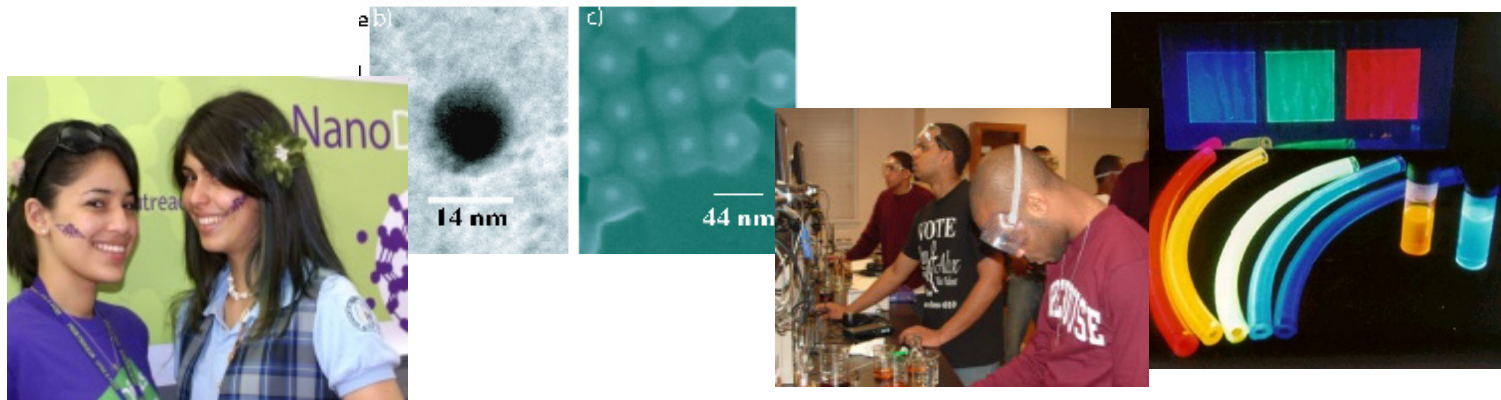


# Partnership for Research and Education in Materials (PREM)

- Results 2012 PREM Competition
- Current Demographics & Output Data
- Program Management
  - Annual Reports
  - Program Expectations



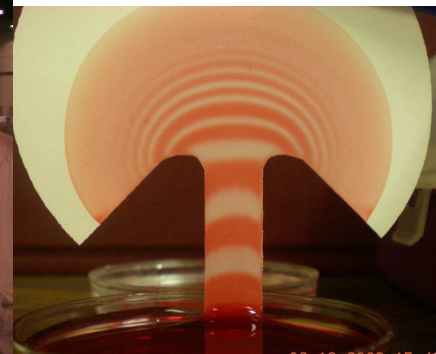
# Partnership for Research and Education in Materials (PREM)



Mary Galvin and Sean L. Jones  
PREM Program Directors  
*Tom Rieker (National Facilities)*



Boundary levels: 15°  
60.00  $\mu\text{m}$  = 40 steps IPF [100]



# 2012 PREM Competition

- Fourth PREM Competition.
- Solicitation NSF 11-562.
- Changes to solicitation:
  - Eligible institutions are minority serving institutions only.
  - Re-competing PREMs must include statement of "Broadening Participation Strategy and Results" and Broadening Participation Results Tables.
  - Cost sharing is no longer allowed - institutional support of the PREM now covered under "Facilities, Equipment and Other Resources", not letters of support.
- 24 Proposals submitted.
- 1 Returned Without Review due to non-compliance issues.
- 6 Awards made; \$18.05M Budget
- Awards range in size from \$475k/yr - \$650k/yr
- 2 new starts and 4 re-competing PREMs. Of these four, 2 have new partners.



