

Vol. 8

## Nanomaterials for Biosensors



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### The Series

*Nanotechnologies for the Life Sciences (NtLS)* is the first comprehensive source covering the convergence of materials and life sciences on the nanoscale, a wide field of research which brings together the main technology drive of the 21st century and existing, multibillion dollar markets.

Written by international experts describing the various facets of nanofabrication, the ten volumes of *NtLS* provide the underlying nanotechnologies for the design, creation and characterization of medical, biological and cybernetic applications. Each volume addresses in detail one particular facet of the field.

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### This Volume

Volume 8 covers a wide range of materials and design concepts for biosensors. Different kinds of nanoscale particles, rods, wires and structures offer numerous opportunities for biological material detection and analysis, and materials as well as applications and instrumentational issues are addressed in detail.

### From the Contents

- Carbon Nanotube Field-effect Transistors and Sensors
- Nanotubes, Nanowires, and Nanocantilevers in Biosensor Development
- Fullerenes, Metal and Semiconductor Colloidal Nanocrystals, Proteins, and Biomimetic Materials for Nanosensors
- Quantum Dot-based Nanobiohybrids for Fluorescent Detection
- Gold Nanobiosensor- and Dendrimer-based Electrochemical Detection Methods
- Integrated Systems for Ultrasensitive Detection of Biomarkers
- Pico/Nanoliter Chamber Array Chips for Single-cell, DNA and Protein Analysis

### Forthcoming Volumes

- Tissue, Cell and Organ Engineering
- Nanomaterials for Medical Diagnosis and Therapy

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