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Education:

PhD: **Nankai University** MS: BS:

General Areas of Expertise:

Environmental Science, Human Health, Remediation

Short Bio:

Prof. Dr. Hongwen Sun currently is the dean of College of Environmental Science and Engineering, Nankai University, China. She got her Ph D of Environmental Chemistry at Nankai University in 1994. She is engaged as Yangzi Scholar Professor by Ministry of Education, China. Her research interests are environmental fate and human exposure of emerging chemicals, and soil remediation. She has been coordinator of over 30 research projects, and one of which was for Outstanding Youth supported by Natural Science Foundation of China. She has published over 300 journal papers, among which 150 are in SCI cited journals. She has written several book chapters and edited one monograph of "Biochar and Environment".

Five Representative Publications:

1. Hongkai Zhu, Hongwen Sun*, Yanwei Zhang, Jiayao Xu, Bing Li, Qixing Zhou, Uptake Pathway, Translocation, and Isomerization of Hexabromocyclo- decane Diastereoisomers by Wheat in Closed Chambers, *Environmental Science & Technology*, 2016, 50, 2652-2659
2. Yanwei Zhang, Hongwen Sun*, Yuefei Ruan, Enantiomer-specific accumulation, depuration, metabolization and isomerization of hexabromocyclododecane (HBCD) diastereoisomers in mirror carp from water, *Journal of Hazardous Materials*, 2014, 264 : 8-15
3. 3 Tao Zhang, Hongwen Sun*, Yan Lin, Xiaolei Qin, Yanfeng Zhang, Xia Geng, K Kannan, Distribution of poly-and perfluoroalkyl substances in matched samples from pregnant women and carbon chain length related maternal transfer, *Environmental Science & Technology*, 2013,47:7974-798
4. Tao Zhang, Hongwen Sun*, Yan Lin, Lei Wang, Xianzhong Zhang, Ya Liu, Xia Geng, Lijie Zhao, Fasong Li, K. Kannan, Perfluorinated compounds in human blood, water, edible freshwater fish, and seafood in China: Daily intake and regional differences in human exposures, *Journal of Agriculture and Food Chemistry*, 2011, 59: 11168-11176
5. Tao Zhang, Hongwen Sun*, Qian Wu, Xianzhong Zhang, Sehun Yun, and K. Kannan*, Perfluorochemicals in Meat, Eggs and Indoor Dust in China: Assessment of Sources and Pathways of Human Exposure to Perfluorochemicals, *Environmental Science & Technology*, 2010, 44: 3572-3579

FEWSTERN Symposium 2017 Presentation Title and Abstract:

Plant can be an important exposure way for human beings to organic chemicals
 Bioaccumulation of hydrophobic organic contaminants is less important compared to that in aquatic organisms. This is because hydrophobic organic contaminants tend to leave water and accumulate in lipid tissues in organisms, while it is difficult for plants with high water content to uptake the hydrophobic organic contaminant from soil phase where the contaminant is strongly bound. Hence, human exposure via plants has been often ignored before. However, majority of emerging chemicals are polar with high water solubility, which favors plant uptake. It was found in our laboratory that the short chain perfluorinated alkyl acids are accumulated by wheat 100 times greater compared to their long chain analogues. Besides, we checked for the plant uptake pathway of hexabromocyclododecane and found that the uptake from air and air particles can be more important way compared to root uptake. This finding can explain the high contents of hydrophobic contaminants in plant leaves. Moreover, plants can metabolize organic chemicals, and in some cases, the metabolites can be more toxic compared to their mother compound. We found that fluorotelomers can be metabolized by plant into more toxic acids. Hence, the adverse effects by exposure to contaminated plants should be paid more attention. Among the research, the recognition of unknown metabolites and their toxicity is a challenge task.