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**The chemistry of nanomaterials - C. N. R. Rao, A. Müller, A. K. Cheetham (eds), WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim 2004. ISBN 3-527-30686-2, 741 pages**

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This book in two volumes provides the reader with 21 authoritative accounts written by experts in the field of nanomaterials. Topics covered are theory, synthesis, structure, energetics, dynamics and a variety of other properties and related applications of nanomaterials, including such new developments as

- Quantum dots, nanoparticles, nanoporous materials, as well as nanowires, nanotubes and nanostructural polymers
- Nanocatalysis, nanolithography and nanomanipulation
- Methods for the synthesis of nanoparticles

The book gives a brief introduction to nanomaterials at the beginning and the strategies for the scalable synthesis of quantum dots as well as phase-transfer processes in synthesis in following chapters. Novel methods developed for synthesis of nanoparticles such as sonochemistry and solvothermal synthesis are introduced. Diverse nanocrystals, nanotubes, nanowires, nanorods and oxide nanoparticles are covered

in volume 1. Volume 2 is devoted to structure and spectroscopy of semiconductor nanocrystals and core-shell semiconductor nanocrystal for biological labelling. Additional subjects include nanoporous materials, nanocatalysis and nanostructured polymers. The book finishes with an introduction of the electrochemistry of nanoparticles and an overview of nanolithography. These fields have grown extensively and found innovative applications in the area of nanofabrication in the last five years. In addition, large semiconductor complexes hold great promise for use in future electronic applications.

Chemistry plays a particularly important role in the synthesis and characterization of nanobuilding units. These include nanocrystals of metals, nanotubes of carbon and inorganics, nanowires of various materials and polymers involving dendrimers and block copolymers. Therefore, the book is especially interesting for chemists who want to gain insight into the entire spectrum of nanoscience.

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