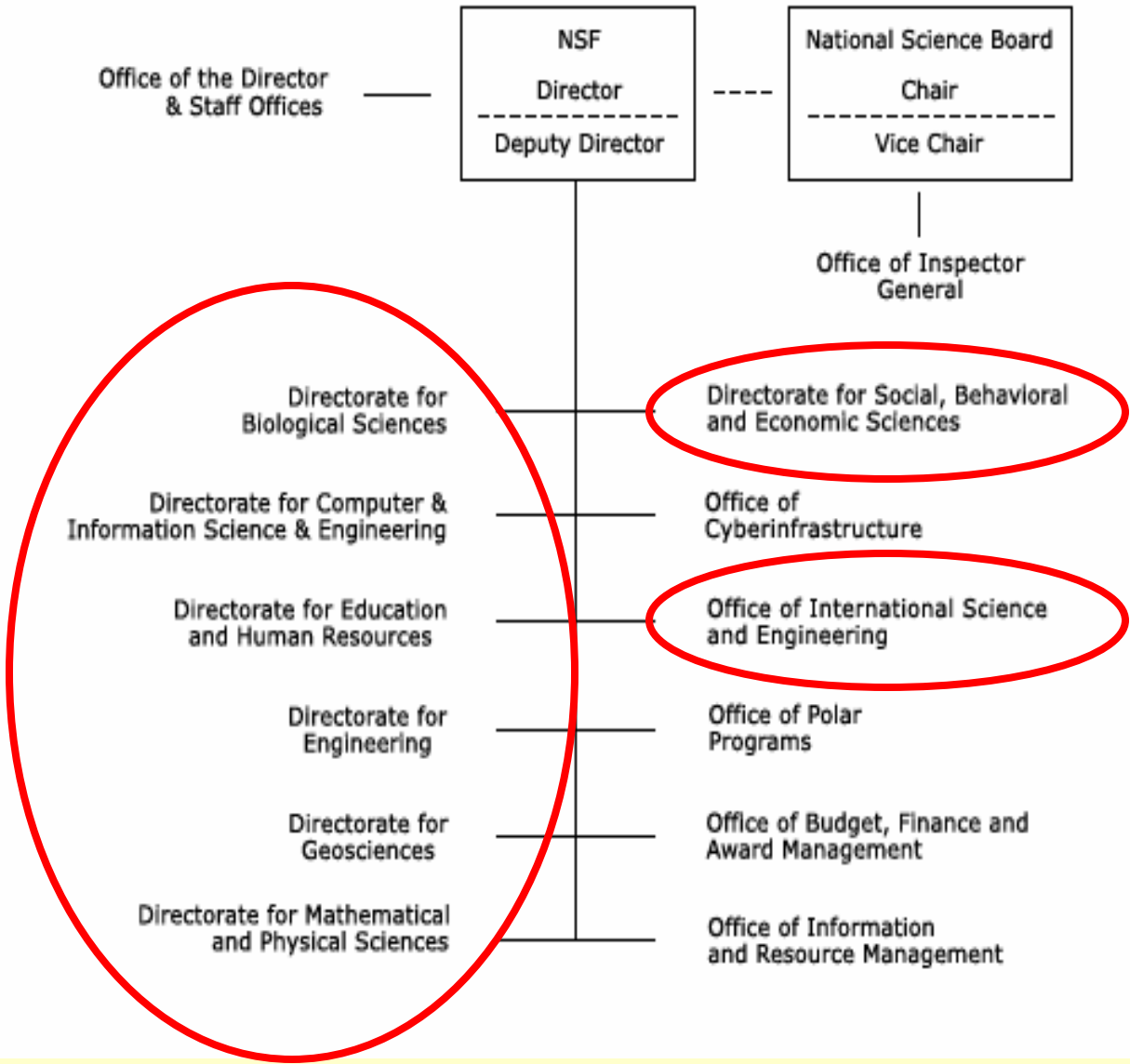




NANO AT NSF

National Science Foundation





National Science Foundation by Directorate

National Nanotechnology Initiative Funding

(Dollars in Millions)

