DESCRIPTION

Thorough and up-to-date, this book presents recent developments in this exciting research field.

To begin with, the text covers the fabrication of chiral nanomaterials via various synthesis methods, including electron beam lithography, ion beam etching, chemical synthesis and biological DNA directed assembly. This is followed by the relevant theory and reaction mechanisms, with a discussion of the characterization of chiral nanomaterials according to the optical properties of metal nanoparticles, semiconductor nanocrystals, and nanoclusters. The whole is rounded off by a summary of applications in the field of catalysis, sensors, and biomedicine.

With its comprehensive yet concise coverage of the whole spectrum of research, this is invaluable reading for senior researchers and entrants to the field of nanoscience and materials science.

ABOUT THE AUTHOR

Prof. Zhiyong Tang obtained his PhD degree in 1999 from the Chinese Academy of Sciences. After this, he went to the Swiss Federal Institute of Technology Zurich, Switzerland, and to the University of Michigan, USA, for his postdoctoral research. In November of 2006, he joined the National Center for Nanoscience and Technology (NCNST) in China and took up a full professor
position. His current research interests focus on fabrication and application of chiral inorganic nanoparticles as well as nanoparticle superstructures.

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