
Preface

The collection of words and terms for a science as large as ceramics and its related technology, industry and applications has been an on-going large task. When Head of the Department of Industrial Technology, more than 15 years ago, I became aware of the exponentially growing vocabulary needed by the students to understand and answer the examination questions passing across my desk at times throughout the year. This was particularly true for the burgeoning science of advanced ceramics and composites, magnetic, electrical and electronic ceramics and the new areas involving nanomaterials. A determined search of the sources these students were asked to consider involved many more text books, journals and information technology outlets than the large number involved in the second edition of this Dictionary.

The pace of change has been amazing with, for example, the discovery of all the new allotropes of carbon and their suggested applications as well as their actual applications. The methods of forming, shaping and consolidating ceramics expand all the time, and the science and use of composites containing ceramics has accelerated. Science has continued to precipitate ceramics into new areas of application as well as give explanations through concepts, such as **plasmons**, to the fascinating art of ceramics throughout millennia as exemplified by the **Lycurgus cup**. This is an example of the use made of bold text in this edition.

It has been an enormous effort to bring information from so many sources to a single collection. There is more science and a wider range of definitions in this greatly expanded text which the student communities I tried them out on found useful and many said “sped them on their way to a faster understanding”.

The proven basis of the first two editions has been retained but a greater emphasis has now been given to guiding the reader to related information by emboldening words and concepts in the text that have their own entries. Double entries occur when a series of adjectives are used attached to the same word or concept and there has been a gathering together of items scattered throughout the text, such as equations. The wide use of acronyms and abbreviations has continued to grow and an effort has been made to keep pace in this edition. Further progress has been made to consolidate SI units, but some of the “beloved” older systems continue through many of the Appendix Tables and in definitions in the text.

The text has become somewhat more hybrid between straight dictionary and science encyclopaedia as trial users asked more about the range of sciences and techniques encompassed by ceramics. Striking a balance has been as hard as many ceramics are. I earnestly hope that this edition continues in the development of the ideals and concepts of the first edition and that this will be used as a first port of call by those puzzled by some of what they read or are just curious or perhaps crossword addicts.

I have learned so much doing the work and preparing the manuscript that it has enriched me greatly notwithstanding what may be forthcoming.

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Dictionary of Ceramic Science and Engineering

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2013, X, 549 p.,

ISBN: 978-94-007-0916-4