Preface

The development of porous ceramic materials has brought a new challenge to a variety of industries because porous ceramics are more durable in severe environments and their surface characteristics permit them to satisfy specific functional purposes.

With the growing demands of porous ceramics for industrial applications, a number of technologies have been developed to fabricate these materials with an attempt to control their pore characters as well as to realize the pore-related properties in order to gain a deeper understanding of the relation between the various pore-related properties for optimization purposes.

To date, porous ceramic materials with more delicate and uniform pore structures and pore sizes ranging from a few hundred micrometers to a few nanometers can be achieved for diverse purposes by either physical or chemical processing. This is one of the purposes of this special volume to bring readers some or better understanding of the processing and properties of the porous ceramic materials.

This volume is a collection of papers covering the fabrication, property evaluation, characterization and applications of the porous ceramic materials developed to date. The editor hopes that the reader will find something to be interesting and worthwhile.

Based on this spirit, this volume includes fundamental theories, novel fabrication techniques, and special classes of ceramic materials involved in sensing and biomedical applications.

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