distribution and Fate of Emerging Contaminants in Hydrologic Systems of the Built Environment

Cosponsored with: ACS Committee on Environmental Improvement

As metropolitan areas grow, water quality is increasingly impacted by PPCPs and pesticides entering waterways through incomplete removal in wastewater treatment plants, overland runoff, and combined sewer overflows. Abstracts are invited reporting research on detecting, quantifying and removing emerging contaminants from wastewater, and exploring potential toxic effects of parent compounds and their transformation processes.

Allison MacKay, *University of Connecticut*, mackaya@engr.uconn.edu
Yu-Ping Chin, *Ohio State University*, yo@geology.ohio-state.edu

Emerging Contaminants Across Mixed Media: Advances in Basic and Applied Research and Their Extension to Risk Assessment and Remediation

This symposium seeks to develop a better understanding of how complex mixtures of metals, inorganic and organic compounds behave and transport across various environmental media (air, water, soil, and sediment) and to strengthen the link between this fundamental research and risk assessment and remediation.

James Rice, *Brown University*, James_Rice@Brown.edu
Jillian Goldfarb, *University of New Hampshire*, J.Goldfarb@unh.edu

Environmental Electrochemistry: Principals and Applications

This symposium will provide a forum for researchers in electrochemistry to exchange their recent advances in principles and applications of electrochemistry related to natural and built environmental systems. Publication of papers presented at the symposium in ACS Books Symposium Series is planned.

Chin Huang, *University of Delaware*, huang@ce.udel.edu
Guo Hua Chen, *Hong Kong Univ of Sciences and Tech.*, kechengh@ust.hk
Kazuya Nakata, *Kanagawa Academy of Science & Technology (Japan)*, pg-nakata@newkast.or.jp
Jiu Hui Qu, *Chinese Academy of Sciences*, jhqu@rcees.ac.cn
Shi Chern Yen, *National Taiwan University*, scyen@ntu.edu.tw

Environmental Fate and Reactivity of Highly Condensed Aromatic Carbon

Cosponsored with GEOC

In this symposium, we seek abstracts that investigate fundamental chemical and physical properties of macromolecular condensed aromatic/aliphatic carbon that control its environmental fate. We encourage cross-disciplinary discussions between the agronomic, industrial, and ecological fields.

Timothy Filley, *Purdue University*, filley@purdue.edu
Cliff Johnston, *Purdue University*, cliffjohnston@purdue.edu
Chad Jafvert, *Purdue University*, jafvert@ecn.purdue.edu

Environmental Impacts of Electronic Technologies, Products, and Processes: The Search for Sustainable Electronics

Cosponsored with ACS Committee on Environmental Improvement

Rapid growth of electronic technology reduces the use-life of electronic products, thus creating new challenges in the management of e-waste. This session will explore the environmental impact of electronic production, green design for extended use of electronics, LCA and other industrial assessment tools, and innovative technologies to meet future market and sustainability challenges.

Endalkachew Sahle-Demessie, *US EPA*, Sahle-Demessie.Endalkachew@epa.gov
Seung-Jin Lee, *US EPA*, lee.seung-jin@epa.gov

Environmental Implications and Effects of Unconventional Gas Development

Unconventional gas in coal beds and in tight shales is changing the view of domestic natural gas supply. This symposium will highlight new strategies, technologies and environmental effects of extracting

these new resources, as well as new debates on the impact of extraction on air and water resources.
Jeanne Vanbriesen, *Carnegie Mellon University*, jeanne@andrew.cmu.edu
Kelvin Gregory, *Carnegie Mellon University*, kelvin@cmu.edu

