



Occurrence and distribution of xenoestrogenic compounds and emerging persistent organic pollutants in the aquatic environment of Taiwan

Wanghsien Ding

National Central University, Department of Chemistry, Chung-Li, Taiwan (wanghsiending@gmail.com)

Xenoestrogenic compounds and emerging persistent organic pollutants (POPs) have widely aroused public concern in recent years. Concentrations of xenoestrogenic compounds, such as bisphenol A (BPA), nonylphenol isomers (NPs), parabens (MeP, PrP and BuP), and musks (HHCB and AHTN), as well as emerging POPs, such as perfluorooctanesulfonate (PFOS), perfluorooctanoate (PFOA) and short chain chlorinated paraffins (SCCPs) were analyzed in river water samples in order to determine the distribution characteristic of these compounds in 18 major rivers of Taiwan. The BPA, NPs and parabens (MeP, PrP and BuP) were detected in all river samples, and with the concentration ranges from sub-ppb (ug/L) to ppb levels, while the detection rates of other compounds ranged from 67 to 83% in the 18 rivers. Although the concentrations of these compounds in our aquatic environment are too low to pose an acute risk, the potential adverse effects from long-term exposure, and the ubiquitous occurrence of these compounds might indicate that more work should be done to expand the knowledge about potential risk of xenoestrogenic compounds and emerging POPs pollution.