

# Preface

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The original version of this book was published in Japanese by the first author. It has had a wide variety of readers in Japan ranging from undergraduate and graduate students in universities to engineers in industries. Due to its success in the Japanese language, Chinese and Korean versions were published soon after the Japanese one.

Considering the nature of the book, which covers basic knowledge for novices, practical applications for industrial engineers, and advanced developments for researchers, we have decided to publish an English version to make the content available and, hopefully, useful to a much wider range of readers.

However the present book is not merely a literal translation of the Japanese version since that is already more than 10 years old. Instead, we have thoroughly reviewed the content, partly truncated obsolete sections, extensively expanded others, incorporated recent knowledge and added new material that has emerged since the first publication.

In writing the book, we employed a variety of materials from books, journals, standards, etc. We gratefully acknowledge the many publishers who kindly gave us citation permission for using their material. We also would like to express our deep appreciation to our friend, the late Dr Heinz Terstiege of the Bundesanstalt für Materialforschung undprüfung, Germany, for the original photographs of color scientists.

Finally we would like to express our deepest thanks to Tokyo Denki Daigaku Shuppankyoku, the publisher of the original Japanese version, who kindly gave us permission to translate the Japanese version into the present English one.

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Alan R. Robertson

