

Overview of Argonne's Center for Nanoscale Materials: A U.S. Dept. of Energy Nanoscale Science Research Center

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Programs*



Synthesis, fabrication, characterization and theory of materials at the nanoscale

<http://nano.anl.gov>

Dept. of Energy Nanoscale Science Research Centers (NSRCs)

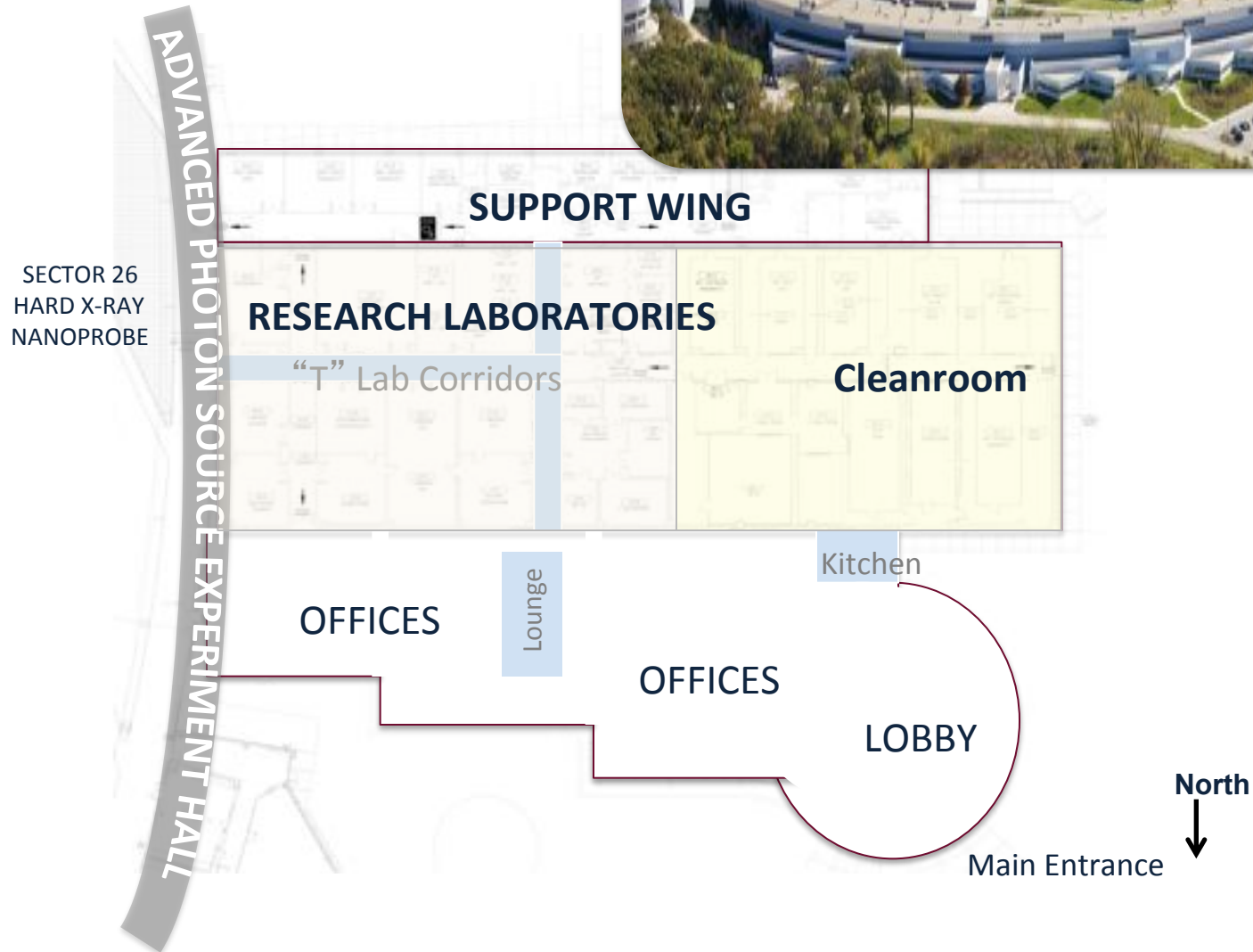


CNM Sponsors and Users

- The CNM is funded by the U.S. Dept. of Energy, Office of Science, Office of Basic Energy Sciences
- As a division, DOE funds the research and support activities of 70 staff members
- As a user facility, DOE funds the infrastructure that is available to more than 450 researchers per year (the user community)
- The user community is made up of scientists within Argonne and also external to Argonne and the DOE system