	FY 2006 Actual	FY 2007 Request	FY 2008 Request	Change over FY 2007	
				Amount	Percent
Biological Sciences	\$49.00	\$52.55	\$55.55	\$3.00	5.7%
Computer and Information Science and Engineering	10.42	12.87	11.00	-1.87	-14.5%
Engineering	127.77	137.02	139.02	2.00	1.5%
Geosciences	9.00	9.65	9.65	-	-
Mathematical and Physical Sciences	158.24	156.42	169.91	13.49	8.6%
Social, Behavioral and Economic Sciences	1.56	1.67	1.67	-	-
Office of International Science and Engineering	0.48	-	-	-	-
Subtotal, Research and Related Activities	\$356.47	\$370.18	\$386.80	16.62	4.5%
Education and Human Resources	3.24	3.00	3.10	0.10	3.3%
Total, National Nanotechnology Initiative	\$359.71	\$373.18	\$389.90	16.72	4.5%



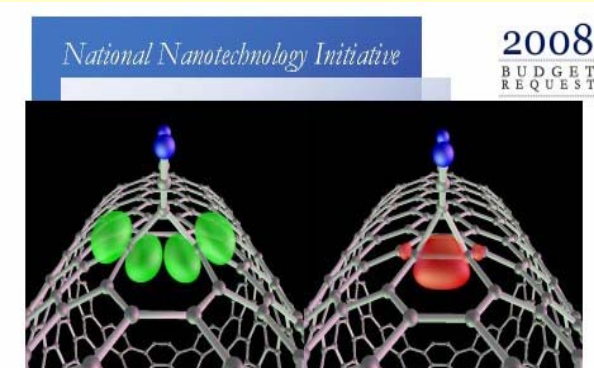
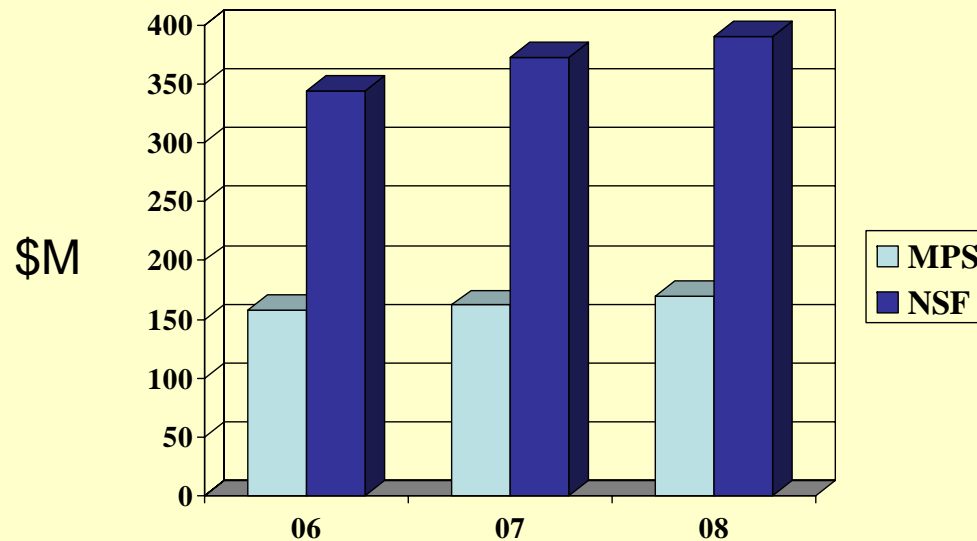
Nanoscale Science and Engineering

Wide Spectrum of Topics and Support Modes

Individuals, Groups, Centers, Networks, Facilities, SBIR...

FY 08 REQUEST \$390M (NSF), via all Directorates

<http://www.nsf.gov/crssprgm/nano/>



Functionalized nanotubes

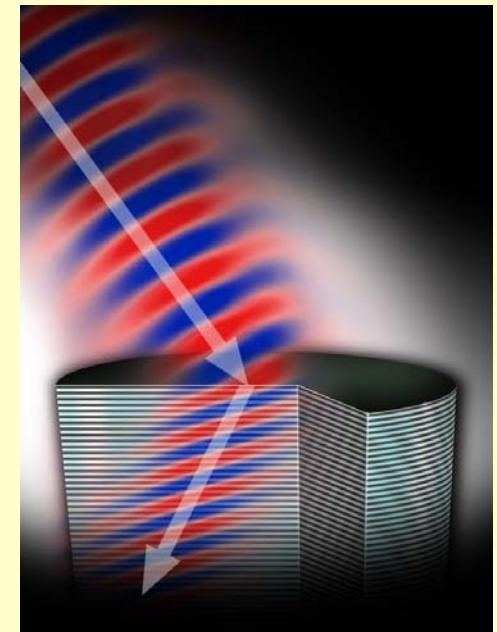
Marzari group, MIT

NSF support for nano is mostly 'mainstreamed' via *unsolicited* proposals (individuals and groups); via centers competitions; or for instrumentation & facilities



