

Preface

This book contains an overview of *Novel Synthesis and Characterization of Nanostructured Materials*. This kind of materials has been largely studied in the past few years. They have great potential for applications in different fields such as Engineering, Physics, Chemistry, Biology, and Medicine. Synthesis and characterization of nanostructured materials is a subject of great interest involving Science, Technology, Market, Politicians, Government, and Society. Based on results obtained by our research group during the past years, this book comes to present novel techniques to synthesize nanostructured materials and characterize their properties such as crystallinity and crystallite size, specific surface area, particle size, morphology, and catalytic activity. This book is aimed for students, researchers, and engineers who search for general knowledge about the main methodologies to obtain and characterize nanostructures materials.

The following chapters present the general aspects of different synthesis of nanostructured materials, such as *Combustion Synthesis* (Chap. 2), *Spray Pyrolysis* (Chap. 3), *Electrospinning* (Chap. 4), Catalytical Chemical Vapor Deposition applied in the Synthesis of Carbon Nanotubes and Carbon Nanotubes Forests (Chap. 5), *Hydrothermal Synthesis* (Chap. 6) and *High-Energy Milling* (Chap. 7).

We hope that the clear language and the application-oriented perspective will be suitable for professionals and students who want to access foremost knowledge about Science and Technology concerning the synthesis and characterization of nanostructured materials.

We would thank the staff of Springer Verlag for their professional guidance in regard to this book.

Porto Alegre, Brazil, August 2013

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Novel Synthesis and Characterization of
Nanostructured Materials

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2013, IX, 85 p. 38 illus., Hardcover

ISBN: 978-3-642-41274-5