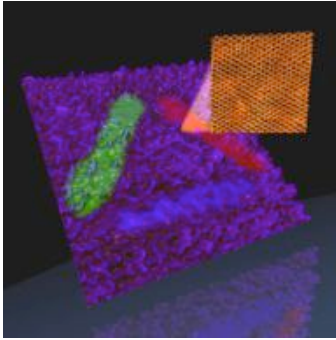


CNM Facility - 1st floor of 440



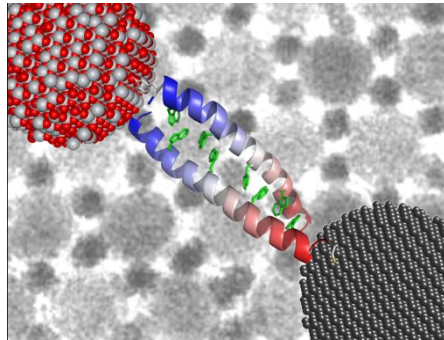
Six research groups at CNM

Electronic and Magnetic Materials and Devices



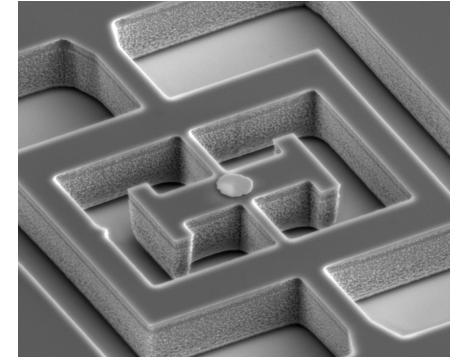
Charge- and spin-based materials for energy and information transport

NanoBio Interfaces



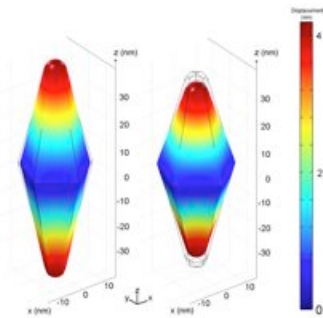
Bio-inspired materials and processes for energy transduction

Nanofabrication and Devices



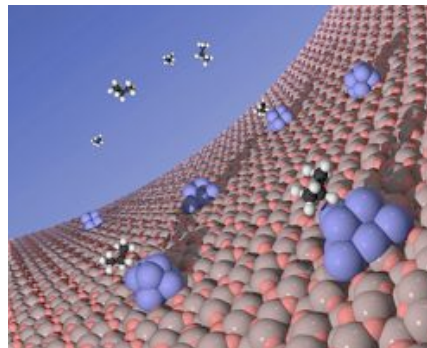
Nanoscale materials and structures for new device functionality

Nanophotonics



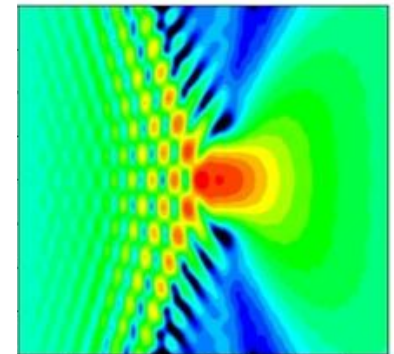
Understand and control optical energy pathways