Nanoscale Science and Engineering NNI Program Component Areas FY 2008 NSF Request (\$M)

• Fundamental phenomena and processes	142.7
• Nanomaterials	60.2
• Nanoscale devices and systems	51.1
• Instrumentation research	14.5
• Nanomanufacturing	26.9
• Major facilities and instrument acquisition	31.6
• Societal dimensions	62.9
• <i>Environmental, health & safety impacts</i>	
• Educational aspects	
• Broad implications for society	
• TOTAL	\$389.9M



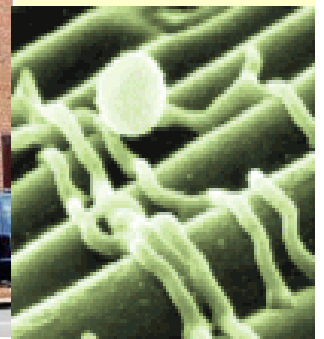
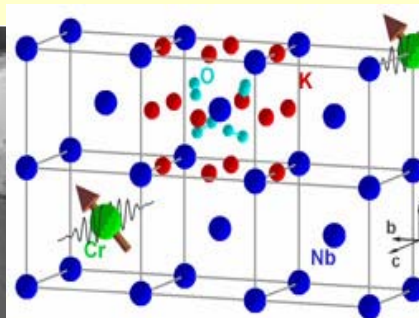
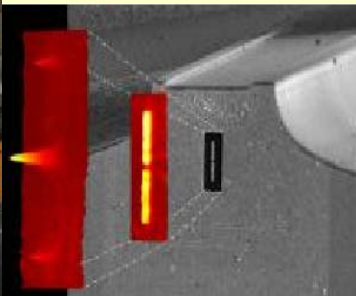
Metamaterials

Princeton MRSEC & ERC



Diverse Funding Modes Support Nano

- Individual investigator awards (unsolicited proposals mostly)
- Interdisciplinary teams (NIRTs) – mainstreamed on renewal
- Centers – NSECs, MRSECs, ERCs, STCs, NCLT
- Instrumentation (via MRI and disciplinary instrumentation programs such as IMR in materials)
- Facilities and Networks such as the NNIN, NHMFL etc etc
- Workshops, symposia, international collaboration



NSF 07-593 Deadline 1/30/08

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MPS Funding

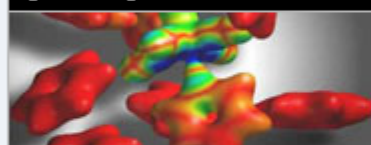
MPS Awards

MPS Discoveries

MPS News

About MPS

Chemistry (CHE)



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[Publications](#)

[Career Opportunities](#)

[Chemistry Proposal Window](#)

International Collaboration in Chemistry between US Investigators and their Counterparts in Germany, United Kingdom and China (ICC)

CONTACTS

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CONTACTS AT INTERNATIONAL PARTNERING AGENCIES

Germany (DFG)

Dr-Ing. Georg Bechtold
Deutsche Forschungsgemeinschaft (DFG)
Chemie und Verfahrenstechnik-
Polymerwissenschaft
D-53170 Bonn
Tel: +49 (228) 885-2818
e-mail: georg.bechtold@dfg.de



International Activities in Materials

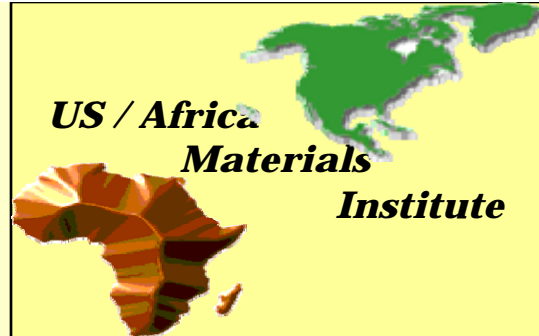
DMR Office of Special Programs
Carmen Huber – chuber@nsf.gov

