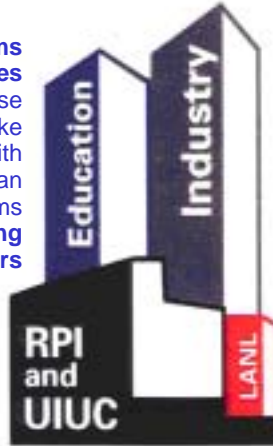




Nanoscale Science and Engineering Center for Directed Assembly of Nanostructures

www.rpi.edu/dept/nsec

K-12 Programs
Undergraduate Colleges
Morehouse
Mount Holyoke
Smith
Spelman
Williams
Distance-learning
Visiting Researchers



Industry Partners

ABB
Albany International
IBM
Eastman Kodak
Philip Morris
New York State



Rensselaer Polytechnic Institute

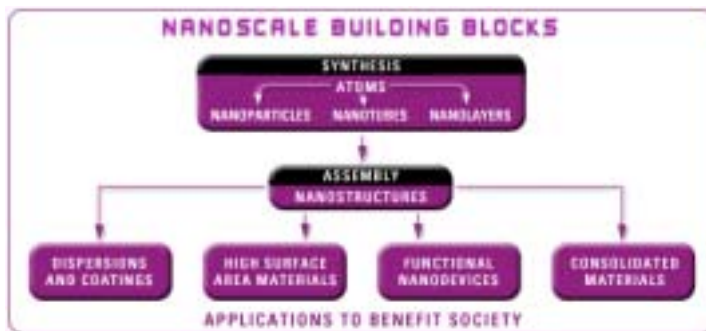


University of Illinois at Urbana-Champaign



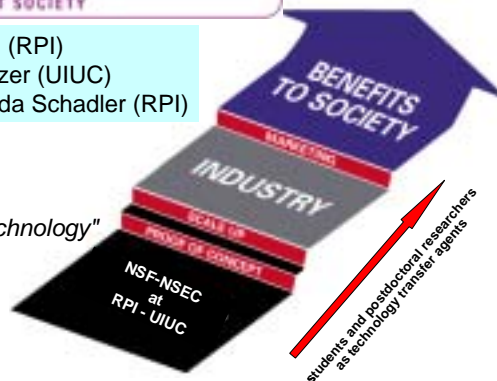
1st (2003)
Korea-US Nanoforum
Chang Yeol Ryu (RPI)

Founded September 2001



Director: Richard W. Siegel (RPI)
Associate Director: Ken Schweizer (UIUC)
Education & Outreach Coordinator: Linda Schadler (RPI)

"Socioeconomic Implications of Nanotechnology"
NSEC-funded project
by Lois S. Peters
(School of Management, RPI)



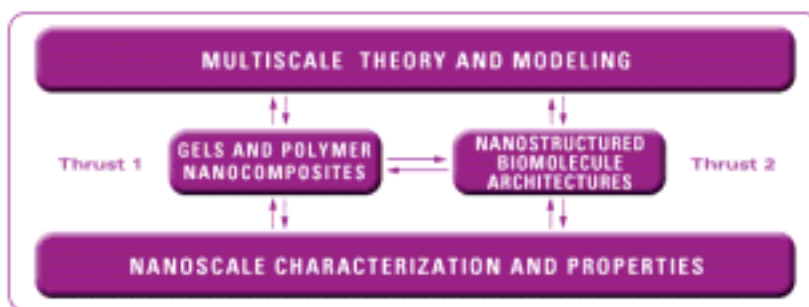


NSEC Research Groups Directed Assembly of Nanostructures

- Multiscale Theory and Modeling
: Group leader (Pawel Keblinski, RPI)
- Nanoparticle Gels and
Polymer Nanocomposites
: Group leader (Jennifer A. Lewis, UIUC)
- Nanostructured Biomolecules
Composite Architectures
: Group leader (Jonathan S. Dordick, RPI)
- Characterized Nanostructured Materials
: Group leader (Pulickel M. Ajayan, RPI)



Synergy & Multidisciplinary Approach on “**Nanomaterials**”



Session 3 (First Korea-US NanoForum)
Materials, Simulation, Fabrication and Education
2:05 pm – 2:25 pm, 10/14/2003 (Tuesday)



Assembling Nanomaterials

Richard W. Siegel

*Rensselaer Nanotechnology Center
Rensselaer Polytechnic Institute*



U. S. - Korea Forum on Nanotechnology
Seoul, Korea

14 October 2003



Education & Outreach Program

Coordinator: Linda S. Schadler (RPI)



Kindergarten through Grade 12

"BOAST"

"Bringing Nanotechnology to the Classroom"

"Explore Your Options"

"Nanoscope"

The Junior Museum Project

Turning Fun Into Scholarship
...and Kids Into Scholars

"The Molecularium"

Undergraduates

Educational Partnerships with Select Undergraduate Colleges

Nanotechnology Course Listing

Graduate and Continuing Education

Archer Center for Student Leadership

Co-op Program

Nanotechnology Course Listing

Professionals

Annual Workshops

Visiting Scholars

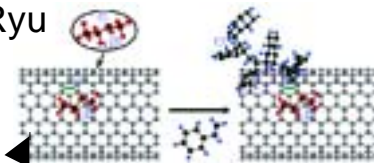




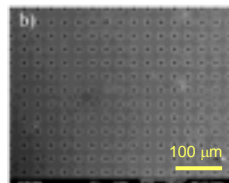
NSEC & my research

Chang Yeol Ryu

()
Trust I Seed



- Single Step In Situ Synthesis of Polymer-Grafted Single-Wall Nanotube Composites (Ryu & Ajayan) *J.A.C.S.-Comm* (2003) 125, 9258.
- Selective Positioning and Density Control of Nanotubes within a Polymer Thin Film (Ryu & Ajayan) *Nano Letters* (2003) 3(10), 1333. ▶



◀ Block Copolymer Nanopatterning

- Flexible Display TFT materials ▶
: Role of mesoscale morphology
“Nano-rods” in poly(hexyl thiophene)
(Ryu and Z. Bao) - *Poster*



0 μm 2 μm



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Thank you