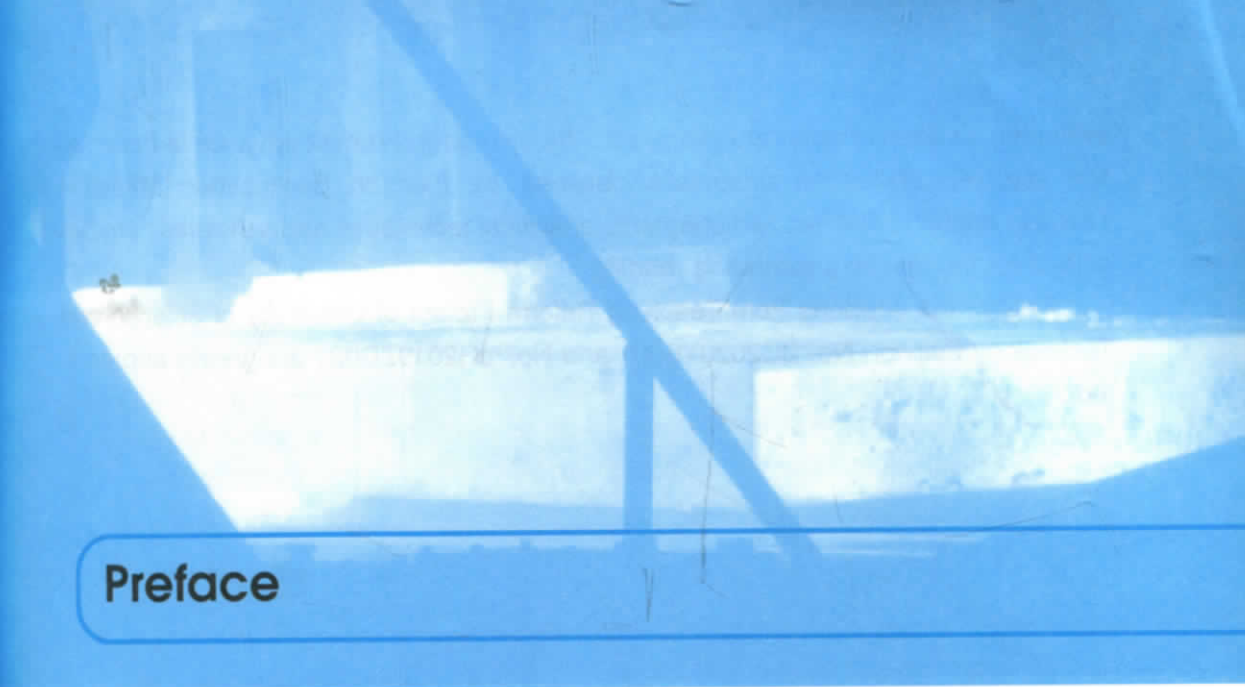




## Preface

The international class for materials science and engineering in University of Science and Technology Beijing (USTB) starts from 2008 to meet the requirement of globalized competition in science and technology. All the courses are taught in English to help the local students who are going to study abroad to adapt to the international environment.

However, we found some difficulties in selecting proper English textbooks for them. The contents in English textbook of Fundamentals of Materials Science are much easier than those in our local textbook. In order to minimizing the differences between these two books, we plan to write the English textbook by ourselves. To lighten the burden of both teachers and students, Fundamentals of Materials Science is divided into six classes, namely, crystallography and crystal structure, thermodynamics, kinetics, surface and interface, deformation and recrystallization, and phase transformation.

Professor Yang Ping and I are in charge of the subject "deformation and recrystallization", thus we are responsible for writing the English textbook for it. We are also working on the research field "Fundamentals of materials science and anisotropic properties of materials" controlled mainly by deformation/recrystallization or phase transformation for decades. Therefore, we are qualified for writing the textbook entitled "Deformation and Recrystallization in Solid Materials".

The lecture notes have been finished around 2016 mainly by Professor Yang Ping. I modified and enhanced them in the following years during teaching. Now, the textbook includes six chapters and is scheduled for 16 teaching hours. Exercises and

examples for each chapter are prepared. We also added recent advance in deformation and recrystallization processes obtained by Electron Backscatter Diffraction (EBSD) method. The last two chapters, analytical techniques and softwares, are designed for the off-class extending reading.

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