

**Overview:** The 14th International Conference on Mercury as a Global Pollutant (ICMGP 2019) was organized from 8<sup>th</sup> to 13<sup>th</sup> September, 2019 in Krakow, Poland.



The conference consisted of plenary sessions, oral sessions and poster sessions. The five plenary sessions covered topics such as marine mercury cycling, terrestrial mercury cycling, methylation in the environment and biota, mercury reduction from power industry and input from the scientific community in the implementation of the Minamata Convention.

The oral sessions were structured to address 4 main themes as follows:

- How is mercury cycling changing on the global, regional and local scales in response to perturbations caused by major anthropogenic drivers of the environmental change?
- What is the relative risk of mercury exposure to human health and wildlife in the context of human welfare?
- How can technological development contribute to the reduction of mercury exposure and improvement of environmental responsibility? How will industry achieve more control of Hg emissions, handle waste products, and clean up contaminated site?
- How can scientific knowledge contribute to the implementation and effectiveness evaluation of the Minamata Conventions and other regulatory agreements? Importance of integration and implementation of emerging and future mercury research into the policy making.



**Session for Mercury Waste Treatment:** A Session focusing on “Treatment of Hg Containing Wastes” was also convened. The session contained the following presentations focusing on various elements of treatment of mercury containing wastes:

- Presentation on the amount of mercury in natural gas (Presentation by Peter Maxson, Concorde East/West Sprl): This presentation described a study to estimate the amount of mercury in natural gas production, identify main pathways of

mercury and estimate how much mercury ends up in different environmental media. The calculations and assumptions were cross checked using two approaches to determine the total mercury in gas.

- Mercury stabilization as HgS with a wet chemical process (Presentation by Philippe Zanettin, BATREC): This presentation was given by a European company (BATREC) regarding its mercury stabilization process to transform toxic mercury into non-toxic HgS using a wet physico-chemical process.
- Methylmercury retention evaluation to support Saltstone waste acceptance criteria (Presentation by Savannah River National Laboratory): This presentation explained a work done to identify the fate of the Methylmercury in Saltstone, a waste form containing Portland cement, slag cement, and Class F fly ash.
- Development of stabilization processing technology for waste incineration facilities using chelate (Presentation by LEE, Eun-Song, Yonsei University): The presentation focused on an experiment of stabilization of fly ash contaminated by mercury by using EDTA and Na<sub>2</sub>S.
- Calcium alginate mesoporous activated carbon composite beads as a novel adsorbent for elemental mercury from natural gas (Presentation by MASOD, Mohamed B., Egyptian Petroleum Research Institute (EPRI)): This presentation focused on work where the feasibility of activated carbon alginate beads composite can be used as a potential and low cost adsorbent for removing elemental mercury.

In the poster session, posters focusing on generation on mercury containing wastes (including ASGM sites, waste stabilization techniques) were also exhibited.



\*All photos courtesy of ICMGP2019 website