ESPR special issue on Asian environmental chemistry

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Received: 19 January 2018 / Accepted: 31 January 2018 / Published online: 16 February 2018
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Recent development of science and technology has been supporting expansion of industrial and economical activities as well as populations, particularly in East Asia. These expansions, however, pose severe environmental stresses in the region, including increased levels of pollution in the air, water, soil, and foods and deterioration of health status in humans and wildlife. It is an urgent task to grasp the current environmental situation, to identify and reduce major pollution sources, to assess and prioritize risks, and to establish appropriate chemical and waste management frameworks in the Asian region in order to establish healthy and safe societies and to contribute to sustainable development in the region.

The research communities assessing environmental pollution and health impacts and threats are of crucial importance for science advice to develop appropriate science-based environmental and chemical policies for sustainable development.

The International Conference of Asian Environmental Chemistry (ICAEC2014) was held from 24 to 26 November 2014 in Bangkok, Thailand, with the support of the Japan

Society for Environmental Chemistry (http://www.j-ec.or.jp/index_e.html) and Chulabhorn Research Institute (<https://www.cri.or.th/en/index.php>). It was a forum for environmental chemists and relevant stakeholders to present and share information on various aspects of the environmental pollution, monitoring, and assessment approaches as well as political/administrative options to address the pollution problems. Researchers from 19 countries participated in the ICAEC2014 meeting and scientific sessions which included more than 200 presentations (http://www.j-ec.or.jp/seminar/icaec2014/pdf/Oral_presentation.pdf).

This special issue includes selected studies from the Conference that will provide readers with some insights into current scientific activities carried out in Asian countries that are directed at diverse aspects of environmental pollution.

In addition to a wide range of scientific achievements presented in the Conference, two very significant developments resulted from interaction and discussions between participants, including the establishment of the Thailand Society for Environmental Chemistry and the development of the Bangkok Declaration, a joint initiative between the Japan Society for Environmental Chemistry and the Thailand Society for Environmental Chemistry to collaborate and share knowledge on the progress of environmental chemistry in both countries (http://www.j-ec.or.jp/seminar/icaec2014/pdf/Bangkok_Declaration.pdf).

The population in Asian countries is growing rapidly, with an increasing number of highly motivated and active young scientists and researchers. We hope that the outcomes of the joint efforts at this scientific conference, including the establishment of a new society of environmental chemistry, presentation and discussions of scientific results, and advancement and future co-operation and collaborations will provide new and expanding opportunities, particularly for the young generation of scholars and scientists to further their interests in preventing environmental pollution and to work together for a better and sustainable non-toxic future.

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Takeshi Nakano was born in 1949 in Kobe, and obtained a master's degree in Applied Chemistry from Osaka University, Japan, in 1974, and Ph.D. at the same University (Studies on Congener-Specific Analysis of Chlorinated Aromatics and its Application to Environmental Chemistry) in 2007. In 1974, he joined the Hyogo Prefectural Institute of Environmental Science for more than 40 years. He contributed to the field of congener-specific analysis for dioxin and related compounds.

His main expertise is in the field of persistent organic pollutants (POPs), especially dioxins as well as PCBs in human and environmental samples as well as enantioselective analysis for chiral compounds such as PCB, HCH, DDT, and chlordanes. He is contributing to various POP-related committees under the Ministry of Environment of Japan such as POP monitoring, PCB destruction project, and unintentional formation of POPs. He co-organized the International Conference of Asian Environmental Chemistry in 2014 and the 9th PCB Workshop in 2016 in Kobe, Japan. Since 2014, he is contributing to the JICA (executing agency for technical cooperation of the Government of Japan) grass root project "Capacity Building for Analysis and Reduction Measures of Persistent Organic Pollutants in Serbia" as project leader (globalgreengroup.org/people.html). He maintains voluntary web server (ee-net.ne.jp) for sharing of information of environmental, analytical, and technical issues as chief member of the MS analysis commission of the Japanese water environment society. His hobby is to record researcher's natural smile as official photographer of the Dioxin Conference Series (ee-net.ne.jp/dioxin/) and other conferences.

Yasuyuki Shibata graduated from the Department of Biochemistry, University of Tokyo. He was working as an environmental chemist at the National Institute for Environmental Studies, Japan, for more than three decades, and is now a fellow of the institute. He is a member of Regional Organization Group in Asia-Pacific and also Global Coordination Group under the Stockholm Convention. He has published around 200 papers, which cover speciation of metals,

particularly arsenic, with hyphenated techniques, analysis of carbon-14, and other long-lived radioisotopes using accelerator mass spectrometry, sampling and analysis of POPs, and other pollutants, such as perfluoroalkyl acids and neonicotinoids, in the environment, and long-term archiving of environmental samples for the future, i.e., environmental specimen banking. As originated from biochemistry field, he keeps interests in the use of various wildlife species, such as bivalves, fishes, birds, and dragonflies, for biomonitoring and metabolism and mechanisms of toxicities of pollutants in organisms including human beings. He has been serving as a member of various committees organized by the Ministry of the Environment, Japan, and also experienced teaching in several universities, including University of Tokyo, Tohoku University, and Ehime University. He is currently the president of Japan Society for Environmental Chemistry, a member of the board of directors of Japan Society for Endocrine Disruptor Research, and an auditor of the Society for Remediation of Radioactive Contamination in the Environment.

Michael Denison received a B.S. degree in Marine Biology from St. Francis College, a M.S. degree in Animal Physiology from Mississippi State University, and a Ph.D. in Environmental Toxicology from Cornell University. After postdoctoral research in the Clinical Pharmacology Department at the Hospital For Sick Children in Toronto, and the Molecular Pharmacology Department at Stanford University, he joined the Department of Biochemistry

at Michigan State University as an Assistant Professor and relocated UC to Davis where he is currently a professor in the Department of Environmental Toxicology. Dr. Denison's overall research focus for the past 36 years has been directed toward understanding the molecular mechanisms by which the Ah receptor mediates the biological/toxicological actions of dioxins and related chemicals. His research studies are directed toward characterization of the mechanism by which the Ah receptor and its associated protein factors regulate gene expression, structure/function of the AhR, and structural diversity of AhR ligands as well as the development of receptor-based bioassay systems for the detection and quantitation of dioxin-like chemicals and environmental hormones (i.e., endocrine active chemicals and endocrine disruptors) and other fun stuff, and he has more than 200 publications in these areas.

Roland Weber is working since 2003 as an independent international consultant mainly for UN Organizations (UNEP, UNIDO, UNDP) and environmental ministries on the implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs). His areas of particular expertise include dioxins, other unintentionally produced POPs and brominated and fluorinated POPs, and POP-like chemicals. He is a drafter/co-drafter of several technical guidance documents for the

Stockholm Convention and member of the UNEA/Stockholm Convention BAT/BEP expert group. He co-authored the Mediterranean action plan for sustainable consumption and production (SCP) and the SCP toolkit for policy makers. He is an active member of the "global POPs research community," member of the Editorial Board of ESPR, and has published more than 120 peer-reviewed papers (www.researchgate.net/profile/Roland_Weber3). He received his Ph.D. in 1996 from Tübingen University and worked from 1997 to 2002 as head of a Dioxin/POPs R&D laboratory for IHI Co., Ltd. (Yokohama/Japan) with research cooperation to Kyoto and Ritsumeikan Universities. Since 2010, Dr. Weber is a visiting Professor at the Tsinghua University POPs Research Centre in Beijing.