Theory and Modeling



Theoretical explorations of nanoscale phenomena

X-ray Microscopy



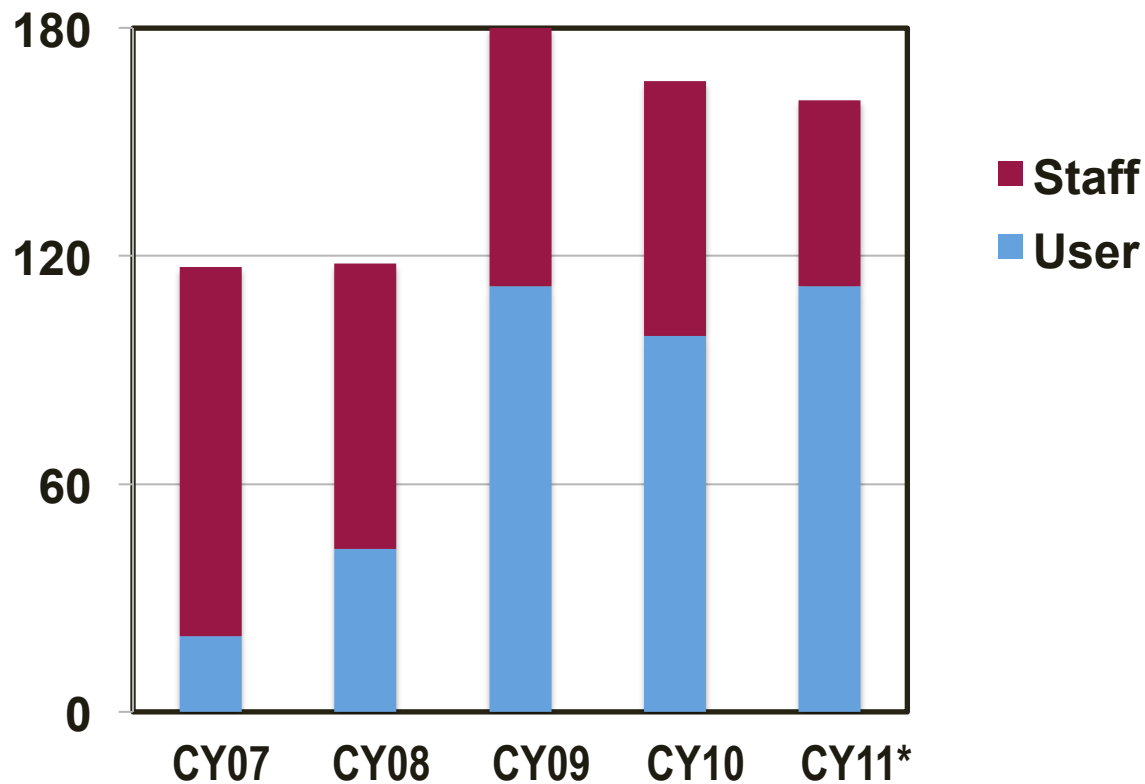
Create images of the nanoworld with hard x-rays

Dual role of CNM research staff

- CNM research staff perform their own ‘core’ research which is under the auspices of DOE BES for mission, review, and accountability: CORE SCIENCE
- CNM research staff also perform service to the user community either by collaboration or by instruction: USER SCIENCE
- The CNM gives equal importance to both roles