# Class of 2009 and 2012

Institution	Partner	Research Focus
California State Univ. – Northridge	Princeton University MRSEC	Computational materials science
Howard University	Cornell Univ. MRSEC, Prince Georges Comm. College, Gallaudet University	Growth and transport studies - Topological Insulators and III-V materials
Jackson State University	University of California at Santa Barbara MRSEC	Organic electronics and sensors
Norfolk State University	University of Michigan MRSEC	Metamaterials and surface plasmons
+Texas State University San Marcos	Duke University (Triangle) MRSEC	Assembly of polymers, clay platelets and nanoparticles; Assembly of proteins
+University of Texas El Paso	University California Santa Barbara MRSEC	Organic Photovoltaics
Univ. of Puerto Rico Mayaguez	U Wisconsin MRSEC and NSEC	Biomaterials, soft materials, nanoporous materials for catalysis
+Clark Atlanta University	GA Tech MRSEC	Graphene – computational and surface functionalization and surface char.
Univ. of Puerto Rico -Humacao	U Penn MRSEC	Nanoelectronics, photonics, biosensors
+New Mexico Highlands Univ.	U Washington STC, Ga Tech, Morehouse College	Biophotonics, solar cells
+City College of New York	Chicago MRSEC	Nonequilibrium dynamics, soft materials
+Univ. of Texas – San Antonio	Northwestern MRSEC	Biomaterials
+Univ. of Texas - Pan American	Minnesota MRSEC	Polymer composites, Organic electronics, porous mtl's for energy appl
+Xavier University of Louisiana	NYU MRSEC	Batteries, biomaterials, organic crystals

Class of 2012

Class of 2009

+ New starts

# Current Demographics

	<b>Total *</b> <b>(affiliated)</b>	<b>Women</b> <b>%</b>	<b>Under-represented</b> <b>minorities</b> <b>%</b>
<b>Faculty at PREM</b>	92(20)	30	61
<b>Faculty at Partner Inst.</b>	68(31)	15	18
<b>Post-docs</b>	36(21)	17	36
<b>Graduate students</b>	100(34)	31	54
<b>Undergraduates</b>	131(44)	37	92

\* Total = NSF PREM supported + affiliated (non-PREM support)

Data from 2012 Annual Reports for the 8 PREMs of 2009 Class  
2006 PREMs Finished in 2011-2012



# Output and Productivity

	Class 2004	Class 2006	Class 2009 YR3
<b>Average Number of Publication/Year</b>	16	12	12
<b>Average Number of Publications with 2 or more PREM Faculty/Year</b>		4	
<b>Average Number of Publications w/ Partner Faculty</b>		3	
<b>Total Patents Awarded</b>	0	1	1
<b>Total Patents Pending</b>	7	7	5
<b>Total Patents Licensed</b>	1	1	0

- Publish! – looking for all faculty to be productive not just 1 or 2.
- Co-Publish within the PREM – this is a group research award.
- Co-publish with the partner – again, this is a group research award



# Annual Reports

## Executive Summaries –

- Present the most important achievements of the PREM for the year.
- 2 page “Elevator Pitch” – major accomplishment/finding in the research, building the pipeline, and education/outreach activities.

## Research Accomplishments and Plans –

- What was accomplished (not detailed list of experiments).
- Why it was done, i.e. the motivation.
- What ‘s next.

## Data Tables –

- NEW – students that participated in REU ONLY. Unless the student participated in year-round PREM activities, this student should not be listed in your cumulative list or counted in the data tables.

## Publications –

- Reminder that only publications that acknowledge PREM support should be listed here. The best acknowledgements will give both award number and mention “PREM”.

## Highlights –

Much better this year!



# PREM Expectations

- **Broaden participation in materials research at all levels.**
- Create new opportunities for students at minority-serving institutions .
- **Build competitive and sustainable research initiatives and culture through publishing and grantsmanship.**
- Integrated research and education programs.
- Enhance capacity and infrastructure.
- **Impact both institutions – research, education, outreach, culture.**
- Close interactions **with partner institution** and NSF Program Managers.







# Q&A