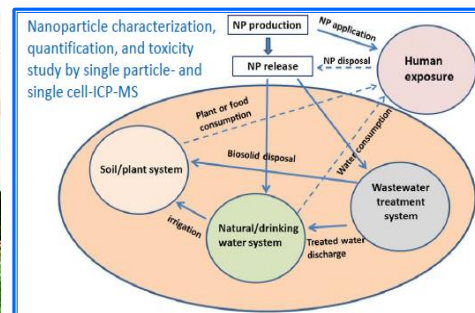
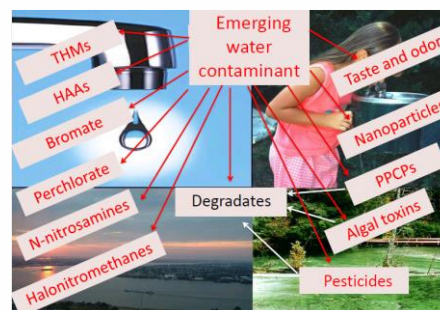


Bioanalytical and Environmental Analyses

Research Focus

- ❖ Development of analytical methods for applications in life science, biomedicine, and environmental pollutants
- ❖ Drinking water quality monitoring and improvement
- ❖ Biomarker discovery including cancer biomarker, traumatic brain injury (TBI) biomarker, seed quality biomarker, etc.
- ❖ Nanoparticle characterization and quantification by cutting edge single particle- and single cell-ICP-MS and their novel applications in life science, food safety, emerging environmental contaminant, etc.



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Research Funds

- ❖ National Institute of Health
- ❖ National Science Foundation
- ❖ Missouri Department of Natural Resources
- ❖ Environmental Protection Agency
- ❖ Leonard Wood Institute (DoD)
- ❖ Water treatment facilities
- ❖ Industries

Keywords

Bioanalysis; advanced instrumental analysis; single cell- and single particle-ICP-MS, environmental contaminants; water disinfection byproducts (DBPs); harmful algal bloom; biomarker

Significant Achievements

- ❖ Faculty achievement award, Missouri S&T, 2012, 2014, 2016
- ❖ Total 46 peer reviewed journal publications in recent 5 years
- ❖ Total >90 conference presentations in recent 5 years
- ❖ One patent issued in year 2020

Potential Collaboration fields

- ❖ Broad fields that need analytical quantification and characterization; nanoparticle analysis; biomarker discovery