Metrics for DOE Reviews: Scientific Impact

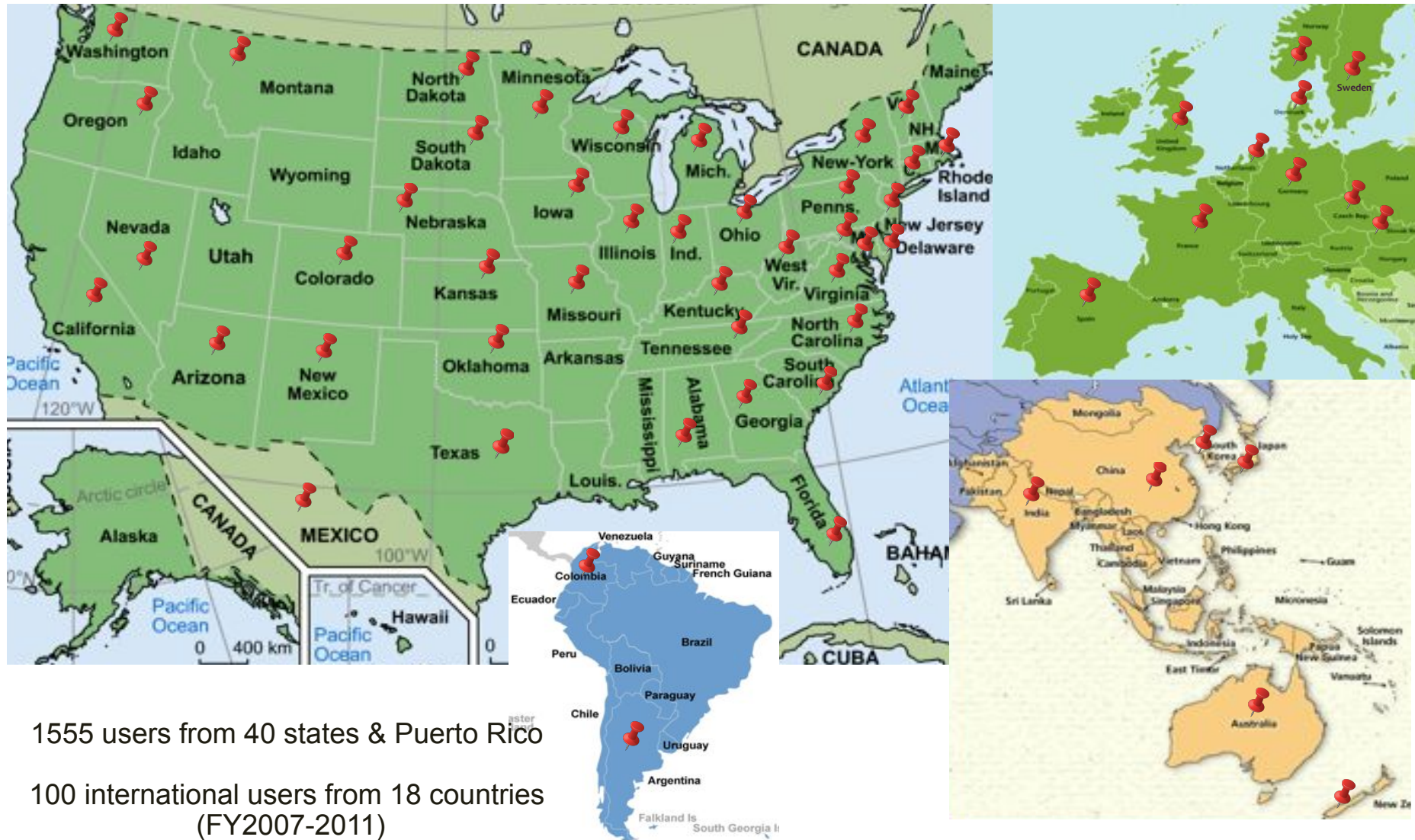
CNM Publications



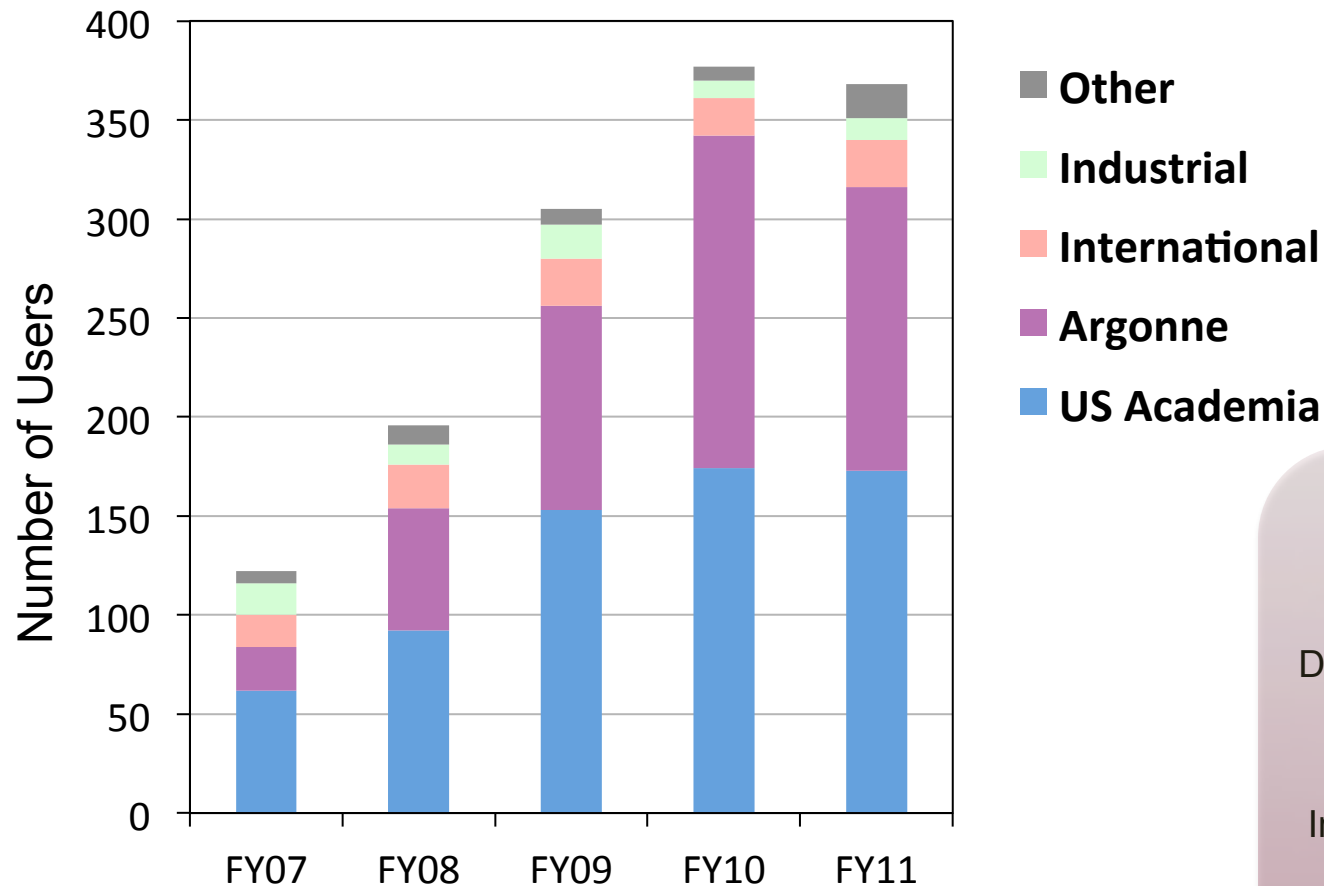
*Jan-Sept 2011



CNM's User Community



CNM's User Community



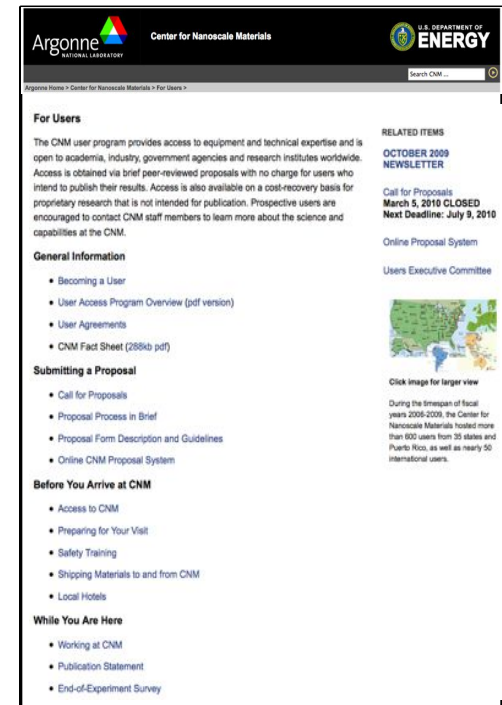
Industrial Users

ADT, Inc.
Creatv Microtech
Diamond Light Sources, Ltd.
Euclid Techlabs
IBM
Hewlett-Packard
Industrial Research Limited
Lake Shore Cryotronics
McCrone Associates
Nalco
Packer Engineering
Seagate