Exploring the Exposome: The Future of Exposure Assessment

Cosponsored with: ACS Committee on Environmental Improvement
Success in mapping the human genome has fostered a complementary concept of mapping the "exposome," *i.e.,* measured exposure of an individual throughout its lifetime and how such exposures relate to the individual's health. Understanding how environmental exposures (diet, lifestyle, etc.) interact with our own unique characteristics like genetics, physiology, and epigenetic changes is the cornerstone of the exposome. This symposium will explore the exposome, its applications to human health, development of new methods and devices for measuring the exposome.
Larry Olsen, *Centers for Disease Control & Prevention*, LOlsen@cdc.gov
Debra DeBord, *Centers for Disease Control & Prevention*, ded4@cdc.gov

Fate and Toxicology of Emerging Environmental Contaminants

Presentations are invited that link various domains of chemistry and engineering for the purpose of communicating recent experimental or theoretical research related to all aspects of emerging contaminants in the environment. Targeted chemicals can be natural or synthetic in origin.
Xiaoping Pan, *Eastern Carolina University*, panx@ecu.edu
Baohong Zhang, *Eastern Carolina University*, zhangb@ecu.edu
Sophie Uchimiya, *USDA Agricultural Research Services*, sophie.uchimiya@ars.usda.gov

Fate of Environmental Pollutants in Biogeochemical Interfaces

A variety of emerging pollutants (*i.e.,* organic/inorganic compounds and radioactive elements) can be removed and/or immobilized via interactive reactions of sorption, volatilization, precipitation, and complexation. This symposium welcomes research papers for oral and poster presentations that describe advances in our understanding of complex interations of pollutants in the biogeochemical interfaces and provide insight into possible remediation strategies. Case studies and theoretical computational simulation studies to elucidate the fate of comtaminants in biogeochemical interfaces are particularly encouraged.
Woojin Lee, *Korea Advanced Institute of Science and Technology*, woojin_lee@kaist.ac.kr
Seunghee Han, *Korea Advanced Institute of Science and Technology*, shan@gist.ac.kr

Green Chemistry and the Environment

Cosponsored with ACS Green Chemistry Institute, ACS Committee on Environmental Improvement
This symposium will address emerging strategies and methodologies for green synthesis of commodity chemicals, green approaches to fabrication of advanced materials, waste valorization, advances in biorenewable technology, alternative feedstocks, and benign manufacturing for the purpose of ensuring a sustainable future.
Rafael Luque, *Universidad de Cordoba, Campus de Rabaneles (Spain)*, q62alsor@uco.es
Sherine Obare, *Western Michigan University*, sherine.obare@wmich.edu

Heterogeneous Catalysis for Environmental and Energy Applications

Cosponsored with CATL
This symposium will highlight new developments in nanotechnology for heterogeneous catalysis, which can help to meet rising energy requirements while protecting the environment. Specific focus will be on application of catalysts to environmental remediation, ranging from vehicle emissions to reducing water pollution.
Alexander Orlov, *SUNY Stony Brook*, alexander.orlov@stonybrook.edu
Marco Castaldi, *City College of New York*, mcastaldi@che.ccny.cuny.edu

Materials-Based Technologies for Water and Energy Sustainability: Research Frontiers and Practical Challenges to Adoption

Cosponsored with AEESP, ACS Committee on Environmental Improvement
This symposium will focus on the development of new materials-based technologies and their application for water treatment and low-cost renewable energy production, particularly fundamental investigations addressing critical hurdles to the widespread adoption of materials-based technologies.
Timothy Strathmann, *University of Illinois at Urbana-Champaign*, strthmnn@illinois.edu
David Cwiertny, *University of California, Riverside*, dcwiertny@engr.ucr.edu
Manish Kumar, *Penn State University*, manish.kumar@psu.edu
Chongzheng Na, *University of Notre Dame*, cna@nd.edu

Membranes for Water Purification

This symposium will focus on basic research on the use of membrane processes in environmental water separations, including microfiltration, ultrafiltration, nanofiltration, reverse osmosis, forward osmosis, and membrane distillation.
Kimberly Jones, *Howard University*, kljones@howard.edu
David Jassby, *University of California, Riverside*, djassby@engr.ucr.edu
Baoxia Mi, *University of Maryland*, bmi@umd.edu

