



Journal of Chemistry

Special Issue on

Environmental Chemistry: Separation Methods of Metals, Their Complexes, and Ligands

CALL FOR PAPERS

Different levels of metals in various forms and their ligands are widely spread in environment owing to soil erosion, industrial, and agricultural processes. Contamination due to metals and their derivatives is an important topic due to its various effects on human health and the environment, and furthermore, exposure to certain metals at trace amounts can entail irrecoverable and severe effects. In addition, the presence of some metals in different food and agricultural products has been a major concern for many years. On the other hand, some metals are considered to be among the vital micronutrients, and they have a wide range of biochemical functions in all living organisms, and some of them are of economic importance in various industries. It is difficult for most chemists to be aware of the availability of the many new separation techniques, described largely in environmental chemistry, which are increasingly important in the separation and characterization of metals, their complexes, and ligands.

Furthermore, the design and application of supported metal complexes as sites for molecular recognition in the separation of biomolecules and organic materials have the potential to dominate multibillion dollar industries in proteins and chiral drugs. Analysis of metals, their complexes, and ligands is difficult due to their very low concentrations in samples and high complexity of sample matrices; thus, determination, separation, and detection are often a major task for the environmental chemists, as they are a good tool to monitor toxicants in environmental samples. Currently, there is an urgent need for development of new separation techniques that are cost-effective, reliable, selective, efficient, reproducible, and environmentally friendly.

Authors are invited to submit technical papers describing original work on development of novel techniques in environmental chemistry used to separate, detect, and determine various metals, their complexes, and ligands that are economically important and environmentally toxic.

Potential topics include, but are not limited to:

- ▶ Solid Phase Extraction (SPE) and Solid Phase Microextraction (SPME) methods
- ▶ Chromatographic, spectroscopic, and electrophoretic separation methods
- ▶ Materials synthesis and engineering for extraction methods
- ▶ Liquid-liquid extraction (LLE) and liquid-liquid microextraction (LLME) methods
- ▶ Electrochemical detection methods
- ▶ Mass spectrometry of transition metal complexes: connections with chromatography
- ▶ Separations methods for isomers and chiral metal complexes
- ▶ IMAC protein separations via metal complexes

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jchem/environmental.chemistry/ecsm/>.

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