



Preface

Toxic metals in the environment- geochemical processes and health implications



During the last century, up to nowadays, human activities have released a large amount of toxic metals to the surface environment of our planet causing a number of environmental accidents and public health issues such as the worldwide infamous Minamata disease (Harada, 1995) and the Itai-itai disease (Kasuya, 2000). Since the outbreak of these notorious disasters, the scientific community has devoted great efforts to investigate the biogeochemical cycling of toxic metals in the environment and to assess the health risks related to them.

The first International Conference on Heavy Metals in the Environment (ICHMET) was held in Toronto in 1975. Since then, ICHMET conferences have been held periodically at different continents. The 17th ICHMET edition was held from September 23 to 25, 2014 in Guiyang, China. More than 300 participants from 26 countries and regions attended the conference. From 164 oral and 140 poster presentations, we selected 17 papers to be included in this Special Issue of Journal of Geochemical Exploration entitled "Toxic Metals in the Environment - Geochemical Processes and Health Implications".

Four papers are related to both the distribution of toxic metals and the geochemical processes affecting them in soil (Ungureanu et al., 2016; Ravankhah et al., 2016; Li et al., 2016; Zhou et al., 2016); 3 papers discuss the distribution and leachability of toxic metals in river and sea sediments (Bao et al., 2016; Liao et al., 2016; Wang et al., 2016); 2 papers present studies on the release of toxic metals from metal mining and smelting processes (Hu et al., 2016, Yuan et al., 2016); 3 papers analyze the health risks related to toxic metals exposures (Liu et al., 2016, Masto et al., 2016, Liu et al., 2016); 2 papers investigate the absorption mechanisms of toxic metals by different geological media (Fan et al., 2016, Bauer et al., 2016); 2 papers look at toxic metals accumulation in crops (Fei et al., 2016, Peng et al., 2016); 1 paper investigates the distribution of toxic metals in air dust (Tang and Han, 2016).

This collection of papers presents new data, researches and interpretations aiming at a better understanding of both the biogeochemical cycling of toxic metals in the environment and their potential effects on public health. All of the papers published in this Special Issue were subject to a regular peer review process in accordance with the guidelines established by the journal. We thank all of those who served as peer reviewers, whose comments and constructive criticism improved the quality of the papers published in this issue.

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