An Excellent Addition to Your Library!

Released: February 2014

Nanotechnology: Concepts, Methodologies, Tools, and Applications

Information Resources Management Association (USA)

Over the past few decades, devices and technologies have been significantly miniaturized from one generation to the next, providing far more potential in a much smaller package. The smallest of these recently developed tools are miniscule enough to be invisible to the naked eye.

**Nanotechnology: Concepts, Methodologies, Tools, and Applications** describes some of the latest advances in microscopic technologies in fields as diverse as biochemistry, materials science, medicine, and electronics. Through its investigation of theories, applications, and new developments in the nanotechnology field, this impressive reference source will serve as a valuable tool for researchers, engineers, academics, and students alike.

**Topics Covered:**
- Quantum Computing
- Robotics
- Medical Imaging
- Nanotechnology
- Environmental Science
- Sensor Networks
- Materials Science
- Micro Engineering

Print: US $2,195.00  |  Perpetual: US $3,295.00
Print + Perpetual: US $4,290.00

**Market:** This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners. Ideal for classroom use.

Information Resources Management Association (IRMA) is a research-based professional organization dedicated to advancing the concepts and practices of information resources management in modern organizations. IRMA’s primary purpose is to promote the understanding, development and practice of managing information resources as key enterprise assets among IRM/IT professionals. IRMA brings together researchers, practitioners, academicians, and policy makers in information technology management from over 50 countries.

Publishing Academic Excellence at the Pace of Technology Since 1988
Section 3: Development and Design Methodologies

Chapter 29
Robust Integral of NN and Error Sign Control for Nanomaneupulation Using AFM
Qininmin Yang (Zhejiang University, China) 
Jiangang Lu (Zhejiang University, China)

Chapter 30
Probing the Reactive Center for Site Selective Protonation in a Molecule by the Local Density Functional Descriptors
Sanjdip Kumar Rajak (University of Kalyani, India)
Nazmul Islam (University of Kalyani, India)
Dulal C. Ghosh (University of Kalyani, India)

Chapter 31
Carbon Vacancy Ordered Non-Stoichiometric ZrC0.6: 
Wentao Hu (Yanshan University, China)
Zhongyuan Liu (Yanshan University, China)

Chapter 32
Three Models for Ethical Governance of Nanotechnology and Position of EGAIS’ Ideas within the Field
Fernand Doridot (Center for Ethics, Technology and Society, ICAM Lille, France)

Chapter 33
Computer Simulations of Solar Energy Systems
Akram Gasmelseed (Universiti Teknologi Malaysia, Malaysia)

Chapter 34
Quantum Confinement Modeling and Simulation for Quantum Well Solar Cells
Laurentiu Fara (Polytechnic University of Bucharest, Romania & Academy of Romanian Quantum Confinement Modeling and Simulation for Quantum Well Solar Cells)
Mihai Razvan Mitroi (Polytechnic University of Bucharest, Romania)

Chapter 35
The Basic Logic of Quantum Processes and Quantum Computation I
Hector Sabelli (Chicago Center for Creative Development, USA)
Losias H. Kauffman (University of Illinois at Chicago, USA)

Chapter 36
Modeling of Quantum Key Distribution System for Secure Information Transfer
K. E. Rumyantsev (Taganrog Institute of Technology, Russia)
D. M. Golubchikov (Southern Federal University, Russia)

Section 4: Utilization and Application

Chapter 37
On External Topological Atom (ETA) Indices for QSPR Studies
Kunal Roy (Jadavpur University, India)

Chapter 38
An All-Interior-Region gd-ID Based Design Methodology for Radiofrequency Blocks in CMOS Nanometric Technologies
Raffaele Fiorelli (University of Seville, Spain & Instituto de Microelectronica de Sevilla, Spain)
Eduardo Peralias (Instituto de Microelectronica de Sevilla, Spain)
Fernando Silveira (Universidad de la Republica, Uruguay)

Chapter 39
S. Ikazawa (Graduate School of Information, Waseda University, Fukuoka, Japan)
T. Ueda (Graduate School of Information, Waseda University, Fukuoka, Japan)

Chapter 40
Using Quantum Agent-Based Simulation to Model Social Networks:
C. Bisconti (University of Salento, Italy)
A. Cortolo (University of Salento, Italy)
M. De Maggio (University of Salento, Italy)
F. Grippa (University of Salento, Italy)
S. Totano (University of Salento, Italy)

Chapter 41
Nanowire-Based Handling and Transfer of Individual Silicon Nanowires
Malte Bartenwerfer (University of Oldenburg, Germany)
Sergej Fatikow (University of Oldenburg, Germany)

Chapter 42
Advances in Robot Surgeon
Silvia Frauento (ASML, The Netherlands)
Roberto P. Razzoli (University of Genova, Italy)
Francesco E. Cepolina (University of Genova, Italy)

Chapter 43
On the Modeling of Carbon Nanotubes as Drug Delivery Nanocapsules
F. Alisafaei (University of Wyoming, USA)
R. Ansari (University of Guilan, Iran)

Chapter 44
Designing Biomedical Stents for Vascular Therapy:
Anghya Paul (McGill University, Canada)

Chapter 45
Pharmacokinetic Challenges against Brain Diseases with PEFJ
Hiroshi Watabe (Graduate School of Medicine, Osaka University, Japan)
Keisuke Matsubara (Aixta Research Institute of Brain and Blood Vessels, Japan)
Yoko Ikoma (Karolinska Institute, Sweden)

Chapter 46
Nano-Art
Gez Orvesca (NanoArt21, USA)

Chapter 47
Nanocomputing in Cognitive Radio Networks to Improve the Performance
Yenumula B Reddy (Grahambling State University, USA)

Chapter 48
Generating Supply Chain Ordering Policies using Quantum Inspired Genetic Algorithms and Grammatical Evolution
Seán McGarraghy (University College Dublin, Ireland)
Michael Phelan (University College Dublin, Ireland)

Chapter 49
Nanoparticles
An Excellent Addition to Your Library!
Bakhtiyor Rasulev (Jackson State University, USA)

Chapter 50
Generating Supply Chain Ordering Policies using Quantum Inspired Genetic Algorithms and Grammatical Evolution
Yenumula B Reddy (Grahambling State University, USA)

Chapter 51
Nanocomputing in Cognitive Radio Networks to Improve the Performance
Yenumula B Reddy (Grahambling State University, USA)
Section 6: Emerging Trends
Name: __________________________________ _____________ _
Organization: _________________________________________ _ 
Address: ________________________________ ____________ _
City, State, Zip: _____________________________________ ____ 
Country: _______________________________ ____________ _ ___
Tel: ________________________________________________ __
Fax: _____________________________________________ __ ___
E-mail: ____________________________________________ __ __

☐ Enclosed is check payable to IGI Global in US Dollars, drawn on a US-based bank

☐ Credit Card ☐ Mastercard ☐ Visa ☐ Am. Express

3 or 4 Digit Security Code: ________________________________ 
Name on Card: __________________________________________
Account #: ______________________________________________
Expiration Date: __________________________________________