

Lecture Notes in Earth System Sciences

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Olga V. Frank-Kamenetskaya
Elena G. Panova
Dmitry Yu. Vlasov *Editors*

Biogenic—Abiogenic Interactions in Natural and Anthropogenic Systems

 Springer

Lecture Notes in Earth System Sciences

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Preface

The book is a collection of papers presented at the Fifth International Symposium on Biogenic–Abiogenic Interactions in Natural and Anthropogenic Systems, which was held on 20–22 October 2014 in Saint Petersburg, Russia. Organizers of the symposium were Saint Petersburg State University (the largest educational-scientific center in Russia) and Saint Petersburg Society of Naturalists (the oldest Russian scientific society). The previous symposiums on this topic took place in Saint Petersburg in 2002, 2004, 2007, and 2011.

Saint Petersburg State University, which was founded by Peter the Great in 1724, is the oldest University in Russia. The Russian government has granted national heritage status to Saint Petersburg State University. The university is not only the largest educational center of Russia, but it also is a great scientific center. It is connected with the Saint Petersburg Society of Naturalists—one of the oldest natural science societies of Russia, being founded in 1868 by the Emperor Alexander II. From its foundation through the present day, the society has been associated with Saint Petersburg State University. The first president of the society, Karl Kessler, was the rector of Saint Petersburg State University. Presidents of the Saint Petersburg Society of Naturalists have included famous scientists such as Professor Beketov, Academician Vernadsky, Academician Ukhtomsky, and others. The priorities of the society currently include complex interdisciplinary study in the different fields of earth science and life science, support of scientific communication among scientists, and support for young researchers of nature. The society is a member of the World Union for Conservation.

The papers in this book cover a wide range of topics, covering the interactions between biogenic and abiogenic components in the lithosphere, biosphere, and technosphere. The authors are experts in different fields of science: earth sciences, biology, soil science, materials science, chemistry, environmental protection, and the preservation of cultural heritage.

This book has an interdisciplinary character and contains six parts:

1. Biomineralization in Geosystems
2. Geochemistry of Biogenic–Abiogenic Systems

3. Biomineral Interactions in Soil
4. Bioweathering and Destruction of Cultural Heritage
5. Minerals in Living Organisms and Biomimetic Materials
6. History of Science

This book should appeal to a wide range of readers because it is devoted to the interaction of living and nonliving matter throughout the development of the earth.

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