Preface

There has been great upsurge in recent years in the area of high T_c superconductors. Although there are numerous books and monographs related largely to their physics and chemistry, scattered informations are available on their processing aspects.

Powder processing of ceramics is an established technology and in the area of high T_c superconductors, its importance is felt even more significantly. The present monograph is an attempt in this direction to explore the perspectives and practice of powder processing routes towards control and optimization of the microstructure and pertinent properties of high T_c oxide superconductors. The monograph consists of 6 chapters. After a very brief introduction (Chapter 1), Chapter 2 describes various classes of high T_c oxide superconductors and their phase equilibria. Chapter 3 highlights the preparation of oxide superconductor powders through various routes and details their subtle distinctions. Chapter 4 briefly covers characterisation of the oxide superconductors, laying emphasis on the process-analysis and microstructure.

Chapter 5 describes in detail various fabrication techniques for bulk superconductors through the powder routes. The last Chapter (Chapter 6) describing properties of bulk oxide superconductors, discusses the role of subtituents, compositional variations and processing methods on such properties. References are given at the end of each chapter.

In brief, the monograph is meant for a wide spectrum of readers, who are aiming at preparing bulk oxide superconductors and would like to appreciate the role of processing in optimizing the desired end properties.

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Authors are grateful to numerous authors and publishers for various illustrations, which have been liberally included in the present monograph.

Lastly, the authors would request for the indulgence of the readers for any inaccuracies, which might have crept in, even after all the possible care.

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