The primary goal is to enhance international collaboration in materials research, education and technology

- 1995-2005: a series of international (regional) workshops was held, leading to...
- ***NSF - Materials World Network***
 - *Annual competition, 182 awards to date*
 - *NSF funds the US side of a bilateral or multilateral collaboration*
- ***NSF - International Materials Institutes***
 - *Competitions in 2003 and 2005, 6 awards to date, enhancing US-international collaboration via a network of campus-based nodes*
 - *Next competition FY09*



H. Jain (Lehigh),
C. Pantano (Penn State)
<http://www.lehigh.edu/~inimif/home.htm>



W. Soboyejo (Princeton)
<http://usami.princeton.edu>



*Advanced Neutron
Scattering netWork for
Education and Research*
P. Liaw (UT-Knoxville)
ORNL, others
<http://answer.utk.edu>



IMIs
\$600-700 K/yr each

I2CAM

*International
Institute
for Complex
Adaptive Matter*
D. Cox (UC-Davis)
UC system, others ...
<http://www.i2cam.org>



International Center for Materials Research



Nicola Spaldin (UCSB)
<http://www.icmr.ucsb.edu>



CoSMIC | International Materials Network | Research Activities | Research Nuggets | Collaboratory | Educational Outreach

K. Rajan (Iowa State)
Maryland, Florida Int.
<http://mse.iastate.edu/cosmic-imi/overview.html>

NSF 07-574 (deadline was 11/13/07)
Next competition Fall 2008



National Science Foundation
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Mathematical & Physical Sciences (MPS)

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Materials World Network: Cooperative Activity in Materials Research between US Investigators and their Counterparts Abroad (MWN)

CONTACTS

Name	Email	Phone	Room
Dr. Carmen Huber	chuber@nsf.gov	703-292-4939	Office of Special Programs

Contacts at other organizations:

Contact information in participating countries or regions is provided for the convenience of researchers in those countries or regions. Questions from US investigators should be directed to NSF.

Africa-USA Materials Collaboration Contacts:

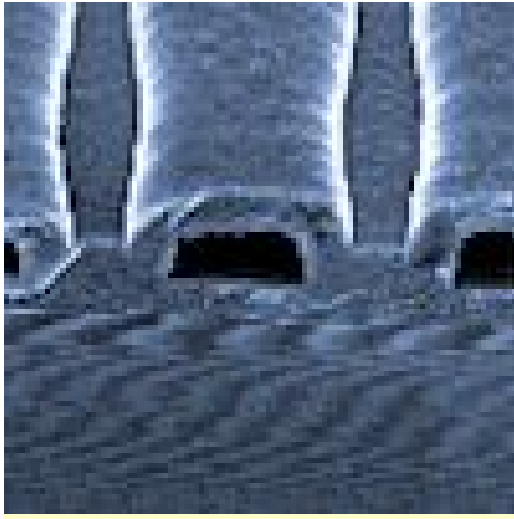
The Materials World Network

Since 2001 ~950 NSF proposals, 182 awards totalling \$67M

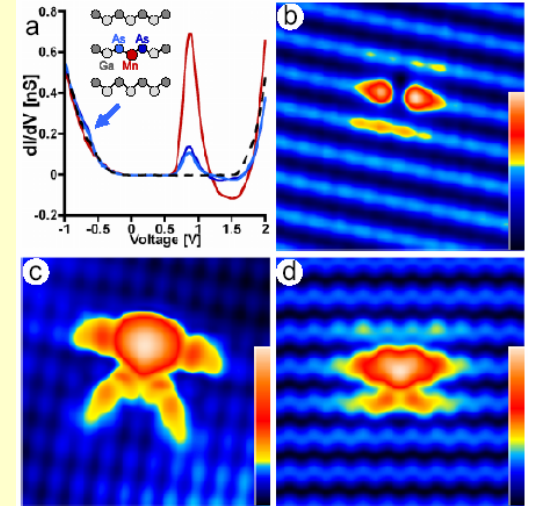


Dots indicate
partnership-
funded awards

NSF's International Materials Institutes are also developing worldwide partnerships that include Asia and Africa...



Thank you!



lhaworth@nsf.gov

<http://www.nsf.gov/dir/index.jsp?org=MPS>

