A. NANOSCALE FABRICATION AND CHARACTERIZATION

1. Nanolithography

A1: Lithography for Semiconductor Technology

A2: An Overview of Ion Beam Lithography for Nanofabrication

A3: Nanofabrication Using Electron Beam and Its Application to Nanometer Devices

A4: Sub-10 nm Imprint Lithography and Applications

2. Self-Assembly and Self-Organization

A5: Fuzzy Nanoassemblies: Toward Layered Polymeric Multicomposites

A6: Nanostructured Thin Films via Self-Assembly of Block Copolymers

A7: A DNA-based Method for Rationally Assembling Nanoparticles into Macroscopic Materials

A8: Organization of Nanocrystal Molecules Using DNA

A9: DNA-Templated Assembly and Electrode Attachment of a Conducting Silver Wire

3. Scanning Probe Microscopy

A10: Scanned Probe Microscopes
A11: Atomic Force Microscopy  

A12: Breaking the Diffraction Barrier: Optical Microscopy on a Nanometer Scale  

A13: Field-induced Nanometer to Atomic-Scale Manipulation of Silicon Surfaces with STM  

B. NANOMATERIALS AND NANOSTRUCTURES

5. Fullerences

B1: Small-Bandgap Endohedral Metallofullerenes in High Yield and Purity  
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6. Carbon Nanotubes

B2: Carbon Nanotubes  

B3: Nanotubes as Nanoprobes in Scanned Probe Microscopy  

B4: A Carbon Nanotube Field-Emission Electron Source  

B5: Carbon Nanotubes as Molecular Quantum Wires  

B6: Individual Single-Wall Carbon Nanotubes as Quantum Wires  

B7: Electronic Structure of Atomically Resolved Carbon Nanotubes  

7. Quantum Dots

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C3: Single- and Multi-Wall Carbon Nanotube Field-Effect Transistors

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10. Molecular Electronics

C5: Computing with Molecules

C6: The Electrical Measurement of Molecular Junctions

C7: Conductance of a molecular junction

C8: Large On-Off Ratios and Negative Differential Resistance in a Molecular Electronic Device

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C9: Artificial Atoms

C10: Observation of Quantum Effects and Coulomb Blockade in Silicon Quantum Dot Transistors at Temperatures Over 100 K

C11: Room Temperature Operation of a Single Electron Transistor Made by the Scanning Tunneling Microscope Nanooxidation Process for the TiOx/Ti System
C12: A Single-Electron Transistor Made from a Cadmium Selenide Nanocrystal

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F8: Efficient, Thermally-Stable, Second Order Nonlinear Response in Organic Hybrid Covalent/Ionic Self-Assembled Films

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F9: Photonic Crystals: Semiconductors of Light

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