Metrology and Stability of Nanomaterials in Environmental Matrices

A symposium aiming to demonstrate the state of the art in analytical techniques for nanomaterials in complex environmental matrices and at environmentally relevant concentrations. There is particular interest in extraction of nanomaterials from complex matrices with minimal alteration or introduction of artifacts.
Anthony Bednar, *US Army Engineer Research & Development Center*, anthony.j.bednar@usace.army.mil
James Ranville, *Colorado School of Mines*, jranvill@mines.edu
Christopher Higgins, *Colorado School of Mines*, chiggins@mines.edu
Aimee Poda, *US Army Engineer Research & Development Center*, aimee.r.poda@usace.army.mil

Predicting Molecular Properties of Environmental Contaminants: Empirical and Theoretical Methods

Cosponsored with COMP
This symposium will address state-of-the-art methods for predicting the properties of environmental contaminants, including chemicals, chemical mixtures, nanomaterials, and pathogenic microorganisms. Major areas of interest will include the formulation, calibration, validition, and application of empirical predictive models (e.g., quantitative structure-activity relationships, QSARS) and models based on chemical structure theory.
Paul Tratnyek, *Oregon Health & Science University*, tratnyek@ebs.ogi.edu
Kathrin Fenner, *Swiss Federal Institute of Aquatic Science and Technology (EAWAG)*, kathrin.fenner@eawag.ch
Dominic DiToro, *University of Delaware*, dditoro@udel.edu
Eric Weber, *US EPA*, weber.eric@epa.gov

Status and Trends of Classical and Emerging Contaminants Across the World

Cosponsored with ACS Committee on Environmental Improvement

Chlorinated compounds dominated global contamination in the 20th century, but new processes and products produce potential contaminants with novel chemical, physical or biological properties. Organizers envision a series of case studies demonstrating the magnitude of problems associated with classical and emerging contaminants across the world. Oral and poster presentations will highlight the status and trends of their occurrence, behavior and fate in the environment.

Satinder Ahuja, *Ahuja Consulting*, sutahuja@atmc.net
Kiril Hristovski, *Arizona State University - Polytechnic Campus*, kiril.hristovski@asu.edu
Nora Savage, *US EPA*, savage.nora@epa.gov
Bommanna Loganathan, *Murray State University*, bloganathan@murraystate.edu

Water: Global Problems, Local Solutions

Cosponsored with ACS International Activities Committee, ACS Committee on Environmental Improvement

This symposium will provide a platform to critically examine water resources, share best practices, and explore innovative community-based solutions to address global water issues.

Isai Urasa, *Hampton University*, isai.urasa@hamptonu.edu
Agnes Rimando, *USDA - ARS*, agnes.rimando@ars.usda.gov
Ellene Contis, *Eastern Michigan University*, econtis@emich.edu
Rolande Hodel, *Westchester Community College*, rrhodel@aol.com

Environmental Chemistry General Posters

Contributions from all areas of environmental chemistry are welcomed for the ENVR general poster session to be held on Wednesday evening, September 11, 2013.

Dionysios Dionysiou, *Univ of Cincinnati*, dionysios.d.dionysiou@uc.edu

C. Ellen Gonter Award Symposium

Presentations by recipients of the C. Ellen Gonter Environmental Chemistry Award. [Invited Papers Only]

Todd Anderson, *Texas Tech University*, todd.anderson@ttu.edu

Symposia Cosponsored by ENVR:

Air Quality at the Interface: Megacities and Agroecosystems [AGRO]
(Cosponsored by SETAC Chemistry Advisory Group and ENVR),
Organizers: George Cobb, *Baylor University*, george_cobb@baylor.edu; Sasha Madronich, *National Center for Atmospheric Research*, sasha@ucar.edu; Peter Green, *University of California, Davis*, pggreen@ucdavis.edu; Laura McConnell, *USDA-ARS*, laura.mcconnell@ars.usda.gov; Elin Ulrich, *US EPA*, ulrich.elin@epa.gov.