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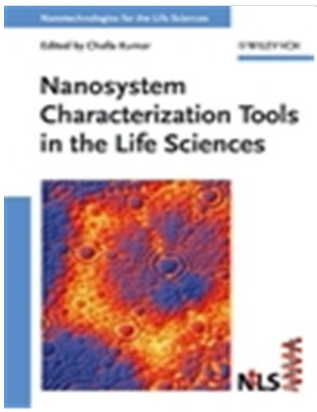

Nanosystem Characterization Tools in the Life Sciences, 1/e

Challa S. S. R. Kumar

2006 | 425 pp | Paperback | ISBN: 9783527313839 | Price: 17,640.00

About the Book

This first dedicated, all-encompassing text characterizes nanomaterials intended for biological or physiological environments and biomedical applications, in particular for medicine, healthcare, pharmaceuticals and human wellness. It finally fills the gap for a concise overview of a wide range of different characterization techniques and how to best employ them in the context of nanoscale life science research. It thus serves as a single source of information gathering up the knowledge otherwise spread over many journal articles, and provides an overall picture to members of all the disciplines involved.

This handy volume covers all important probing techniques, including nuclear and electron spin resonance, light scattering, infrared and Raman spectroscopy, atomic force microscopy, magnetic resonance, tomography, x-ray techniques, and microbalance measurement of antibody binding.

Biochemists, biologists, chemists, materials scientists, and materials engineers as well as all others working in the pharmaceutical and chemical industries or at related research institutions will here a book of great value and importance.

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About the Author

Challa S. S. R. Kumar :- Challa Kumar is currently the Group Leader of Nanofabrication at the Center for Advanced Microstructures and Devices (CAMD), Baton Rouge, USA. His research interests are in developing novel synthetic methods for functional nanomaterials and innovative therapeutic, diagnostic and sensory tools based on nanotechnology. He has eight years of industrial R&D experience working for Imperial Chemical Industries and United Breweries prior to joining CAMD. He is the founding Editor-in-Chief of the Journal of Biomedical Nanotechnology, an international peer reviewed journal published by American Scientific Publishers, and the series editor for the ten-volume book series Nanotechnologies for the Life Sciences (NtLS) published by Wiley-VCH. He worked at the Max Planck Institute for Biochemistry in Munich, Germany, as a post doctoral fellow and at the Max Planck Institute for Carbon Research in Mülheim, Germany, as an invited scientist. He obtained his Ph.D. degree in synthetic organic chemistry from Sri Sathya Sai Institute of Higher Learning, Prashanti Nilayam, India.