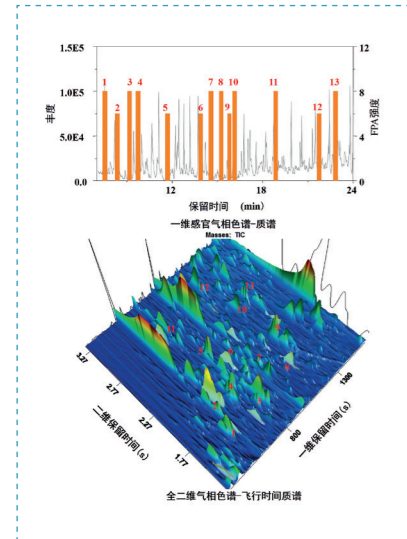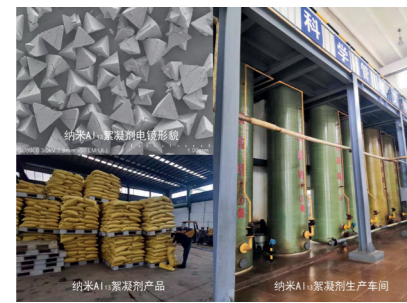# Research Group for Risk Identification and Control of Drinking Water Quality
Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences

感官气相色谱耦合全二维气相色谱-飞行时间原谱
Odorants identification by combining sensory GC with GC×GC/TOFMS

After long-term research accumulation, this group has established a technological innovation system to ensure drinking water safety from source to tap and from engineering to management, and formed a systematic solution to typical water quality risk problems. They have developed high-throughput identification technologies for drinking water risk substances, put forward new principles and methods for ecological rehabilitation and water quality control of micro-polluted water sources, overcome a number of technical difficulties such as the removal of arsenic, fluoride, and taste and odor, clarified the occurrence mechanism of "yellow water" during pipeline distribution, created leakage management and control technologies for large and looped water distribution networks, and developed a series of new theories and methods for drinking water risk assessment. The technologies, methods, materials and equipment developed by this group have achieved large-scale applications, which significantly contributes to the reformulation of China's Standards for Drinking Water Quality, provides systematic support for the drinking water safety of megacities such as Beijing and Shanghai, and strongly promotes the scientific and technological progress of water supply industry.

Outstanding contributors of this research group

Yang Min
He developed the identification, assessment and control methods/technologies for risk substances of natural origin in drinking water. The achievements have been applied in engineering and management practices.

Qu Jiuhui
He broke through the technical problems of removing arsenic, fluoride and other risk substances from water. The achievements have been widely applied in water supply industry.

Wang Zijian
He created an early warning and emergency decision support system for water sources with independent intellectual property rights. The achievements have been popularized and applied throughout the whole country.

纳米 Al₁₃ 絮凝剂及其规模化生产车间
Nano-Al$_{13}$ flocculant and its large-scale production factory

Major contributors

Wang Dongsheng
Shi Baoyou
Wang Weidong
Yu Jianwei
Ma Mei
Hu Chengzhi
Qiang Zhimin
Zhang Yu
Li Hongyan
An Wei
Xu Qiang
Zhang Haifeng
Su Ming
Wang Haibo
Rao Kaifeng
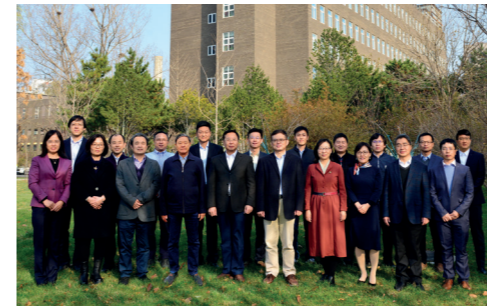Liu Huijuan
Liu Ruiping

一步法除砷的非均相氧化-吸附材料与设备
Heterogeneous oxidation-adsorption materials and facilities for one-step arsenic removal

在线综合生物毒性预警系统
Online integrated biotoxicity early warning system

隐孢子虫和贾第鞭毛虫预处理与识别自动化系统
Automatic pre-treatment and identification instrument for *Cryptosporidium* and *Giardia*

研究集体成员合影
Research group photo

石臼漾水源生态修复典范工程
Paradigm engineering project of Shijiuyang water source ecological rehabilitation

饮用水水质风险识别与控制研究集体
推荐单位：中国科学院生态环境研究中心

研究集体主要科技贡献：

该研究集体经过长期积累，建立了从源头到龙头、从工程到管理的饮用水安全保障技术创新体系，形成了针对我国典型水质风险问题的系统化解决方案。开发了饮用水风险物质高通量识别技术，提出了微污染水源生态修复与水质调控的新原理和新方法，攻克了砷、氟、嗅味等多项水质风险控制技术难题，阐明了管网输配过程"黄水"发生机制，创建了大型环状管网漏损管控技术，发展了饮用水风险评估理论与方法。形成的相关技术、方法、材料和设备进行了规模化应用，为《生活饮用水卫生标准》的修订做出了重要贡献，为北京、上海等超大城市的饮用水安全保障提供了系统支撑，有力推动了供水行业的科技进步。

研究集体突出贡献者

杨 敏 中国科学院生态环境研究中心

研发了饮用水天然源风险物质的识别评估与控制技术，成果应用于工程与管理实践。

杨 敏 Yang Min

曲久辉 中国科学院生态环境研究中心

攻克了砷、氟等风险污染物去除技术难题，在供水行业内规模化应用。

曲久辉 Qu Jiuhui

王子健 中国科学院生态环境研究中心

创建了具有自主知识产权的水源地预警与应急决策支持系统，在全国推广应用。

王子健 Wang Zijian

斯里兰卡不明原因慢性肾病地区地下水处理工程 (300 m³/d)
Groundwater treatment project (300 m^3/d) in the area of chronic kidney disease of unknown cause (CKDu) in Sri Lanka

饮用水水质风险识别与控制技术全国性应用
Nationwide applications of drinking water quality risk identification and control technologies

研究集体主要完成者

王东升	石宝友	王为东	于建伟	马 梅	胡承志
强志民	张 昱	李红岩	安 伟	徐 强	张海峰
苏 命	王海波	饶凯锋	刘会娟	刘锐平	