

CALL FOR PAPERS

Sources, Fate and Transport of Perfluorinated Alkyl Substances in the Environment

Theory - Practice - Innovation

251st American Chemical Society National Meeting & Exposition

San Diego, California

March 13-17, 2016

Abstract Deadline: **October 12, 2015**

In recent years, there has been growing concern regarding the occurrence of perfluorinated alkyl substances (PFAS) in the environment. A PFAS is an alkyl comprised of a carbon backbone with the original hydrogen atoms replaced by fluorine atoms. The electronegativity of the fluorine creates one of the strongest bonds in organic chemistry, producing a molecule with unique thermal stability properties, both hydrophobic and oleophobic characteristics, and surface tension reducing capabilities. These characteristics have found variety of applications in industrial, household and consumer products. Yet, the same properties that make PFAS so versatile, also provide challenges when trying to remove PFAS from the environment. For example, PFAS are, persistent (resistant to biodegradation) and bio-accumulative and pass through the food chain. In fact according to the USEPA, majority of the population in the industrialized world has been exposed to PFAS throughout their life. It is not surprising that concentrations of PFAS have been detected in large number of blood serum samples. Environmental persistence of PFAS may have adverse human health and ecological consequences. PFAS are being increasingly detected in variety of environmental matrices at very low concentrations, yet the complete toxicological profile is not fully understood. PFAS are currently regulated to a limited extent and regulatory attention is increasing.

Due to the persistent, bio-accumulative nature of PFAS and current toxicological studies, it is reasonable to anticipate that exposure to PFAS can result in adverse human health and ecological effects. Although some PFAS have or are planned to be phased out, emerging PFAS such as fluoro telomer alcohols and shorter chain poly- and PFAS need to be evaluated for their potential toxicity to human health and the environment. The purpose of this symposium is to bring together leading multidisciplinary researchers from across the world and provide them a platform for broader dissemination of their latest findings on occurrence, fate, distribution, effect and risks due exposure

to PFAS. Emerging regulatory framework and innovative treatment technologies and evolving analytical capabilities will be covered.

The topics that would be covered in this session, but are not limited to:

- Sources, occurrence and distribution of PFAS in variety of environmental matrices
- Fate and effect of PFAS in the environment
- Human health and ecological implications due to exposure to PFAS
- Development of analytical protocols for detecting PFAS in a variety of environmental samples
- Emerging trends in regulatory policy framework to better manage environmental occurrence of PFAS
- Mitigation of PFAS risk through product substitution such as fluoro telomer alcohols and the shorter chain poly- and PFAS and their toxicological implications

NOTE: *Papers on Aqueous Film Forming Foams (AFFFs) should be submitted to the ENVR symposium “Per- and Polyfluoroalkyl Substances Associated with Aqueous Film Forming Foams (AFFFs): Chemistry, Remediation, and Regulatory Issues.”*

Please submit your abstracts using the ACS Meeting Abstracts Programming System (MAPS) at <https://maps.acs.org>. General information about the conference can be found at www.acs.org/meetings. Any other inquiries should be directed to the symposium organizers:

David M. Kempisty, Lt Col, USAF, BSC, Ph.D.
Assistant Professor, Environmental Engineering
& Science
Department of Systems Engineering and
Management
Air Force Institute of Technology
Building 640, Room 111A
2950 Hobson Way; WPAFB, OH 45433-7765
Office: (937) 255-3636 ext. 4711
David.Kempisty@afit.edu

Sudarshan Kurwadkar, Ph.D., PE, BCEE
Assistant Professor
Department of Civil and Environmental
Engineering
California State University – Fullerton
800 N. State College Blvd.
Fullerton, CA 92831, USA
Phone: 657-278-2457
Fax: 657-278-3916
Email: skurwadkar@fullerton.edu