

Arsenic in the Environment

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Invitation:

As series editors we are actually planning the preparation of new books in this series, and would like to ask you whether you or any of your colleagues would be interested to contribute a volume in the area of your expertise. The volume may be an authored or edited book and it may be a collection of selected and peer-reviewed papers from congresses and other scientific events as well.

About the book series

Although arsenic is known as ‘silent toxin’ since ancient time, and the contamination of drinking water resources by geogenic arsenic was described from different places around the world long ago —as e.g. in Argentina in 1917— it was not before two decades ago, that it received overwhelming public attention worldwide. As a consequence of the biggest arsenic calamity in the world was detected two decades ago in Southeast Asia, there has been an exponential rise in the scientific interest that triggered high quality research. Since then arsenic contamination in drinking water resources, soils, plants and air of predominantly geogenic origin, the propagation of arsenic in the food chain, the chronic affects of arsenic ingestion by humans, and their toxicological and related public health consequences, were described in many parts of the world, and every year new countries or regions are discovered, where the arsenic problem was not known so far.

The presence of arsenic is found in several regions distributed all around the world, both in developing and industrialized countries; although mitigating the problem is quiet different in both, related to the different economic and social conditions in both country groups. Considering high concentrations of As in the drinking water only, it has been estimated that 200 million people worldwide are at risk; a number which is expected to further increase due to the recent lowering of the limits of arsenic concentration in drinking water to actually 10 µg/l, as it was already adopted by many countries, and considerations for even further decreasing this value.

The book series “Arsenic in the Environment” is an inter- and multidisciplinary source of information, making an effort to link the occurrence of geogenic arsenic in different environments and the potential contamination of ground- and surface water, soil and air and their effect on the human society. The series fulfills the growing interest on the arsenic issue worldwide which is going alongside with stronger regulations of arsenic contents in drinking

water and food, which were and are adapted not only by the industrialized countries, but increasingly by developing countries.

The book series covers all fields of research concerning arsenic in the environment with an aim to present an integrated approach from its occurrence in rocks and their mobilization into the ground- and surface water, soil and air, its transport therein, the pathways of arsenic and their introduction into the food chain up to the uptake by humans. Human arsenic exposure, bioavailability, metabolism and toxicology are treated together with related public health effects and risk assessments in order to better manage the contaminated land and aquatic environments to reduce human arsenic exposure. Arsenic removal technologies and other methodologies to mitigate the arsenic problem are addressed not only from the technological, but also from economic and social point of view. Only such inter- and multidisciplinary approaches, would allow case-specific selection of optimal mitigation measures of each specific arsenic problem mitigate the problem and provide the population arsenic safe drinking water, food, and air.

We have an ambition to make this book series as an international, multi- and interdisciplinary source of knowledge and a platform for arsenic research oriented to the direct solution of problems with considerable social impact and relevance rather than only focusing on cutting edge and breakthrough research in physical, chemical, toxicological, medical and other specific issues on arsenic on a broader environmental realm. The book series shall also form a consolidated source with information on worldwide occurrences of arsenic, which otherwise is dispersed and often hard to access, is bundled, and therefore anybody can easily find and access information about arsenic related topics. It shall also have role to increase awareness and knowledge among administrators, policy makers and company executives, on the problem and to improve the international and bilateral cooperation on the arsenic contamination and its effects globally.

As consequence we see this book series as comprehensive information base, which includes authored or edited books from world-leading scientists on their specific field of arsenic research, but will also contain volumes with selected papers from international or regional congresses or other scientific events. Further on, the abstract books of the homonymous international congress series, which we organize biannually in different parts of the world shall appear in this book series. The series shall be open for anybody, in person or as scientific associations, society and scientific networks, for bringing in new book projects. Supported by a strong multi-disciplinary editorial board, book proposals and manuscripts are peer reviewed and evaluated.

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