

## Mission

**Mission:** UW NSEC addresses grand challenges associated with directed assembly of nanoscale materials into functional systems and architectures through the use of self-assembly, chemical patterning, and external fields. Science-media-public interactions, and environmental health and safety research are integral components of the Center.

## Education and Outreach



Installation and grand opening of the Carbon Playground at the Discovery Center Museum in Rockford, IL



Expansion of SCIENCountErs to four additional sites in four states. Program meeting at six clubs weekly



Playground structures built with x-ray crystallography data as blueprints



Completed Small Science Big Decisions project and disseminated nationally through the NISE Network

## Societal Implications

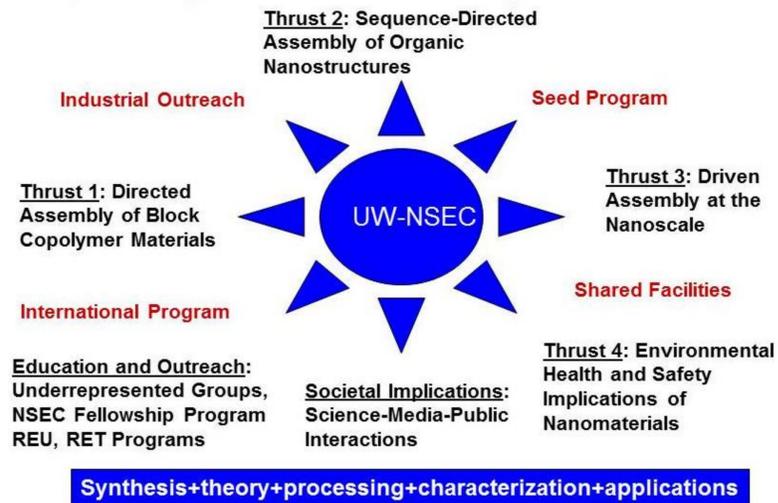
NSEC Informing the Debate on Nano Related Science Communication



## Industrial Partners

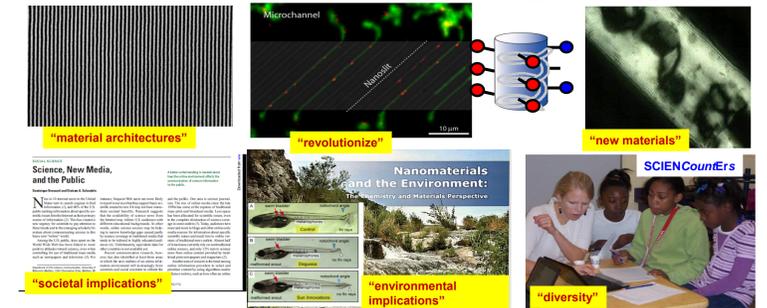


## Templated Synthesis and Assembly at the Nanoscale



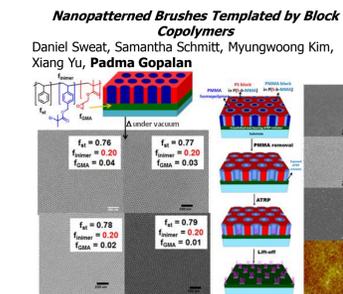
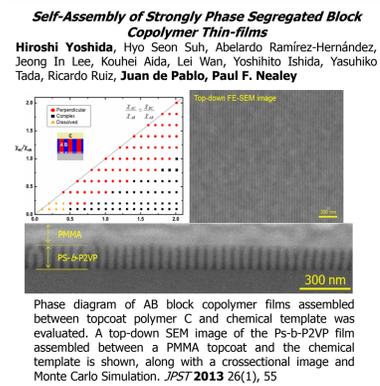
## Vision

**Vision:** Foster transformative and interdisciplinary research in directed assembly; investigate interactions between science, media and public; education teachers, students and public in nanoscale science and engineering.

