

## Introduction

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During a visit to participate in the V Meeting of Environmental Chemistry, George Luther III invited me to coordinate a Special Issue of the Aquatic Geochemistry to show some representative papers of the environmental chemistry being performed in Brazil. When I accepted the invitation, I knew that the challenge of undertaking this task was tremendous, but would be very rewarding. Brazil is a continental country with geographical, social, economic and industrial contrasts that made the selection of what could be considered as “representative” research themes difficult.

Sodré et al. (2012), in the paper “Evaluating copper behavior in urban surface waters under anthropic influence. A case study from the Iguaçú River, Brazil,” focused their study in a subtropical watershed that receives high loads of raw sewage, causing marked changes in the aquatic chemistry of copper. In the paper “Biogeochemical behavior of arsenic species at Paranaguá estuarine complex, southern Brazil,” Dos Anjos et al. (2012) showed that arsenic is present predominantly in the dissolved form and that organic species are abundant in eutrophic areas, especially in summer. The evaluation of how macrophytes influence the Hg cycle in water bodies is presented in “Total mercury distribution and volatilization in microcosms with and without the aquatic macrophyte *Eichornia crassipes*” by Correia et al. (2012). Coprostanol and the ratio of some selected sterols were used as chemical markers of fecal contamination in the estuarine area of Cubatão by Campos et al. (2012) in “Fecal sterols in estuarine sediments as markers of sewage contamination in the Cubatão area, São Paulo, Brazil.” Finally, Fagnani et al. (2012) discuss the reducing properties of the organic matter in rivers with different degrees of contamination in the paper “Mercury in the waters of the Jundiaí River, SP, Brazil: the role of dissolved organic matter.”

These selected papers give us a glimpse of the growing interest in the so-called “urban chemistry”, pointing out some of the impacts caused by the chaotic increase and poor sanitation in metropolitan areas, a typical portrait of Brazil. Of course, these papers are just

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a minor sample of selected research areas centered on understanding the role that metals and organic compounds play as they cycle in both pristine and impacted aquatic ecosystems, but I hope the readers will enjoy the reading as I did.

Campinas, May 2012.

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