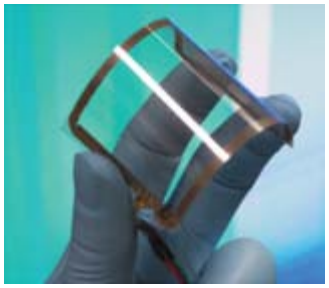
National Nanomanufacturing Network Newsletter

Volume 3 Issue 10 - October 2010

The NNN Newsletter

Synthesis of Nanomaterials Gaining Foothold in Flexible Manufacturing Platforms and Applications



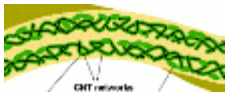
Flexible electronics represents an area for sustainable economic growth in the U.S. as emerging consumer products seek to find competitive advantages through reduced materials and manufacturing costs along with higher throughput production platforms. As an example, high rate, large area, roll-to-roll manufacturing has been a cornerstone of U.S. innovation and global competitiveness for many years, most notably for the coatings and printing industries. The opportunity now exists to enable value added manufacturing capabilities through the incorporation of emerging nanomaterials and nanomanufacturing approaches with these platforms. While significant challenges exist to transition production lines to address emerging markets, investment in these strategies will provide benefits in terms of economic growth, jobs, and other U.S. interests including security. Recently, the National Academies held a one day conference on Flexible Electronics for Security, Manufacturing, and Growth in the U.S. underscoring the impact of flexible electronics and manufacturing on national and global competitiveness.

More...

Regards,
Jeff Morse, Managing Director,
National Nanomanufacturing Network

Learn More about the National Nanomanufacturing Network

Solid-State Polymer Nanocomposite Electrodes for Flexible, Ultrathin Supercapacitors



Emerging trends in energy storage device technologies for a range of consumer electronics, automotive, and grid-scale applications

Upcoming Events

November 1 - 3, 2010
NANA 2010

November 1 - 4, 2010
IEEE Sensors 2010 Conference

November 3 - 5, 2010
Nanoinformatics 2010

November 16, 2010
Benefits and Risk Communication for Nanomaterials

November 16 - 18, 2010
Nanosafe 2010

View Full Calendar

Recently Published

From Our Affiliates

Magnetization vorticity and exchange bias phenomena in arrays of small asymmetric magnetic rings
Physica B-Condensed Matter 405(20):4377-4381

Contact angle hysteresis: a different view and a trivial recipe for low hysteresis

are targeting thin film materials conducive to flexible substrates. With the objectives of increased energy density, manufacturability, and flexibility, integration strategies for supercapacitor devices include carbon nanostructure composite electrodes with solid-state electrolytes. Utilizing CNT/PANI flexible electrode structures, Meng et. al. investigate the integration of an all-solid-state supercapacitor device structure utilizing a simple two-step approach. More....

Nanoinformatics 2010: Have You Registered Yet?

Data. Tools. Sharing. Nanoinformatics 2010 (November 3 - 5, Arlington, VA) is a collaborative roadmapping and planning project designed to survey the landscape, generate a roadmap, and stimulate collaborative activities in the area of nanoinformatics. Nanoinformatics is essential for comparative characterization of nanomaterials, for the design and use of nanodevices and nanosystems, for instrumentation development and manufacturing processes. Registration is still open for those who are interested in participating. Join the conversation! More....

NanoBusiness Alliance Interview with James M. Hussey

In October, the NanoBusiness Alliance talked to James M. Hussey, Chief Executive Officer and member of the Board of Directors of NanoInk, Inc. Mr. Hussey brings 25 years of experience in the pharmaceutical and biotechnology industry as executive, founder, investor, and consultant to senior management and boards of directors. In this interview, Steve Waite talks to Jim about NanoInk's technology, products and applications. We also explore how nanotech can be used to address nanotech EH&S issues and discuss the global competitive landscape. More....

Read more on InterNano

hydrophobic surfaces
Faraday Discussions 146:103-111

Nanoimprint Lithography for Functional Three-Dimensional Patterns
Advanced Materials 22(32):3608-3614

On the transition-metal doping efficiency of zinc oxide nanocrystals
Applied Physics Letters 97(7):073120

Light-driven Nanoscale Plasmonic Motors
Nature Nanotechnology 5(8):570-573

Affiliated Centers

CHM Center for Hierarchical Manufacturing University of Massachusetts Amherst

Center for High-rate Nanomanufacturing

Center for Nanoscale Chemical-Electrical-Mechanical Manufacturing Systems

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