Building a Central Repository for Nanomanufacturing

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Open Repositories 2009 EPrints User Group
We are...

- CHM
  Center for Hierarchical Manufacturing
  $16M NSF Nanoscale Science and Engineering Center

- National Nanomanufacturing Network
  Peer-to-peer network for NM R&D community established by the CHM

- InterNano
  NM information clearinghouse and portal to the NNN.

- Providing staff and hardware support to InterNano
Nanomanufacturing is...

- The essential bridge between the discoveries of the nanosciences and real-world nanotechnology.

- The controllable manipulation of materials structures, components, devices, and systems at the nanoscale (1 to 100 nanometers) in one, two, and three dimensions for large-scale reproducibility of value-added components and devices.
Interdisciplinary

Nanomanufacturing is also...

- A cross-sector R&D enterprise
- The beneficiary of generous federal funding
- Impacting the marketplace
NM needs a central repository

- InterNano clearinghouse visitors and members
- A need to move beyond “reference-level” information
EPrints 3.1.2 installation

Simple configuration edits

- Browse views
- Divisions
- Content and Document types
- Home and Latest Additions pages
- Search
- Subjects

eprints.internano.org
Browse Views with Content

2008

2007
InterNano Nanomanufacturing Repository

Browse by Taxonomy and Year

Please select a value to browse from the list below:

- **InterNano Taxonomy** (63)
  - Environment, Health, and Safety (17)
    - Environmental Impact (7)
    - Nanotechnology (1)
    - Environmental remediation (1)
  - Epidemiology (3)
  - Human Health (7)
  - Toxicology (2)
  - Occupational Hygiene (4)
  - Risk Assessment (7)
  - Surveillance (2)
  - Informatics and Standards (9)
  - Nanomanufacturing Characterization Techniques (10)
    - Other Characterization Techniques (1)
    - Scanning Probe Microscopy (2)
    - Scanning ion-conductance microscopy (SICM) (1)
  - Nanotherm Analysis (1)
  - Nanomanufacturing Processes (14)
    - Assembly Techniques (4)
    - Biological Techniques (4)
    - Protein assembly (1)
    - Self Assembly (1)
  - Nanoscience Objects and Nanostructured Materials (10)
    - Nanocomposites (1)
    - Nanodevice Structures (3)
      - Nanoelectronic circuits and architectures (2)
    - Nanoparticles (1)
    - Nanotubes (2)
    - Carbon nanotubes (2)
  - Social and Economic Impacts (32)
    - Education (8)
    - Ethics (1)
    - Policy and Regulation (19)
    - Social Perspectives (12)
  - Tool development (7)

Taxonomy

Click on the to expand each category. Click on the category name to view related content.

- **My Tags**
  - Environment, Health, and Safety
    - Informatics and Standards (7)
  - Nanomanufacturing Characterization Techniques (1)
    - Nanomanufacturing Processes (1)
  - Nanoscience Objects and Nanostructured Materials (1)
  - Social and Economic Impacts (1)
  - Tool development (3)
Content Profile

- 63 items from academic, government, non-profit, and commercial organizations
- 35 taxonomy terms in all seven top-level categories

- Type: monograph
- Source: non-profit
- Taxonomy: Environmental Health & Safety: Environmental Impact, Risk Assessment, Surveillance; Social and Economic Impacts: Policy and Regulation
Content Profile

- 16 multi-part items and 6 file formats (majority PDF)

  - Type: Conf. Workshop item
  - Source: industry
  - Taxonomy: Nanoscale Objects and Nanostructured Materials
Content Acquisition

- Manual content recruitment
- Barriers – cultural and intellectual property constraints

Planning Systematic Approaches
- Harvesting with OAI and CrossRef
- SWORD Pilot Project

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The bigger vision

- Providing a permanent home and single point of full-text access for scholarly and trade outputs related to nanomanufacturing.

- Incorporating more comprehensive content by type, discipline, and source.

- Demonstrating the value of Open Access to scientific research in a new research area.
Thank you

- Eprints Working Group
  - Rebecca Reznik-Zellen, Science Librarian
  - Bob Stevens, Web/Database Developer
  - Marilyn Billings, Scholarly Communication and Special Initiatives Librarian
  - Stacy Konkiel, Digital Repository Resident
  - Danielle Federa, InterNano Intern

- InterNano Steering Committee
  - Mark Tuominen, Department of Physics and Director NNN
  - Jeff Morse, Managing Director NNN