CHEN Jiubin

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Biography

Jiubin Chen is actually working in the Tianjin University in China at the Institute of Surface-Earth System Science (ISESS). He completed an undergraduate degree in earth science in the Changchun Institute of Geology (now Jilin University) followed by several jobs in different sections. He continued on to a DEA then a PhD programs at the Institut de Physique du Globe de Paris (IPGP), University Paris 7 where he got his doctor degree on the geochemistry of metal (Zn, Cu and Fe) isotopes. He then made a post-doc in the Trent University in Canada on Hg isotopes. Before moving to Tianjin University, he used to work in the Institute of Geochemistry, Chinese Academy of Sciences (IGCAS) in Guiyang. He mainly works on the geochemistry of metal isotopes, with a focus on the method development, fractionation mechanisms and potentail application of metal isotopes in various surface environments. He developed methods for purifying Zn, Hg and Ga from geological matrix for precise isotope analysis. His first study on Zn isotopes in the Seine River demonstrated the potential usefulness of metal isotopes in tracing the pollution sources in aquatic systems. His preconcentration method of Hg enabled studies of Hg isotope systematics in very dilute surface water systems, and the findings of significant mass-independent fractionations for both odd and even Hg isotopes in precipitations from different continents are intrguing and help for better understanding the biogeochemical cycling of this very mobile heavy metal. He just developped a protocol for Ga isotope analysis and the large variation range determined during the adsorption of Ga onto mineral surface makes Ga isotopes a new promising tracer.

Research

- Isotope geochemistry of trace metals (Zn, Cu, Fe, Ga, etc.) and their applications in geochemistry and biogeochemistry
- Human impact of trace elements in aqueous environment
  - Bio-geochemical cycles of trace elements on a global scale, and their fates in air, water and soil
  - Hg speciation and isotopic compositions in environment
  - Analytical geochemistry: sample preparations, purification, mass spectrometry for concentration and isotope measurements
  - Development of new geochemical or biogeochemical isotope tracer