CNM User Access

- Open submittal and review processes
 - public information on website
 - 3 calls per year
 - Multi-facility proposal portal
 - projects last for up to one year
 - Access is free for non-proprietary work
- Flexible access modes
 - Proprietary & non-proprietary
 - Collaborative & independent
 - General & partner
- Reviews & allocations based on feasibility & scientific merit
 - internal technical feasibility
 - external, 100+ member Proposal Evaluation Board
- Notifications occur within 6-8 weeks
- CNM Facility is open 40 hours/week

<http://nano.anl.gov>



*423 Institutions with Argonne
Master User Agreements in
place (as of 9/13/11)*



CNM User Focus: Satisfaction & Feedback

- End-of-experiment form link is sent at the completion of every project
- Annual satisfaction surveys are distributed (approx. 15% response rate)
- Informal feedback from user to their CNM scientific contact
- Direct contact with CNM user office
- Users Executive Committee acts as a liaison between users and CNM
- Comments are distributed to staff/groups/mgmt from the user office

End-of-Experiment Survey

Project Information
1. What is your proposal number? <input type="text"/>
Administrative Support
1. The processing of my experiment proposal was:
<input type="radio"/> Excellent <input type="radio"/> Satisfactory <input type="radio"/> Marginal <input type="radio"/> Unsatisfactory
2. The efficiency of the processing and orientation procedure was:
<input type="radio"/> Excellent <input type="radio"/> Satisfactory <input type="radio"/> Marginal <input type="radio"/> Unsatisfactory
3. The documentation available on the CNM web site to prepare you for your visit was:
<input type="radio"/> Excellent <input type="radio"/> Satisfactory <input type="radio"/> Marginal <input type="radio"/> Unsatisfactory
Comments about overall support:
<input type="text"/>
Environment, Safety and Health (ES&H)

http://nano.anl.gov/users/user_survey.html

Basic Energy Sciences (BES) Annual Facilities Questionnaire

Facility: Center for Nanoscale Materials, Argonne National Laboratory
Fiscal Year: October 2009 through September 2010

USER SATISFACTION Mini-Survey

Please put an "X" in the box above only one answer for Questions 1-4 or mark NA if the question does not apply.

1	How satisfied were you with the fraction of the year that the facility operates?					
	51	19	1			2
	5	4	3	2	1	NA
	Very Satisfied	Satisfied	Neither Satisfied Nor Dissatisfied	Dissatisfied	Very Dissatisfied	Not Applicable
2	How satisfied were you with the schedule or service (i.e., was the time or service delivered on schedule and was downtime kept to a minimum)?					
	45	22	2	2	1	2
	5	4	3	2	1	NA
	Very Satisfied	Satisfied	Neither Satisfied Nor Dissatisfied	Dissatisfied	Very Dissatisfied	Not Applicable
3	How satisfied were you with the performance (i.e., was service maintained close to specifications)?					
	46	22	2	1		2
	5	4	3	2	1	NA
	Very Satisfied	Satisfied	Neither Satisfied Nor Dissatisfied	Dissatisfied	Very Dissatisfied	Not Applicable
4a	How satisfied were you with the support for users provided by the facility staff?					
	59	12	1	2	1	1
	5	4	3	2	1	NA
	Very Satisfied	Satisfied	Neither Satisfied Nor Dissatisfied	Dissatisfied	Very Dissatisfied	Not Applicable

CNM Sponsor & User Focus: Communication

Staff Core Science:

- Scientific Advisory Committee reviews
- Monthly NSRC conference calls with DOE
- Annual DOE NSRC Director Meetings
- Triennial DOE NSRC Contractor's Meetings

User Science:

- Annual Users Meetings
- Triennial newsletters
- Other technical workshops
- User Executive Committee meetings



Users
Meeting

Advanced Photon Source
Center for Nanoscale Materials
Electron Microscopy Center

May 2-5, 2011

- * Plenary Session
 - Views from DOE, Argonne &
 - Facility Status Updates
 - Keynote Presentations
 - User Science Highlights
- * Vendor Expo
- * Poster Session
- * Short Courses
- * Thematic & Facility Workshops

