

Name: Xinhua Zhan

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Education:

- Ph.D., Nanjing Agricultural University, Environmental Pollution Chemistry, 2005
- MSc., Nanjing Agricultural University, Plant Nutrition and Environment, 1997
- B.A., Nanjing Agricultural University, Soil Science and Agricultural Chemistry, 1994

Research interests and expertise:

- Plant uptake and translocation of persistent organic pollutants
- Remediation of contaminated sites
- Application and effects of nano-materials in agriculture

Current projects:

- NSFC 31770546, Mechanism of acropetal translocation of polycyclic aromatic hydrocarbons from crop root surface, 2018-01
- NSFC 31370521, Transport mechanism of polycyclic aromatic hydrocarbons across crop root cell membrane, 2014-01
- Fundamental research funds for the central universities KYZ201145, Uptake interaction between polycyclic aromatic hydrocarbons and inorganic nutrients in plants, 2011-08
- National high technology R&D project 2009AA063103, Enhanced washing technology and equipment for organo-chlorine pesticide heavily contaminated sites, 2010-01

Current teaching:

- Environmental Chemistry, spring and fall semesters

Selected publications:

- Le Yue, Chuanxin Ma, Xinhua Zhan*, Jason C. White, Baoshan Xing*. Molecular mechanisms of maize seedling response to La₂O₃ NPs exposure: water uptake, aquaporin gene expression and signal transduction. *Environmental Science: Nano*, 2017, 4: 843-855.
- Xinhua Zhan*, Xiu Yi, Le Yue, Xiaorong Fan, Guohua Xu, Baoshan Xing. Cytoplasmic pH-stat during phenanthrene uptake by wheat roots: a mechanistic consideration. *Environmental Science and Technology*, 2015, 49: 6037-6044.
- Xinhua Zhan*, Xiao Liang, Tinghui Jiang, Guohua Xu. Interaction of phenanthrene and potassium uptake by wheat roots: A mechanistic model. *BMC Plant Biology*, 2013, 13:

168.

- Xinhua Zhan, Xiaobin Zhang, Xiaoming Yin, Hengliang Ma, Jianru Liang, Lixiang Zhou, Tinghui Jiang, Guohua Xu. H⁺/phenanthrene symporter and aquaglyceroporin are implicated in phenanthrene uptake by wheat (*Triticum aestivum* L.) roots. *Journal of Environmental Quality*, 2012, 41: 188-196.
- Xinhua Zhan, Hengliang Ma, Lixiang Zhou, Jianru Liang, Tinghui Jiang, Guohua Xu. Accumulation of phenanthrene by roots of intact wheat (*Triticum acstivnm* L.) seedlings: passive or active uptake? *BMC Plant Biology*, 2010, 10: 52.

(* corresponding author)