

## Preface

Advances in rapid information technology make it possible to find scientific truths inductively in cyber-space, and this kind of research method is spreading worldwide as a fourth science. On the other hand, living things have undergone numerous trials and errors in the process of evolution, and species acquired the optimum mechanism matching to the global environment. Therefore, the functions of living matters are thought of as obtained by data-driven induction method, and biomimetics is a nature-inspired inductive method.

This book presents contributions from cutting-edge researchers on informatics, ecosystem, and materials. Among the topics covered in this book, a broad range of readers will find the content related to the areas of their interests. The chapters have been organized as follows. Chapters 1 to 4 cover informatics, Chapters 5 to 7 cover ecosystem, and Chapters 8 to 14 cover materials and devices. We hope this book will provide an opportunity to expand readers' ideas for sustainable society.

We thank the chapter contributors, who are lecturers at NBCI (Nanotechnology Business Creation Initiative) seminars, and especially thank Mrs. Masaki Aoki and Masahiro Imaizumi for arranging these seminars.

**Akihiro Miyauchi and Masatsugu Shimomura**

2022