

Environmentally-Friendly Industries for Sustainable Development

<http://enfitwww.env.kyoto-u.ac.jp/>

Keywords: Pollution Control, Drinking Water Quality, Watershed Management, Nature Restoration, Lake Biwa, Asia, Micropollutants, Microplastics



Sinya ECHIGO
Professor



Shuhei TANAKA
Associate Professor

Staff: 8

Researcher: 3

Assistant teaching staff: 1

Assistant technical staff : 4

Student: 15

Doctor: 3

Master: 10

Bachelor: 1

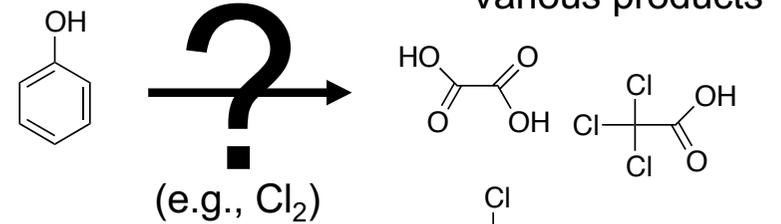
Research student: 1

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Practical research based on field-based research and experimentation and model analysis

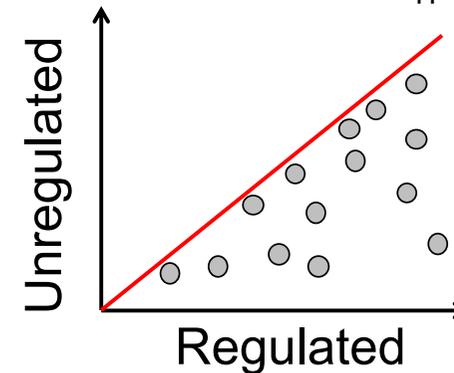
1. Transformation processes of chemical in water treatment and environment

Conversion of even simple compounds is multi-step, branching reactions. We want to find the “rules” of conversion.

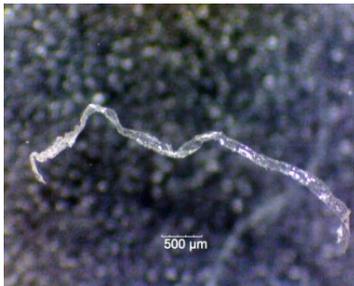


2. Research on the rational management of water quality

It is impossible to measure every possible item.
Rational use of existing indicators.
Upgrading to a new water quality standards framework.



3. Source Tracking and Prediction of Environmental Fate of Microplastics on Urban Water Cycle

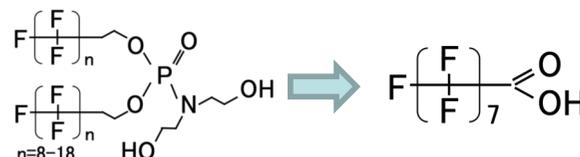


→ Microplastic detected from digestive tube of a fish in Lake Biwa

To know where the microplastics are generated, and what size, and where they exist is one of the emergent issues in the world.



4. Development of Prediction Method and Removal Technology for Organofluorine Compounds in the soil and water environments



→ Chemicals in cosmetics and fire extinguishing agents are turning into hazardous substances in the environment.

Shall we develop the removal devices?

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Come on, Join us!

OPPORTUNITIES



INSTRUMENTS



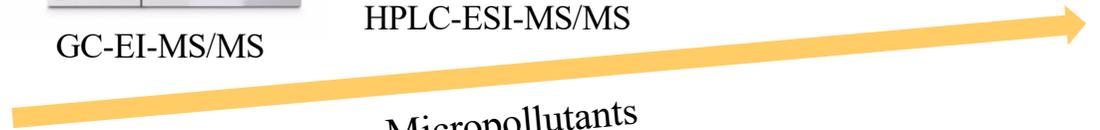
GC-EI-MS/MS



HPLC-ESI-MS/MS



Ion Mobility Q-TOF LC/MS



Micropollutants



FTIR-ATR



µFTIR-FPA



LDIR



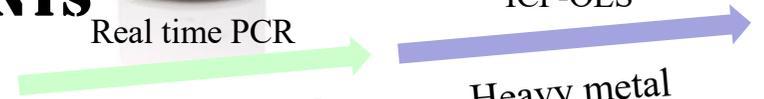
Microplastics analysis



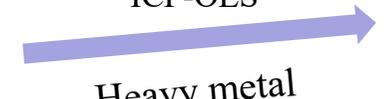
Real time PCR



ICP-OES



Environmental DNA



Heavy metal