



Advances in nanoengineering [electronics, materials, assembly /

Davies, A. G. (

A. Giles)

Thompson, J. M. T.

Imperial College Press ;

Distributed by World Scientific Pub.,

c2007

Monografía

<https://rebiunoda.pro.baratznet.cloud:28443/OpacDiscovery/public/catalog/detail/b2FpOmNlbGVicmF0aW9uOmVzLmJhcmF0ei5yZW4vNDMxMTY3MA>

Título: Advances in nanoengineering [Recurso electrónico] electronics, materials, assembly editors, A.G. Davies, J. M.T. Thompson

Editorial: London Imperial College Press Singapore Hackensack, NJ Distributed by World Scientific Pub. c2007

Descripción física: xii, 315 p. il., some col

Mención de serie: EBSCO Academic eBook Collection Complete Royal Society series on advances in science v. 3 Philosophical transactions. Series A, Mathematical, physical, and engineering sciences

Bibliografía: Incluye referencias bibliográficas e índice

Contenido: 1. The shape of carbon: novel materials for the 21st century / Humberto Terrones and Mauricio Terrones. 1. Introduction. 2. New carbon nanostructures: fullerenes, carbon onions, nanotubes, etc. 3. The future of carbon nanostructures: applications and emerging technologies. 4. Conclusions and future work -- 2. Inorganic nanowires / Caterina Ducati. 1. Introduction. 2. Synthesis of high aspect ratio inorganic nanostructures. 3. Outlook -- 3. Multilayered materials: a palette for the materials artist / Jon M. Molina-Aldareguia and Stephen J. Lloyd. 1. Introduction. 2. Multilayers. 3. Electron microscopy. 4. Hard coatings. 5. Metallic magnetic multilayers. 6. Conclusion and future developments -- 4. Nature as chief engineer / Simon R. Hall. 1. Nature inspires engineering. 2. Nature becomes engineering. 3. Engineering nature -- 5. Supramolecular chemistry: the bottom-up approach to nanoscale systems / Philip A. Gale. 1. Introduction. 2. Molecular recognition. 3. Self-assembly. 4. Self-assembly with covalent modification. 5. Supramolecular approaches to molecular machines. 6. Conclusion -- 6. Molecular self-assembly: a toolkit for engineering at the nanometer scale / Christoph Wälti. 1. Introduction. 2. Functionalized surfaces. 3. DNA-based branched complexes. 4. Manipulation of DNA by electric fields. 5. Concluding remarks and future directions -- 7. Exploring tunnel transport through protein at the molecular level / Jason J. Davis ... [et al.]. 1. Introduction. 2. Molecular electronics. 3. Assembling proteins at electroactive surfaces. 4. Protein tunnel transport probed in an STM junction. 5. Assaying protein conductance in CP-AFM configurations. 6. Conclusions

-- 8. Two frontiers of electronic engineering: size and frequency / John Cunningham. 1. Introduction: size and frequency limits for modern electronic systems. 2. Single electronics. 3. Picosecond electronics. 4. Future prospects -- 9. Erasable electrostatic lithography to fabricate quantum devices / Rolf Crook. 1. Quantum devices. 2. Scanning probe lithographic techniques. 3. Erasable electrostatic lithography. 4. Quantum devices and scanning probes -- 10. Ultrafast nanomagnets: seeing data storage in a new light / Robert J. Hicken. 1. Introduction. 2. What makes a magnet? 3. How are nanomagnets different? 4. Recording technology and speed bottlenecks. 5. Observing ultrafast magnetization dynamics. 6. Harnessing precession. 7. Optical modification of the spontaneous magnetization. 8. Future trends -- 11. Near-field microscopy: throwing light on the nanoworld / David Richards. 1. Introduction. 2. Aperture-SNOM. 3. Apertureless near-field microscopy: the promise of true nanometer-resolution optical imaging. 4. Tip-enhanced spectroscopy. 5. Future developments -- 12. Small things bright and beautiful: single molecule fluorescence detection / Mark A. Osborne. 1. Introduction. 2. Detection modalities. 3. Outlook

Detalles del sistema: Forma de acceso: World Wide Web

ISBN: 9781848160002 1848160003 1860947514 9781860947513

Autores: Davies, A. G. (A. Giles) Thompson, J. M. T.

Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es