



## Intelligent macromolecules for smart devices : from materials synthesis to device applications

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Dai, Liming (1961-)

Springer-Verlag, 2004

Electronic books

Monografía

The age of nanotechnology is upon us. Engineering at the molecular level is no longer a computer-generated curiosity and is beginning to affect the lives of everyone. Molecules which can respond to their environment and the smart machines we can build with them are and will continue to be a vital part of this 21st-century revolution. Liming Dai presents the latest work on many newly-discovered intelligent macromolecular systems and reviews their uses in nano-devices. Intelligent Macromolecules for Smart Devices features: - An accessible assessment of the properties and materials chemistry of all the major classes of intelligent macromolecules from optoelectronic biomacromolecules to dendrimers, artificial opals and carbon nanotubes - In-depth analysis of various smart devices including a critique of the suitability of different molecules for building each type of device - A concise compilation of the practical applications of intelligent macromolecules including sensors and actuators, polymer batteries, carbon-nanotube supercapacitors, novel lasing species and photovoltaic cells As an exposition of cutting-edge research against a backdrop of comprehensive review, Intelligent Macromolecules for Smart Devices will be an essential addition to the bookshelf of academic and industrial researchers in nanotechnology. Graduate and senior undergraduate students looking to make their mark in this field of the future will also find it most instructive

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**Título:** Intelligent macromolecules for smart devices from materials synthesis to device applications Liming Dai

**Editorial:** London Springer-Verlag 2004

**Descripción física:** 1 online resource (xvi, 496 pages) illustrations

**Mención de serie:** Engineering materials and processes

**Bibliografía:** Includes bibliographical references and index

**Contenido:** The Concepts of Intelligent Macromolecules and Smart Devices -- Part

**Copyright/Depósito Legal:** 814259007 880335627 936824876 992061179

**ISBN:** 1852338490 electronic bk.) 9781852338497 electronic bk.) 1280145501 9781280145506

**Materia:** Intelligent control systems Nanotechnology TECHNOLOGY & ENGINEERING- Automation  
TECHNOLOGY & ENGINEERING- Robotics Intelligent control systems Nanotechnology Intelligent control  
systems Nanotechnology

**Enlace a formato físico adicional:** Print version Dai, Liming, 1961-. Intelligent macromolecules for smart devices.  
London : Springer-Verlag, 2004 1852335106 (DLC) 2003059240 (OCoLC)55051066

**Punto acceso adicional serie-Título:** Engineering materials and processes

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