

Preface

The area of mass transport in materials is very well recognized to play an immensely important role in the development of new materials appropriate for advanced technologies and, in some cases, even suggesting the advanced technology itself. But improving the properties of existing materials, devising more efficient ways of synthesizing them, predicting their in-service lifetimes and suggesting ways for recycling are equally as important. Gaining an in-depth understanding of mass transport that ranges from atomistic to macroscopic scales has long attracted the attention of many researchers in materials science and engineering and related fields. Indeed, the investigation of mass transport in materials is one of the oldest scientific disciplines, dating back to the late nineteenth century. This topical volume on “Recent Developments in Mass Transport and Related Phenomena in Materials” was intended to capture a broad cross-section of contemporary research on mass transport and related phenomena in a wide spectrum of technologically important materials. The range of topics presented in this volume is very wide, covering theory, computer simulations and experiments in a wide variety of materials. This reflects the enormous breadth of this area.

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