**Preface: Proceedings of Hierarchical Structure of Materials 2023**

Hierarchical structure of materials is a key issue to understanding physical properties of the materials. The international symposium entitled “Hierarchical Structure of Materials 2023" was held in Kagami Memorial Research Institute for Materials Science and Technology, Waseda University on March 17th, 2023, focusing upon the hierarchical structures of materials in a multi scale viewpoints based not only on physics, but also on mathematics, materials science and engineering.

This symposium commemorates the retirement of Professor Yasumasa Koyama at Waseda University. This issue has been organized to honor the significant achievements and contributions of Prof. Koyama to this research field for more than forty years. Prof. Koyama has made a great contribution to the field of “Hierarchical Structures of Materials”, which was the main subject of the symposium, through his outstanding research and leadership. He has given a unique perspective on hierarchical structures based on mathematical point of view, such as group theory, and discussed the new physics inherent in it.

In this special issue, we have collected the papers of our ongoing research on the hierarchical structures of materials, with the aim of celebrating the achievements of Prof. Koyama. Each paper presents the latest findings from the researchers influenced by him. This special issue contains 8 papers in total, which cover a wide range of theoretical, computational, and experimental studies regarding hierarchical structure of materials. The topics include carbon dots from brown coal, structural changes in Zr80Pt20 alloys, features of epi-graphene on silicon carbide, topological characteristics of fractal sets, dynamical feedback models, magnetic structures in Ca2CoSi2O7, and the inductive response of coils in ionic solutions.

We hope that this special issue not only pays our great respects to Prof. Koyama and acknowledges his influence but also provides our readers with valuable insights and fresh perspectives.

Sincerely,

Publication Committee

Akihiko Hirata and Tomoyuki Yamamoto

Waseda University