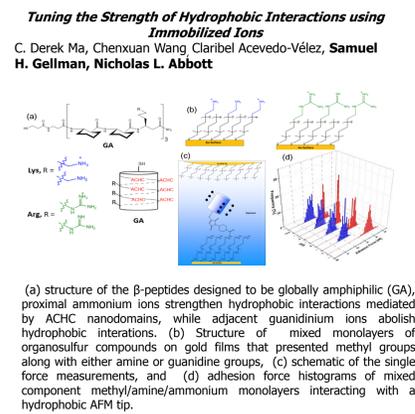


## Research Accomplishments

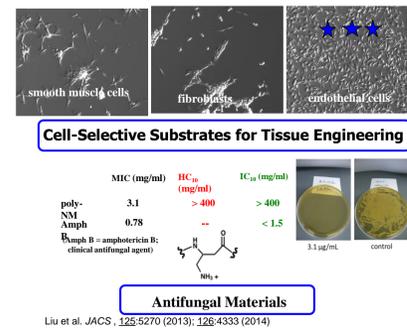
### Thrust 1-Directed Assembly of Block Copolymers Materials



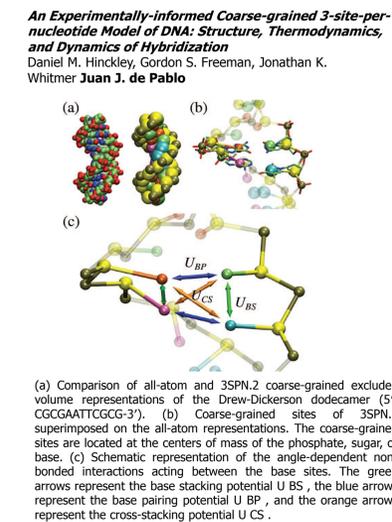
### Thrust 2- Sequence-Directed Assembly of Organic Nanostructures



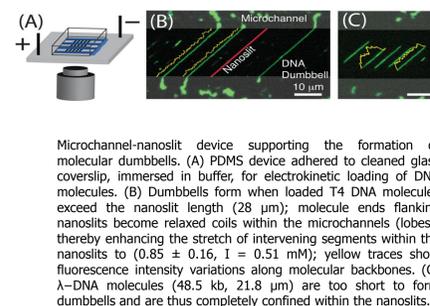
**Nylon-3 Co-Polymers: Discovery of New Bioactive Materials**  
 R. Liu, X. Chen, S.P. Falk, B. P. Mowery, A. J. Karlsson, B. Weisblum, S. P. Palecek, **K. S. Masters**, **S. H. Gellman**



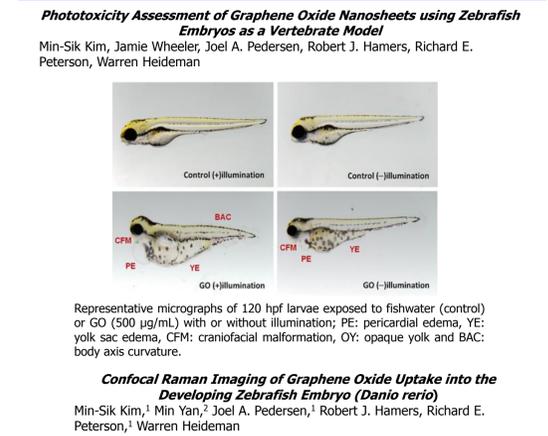
### Thrust 3- Driven Assembly at the Nanoscale



**Presentation of Large DNA Molecules for Analysis as Nanofinanced Dumbbells**  
 Kristy L. Kounovsky-Shafer, Juan P. Hernandez-Ortiz, Kyubong Jo, Theo Odijk, **Juan J. de Pablo**, **David C. Schwartz**



### Thrust 4- Environmental Health and Safety Implications of Nanomaterials



## Academic Partners



## Facilities

