

# Preface

This book collects selected papers presented at the 8th International Symposium on High-Temperature Metallurgical Processing organized in conjunction with the TMS 2017 Annual Meeting & Exhibition in San Diego, California, USA. More than 142 abstracts were submitted. Among them, 72 were selected for oral presentation and 60 were provided with poster presentation opportunity. After reviewing the 98 submitted manuscripts, 77 of them were accepted for publication on this book.

As the title of symposium suggests, the interest of the symposium is on thermal processing of minerals, metals, and materials that intends to promote physical and chemical transformations of materials to enable the extraction and production of valuable materials such as metals, alloys, ceramics, and compounds.

The symposium was open to participants from both industry and academia and focused on innovative high-temperature technologies including those based on nontraditional heating methods as well as their environmental aspects such as handling and treatment of emission gases and by-products. Because high-temperature processes require high energy input to sustain the temperature at which the processes take place, the symposium intends to address the needs for sustainable technologies with reduced energy consumption and reduced emission of pollutants. The symposium also welcomed contributions on thermodynamics and kinetics of chemical reactions and phase transformations that take place at elevated temperatures.

This is the seventh book exclusively dedicated to this important and burgeoning topic. We hope the book will serve as a reference for both new and current metallurgists, particularly those who are actively engaged in exploring innovative technologies and routes that lead to more energy efficient and environmental sustainable solutions.

There could not be this book without contributions from the authors of included papers, time and effort that reviewers dedicated to the manuscripts, and help from the publisher. We thank them all! We also want to thank Mrs. Feng Chen for her assistance in collating the submitted abstracts and manuscripts.

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8th International Symposium on High-Temperature  
Metallurgical Processing

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2017, XXII, 818 p. 421 illus., Hardcover

ISBN: 978-3-319-51339-3