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Brunella Maria / Sibillano, Teresa / Siliqi, Dritan / De Caro, Liberato -- 7. Characterization of inorganic nanostructured materials by electron microscopy / Comparelli, Roberto / Fanizza, Elisabetta / Striccoli, Marinella / Curri, M. Lucia -- 8. Nanosized particles: questioned for their potential toxicity, but some are applied in biomedicine / Dibenedetto, Angela / Fasciano, Stefania / Colucci, Antonella / Aresta, Michele -- Index

Sommario/riassunto

The demand for new materials with novel properties on the micro- and nano-scale continues to grow. This book provides an overview of state-of-the-art techniques for the synthesis and characterization of inorganic nanomaterials including sonochemistry, microwave dielectric heating, sonoelectrochemistry and RAPET, high-throughput experimentation in heterogeneous catalyst research, photoluminescence, and methods for surface structuring. Imaging techniques include X-ray photoelectron spectroscopy, X-ray absorption spectroscopy, single crystal and powder X-ray diffraction, X-ray microimaging (SAXS, WAXS & GISAXS), electron microscopy, and solid state NMR. The work is essential reading for all researchers in academia and industry working in the field of nanosciences.
