NCI Southwest

The Nanotechnology Collaborative Infrastructure Southwest

building a southwest regional infrastructure for nanotechnology discovery, education and innovation.

MARICOPA COMMUNITY COLLEGES

ASU

SCIENCE foundation ARIZONA INNOVATION AT WORK

Research Centers

Take advantage of our cutting edge facilities and resources. To find out more, click on one of the nanotechnology centers below.

LeRoy Eyring Center for Solid State Science
Open access to advanced facilities and equipment

PROFILE

ASU NanoFab
A flexible nano-processing facility

PROFILE

The Center for Nanotechnology in Society
Studies the societal impacts of nanotechnology

PROFILE

Solar Power Lab
Staging ground for sustainable energy technology

PROFILE

Center for the Life Cycle of Nanomaterials
Interdisciplinary team studying the trade-offs between the intended use of engineered nanomaterials and the potential risks

PROFILE

Peptide Array Core
Offering peptide microarrays and processing

PROFILE

Funded, in part, by a grant from the National Science Foundation. DUE 1542160

The NCI Southwest is a regional center in the NNCI

National Nanotechnology Coordinated Infrastructure

Education

Education and community outreach is at the heart of our mission. Find out more about our research experiences, webinars, outreach, and remote access opportunities below.

More REU Action: Building components for a bio-sensor (left), and inspecting silicon wafers in a cleanroom (right).

Research Experiences

We are pleased to fund summer research programs for teachers and undergraduates. Information and applications for the 2017 program for undergraduates are now available.

Information for 2017 REU

Use the link below to learn about the 2016 programs.

View 2016 Highlights

Remote Access

We are pleased to partner with the national RAIN Network to offer free remote access to nanotechnology instruments from the ASU NanoFab.
Bring the technology from our lab into your classroom. You can remotely control a scanning electron microscope to look inside the nano world!

More Information

Request a Remote Access Session

Webinar Series

Our 2016 nanotechnology webinar series is underway.

View Webinars

Outreach

We conduct outreach programs with K-12 schools and the general public year-round.

View Activities

NCI-SW Events Calendar

Educational Activities

- Remote access electron microscope used in K-12 classrooms across the state and for public events.
- Partnering with Rio Salado College at ASU's "Night of the Open Door" and Tempe's "Geeks Night Out".
- Lab tours of ASU centers for > 700 grade school and community college students.

- REU and RET participants from Scottsdale CC and Navajo Technical University.
- NTU students presented at the Workshop on Crystalline Silicon Solar Cells, Vail, CO, Aug. 2016.

- Cleanroom "Virtual Field Trip" – panoramic tour as a platform for on-line teaching materials.

  http://vft.asu.edu/vftvr/nanofab/

  http://vft.asu.edu/VFTNanofab/panos/nanofab/cleanroom.html

SEI Activities

- Hosting external users to better understand tools for developing future scenarios.

- "Science Outside the Lab" workshop in Washington, DC.

Computational Activities

- Dragica Vasileska coordinates the NCI-SW computational nanoelectronics activity.
- She is converting her ASU "Semiconductor Device & Process Simulation" class into a nanoHUB course.
- 20-30 thirty minute lectures that use device modeling scripts running Padre, the nanoHUB drift-diffusion simulator.

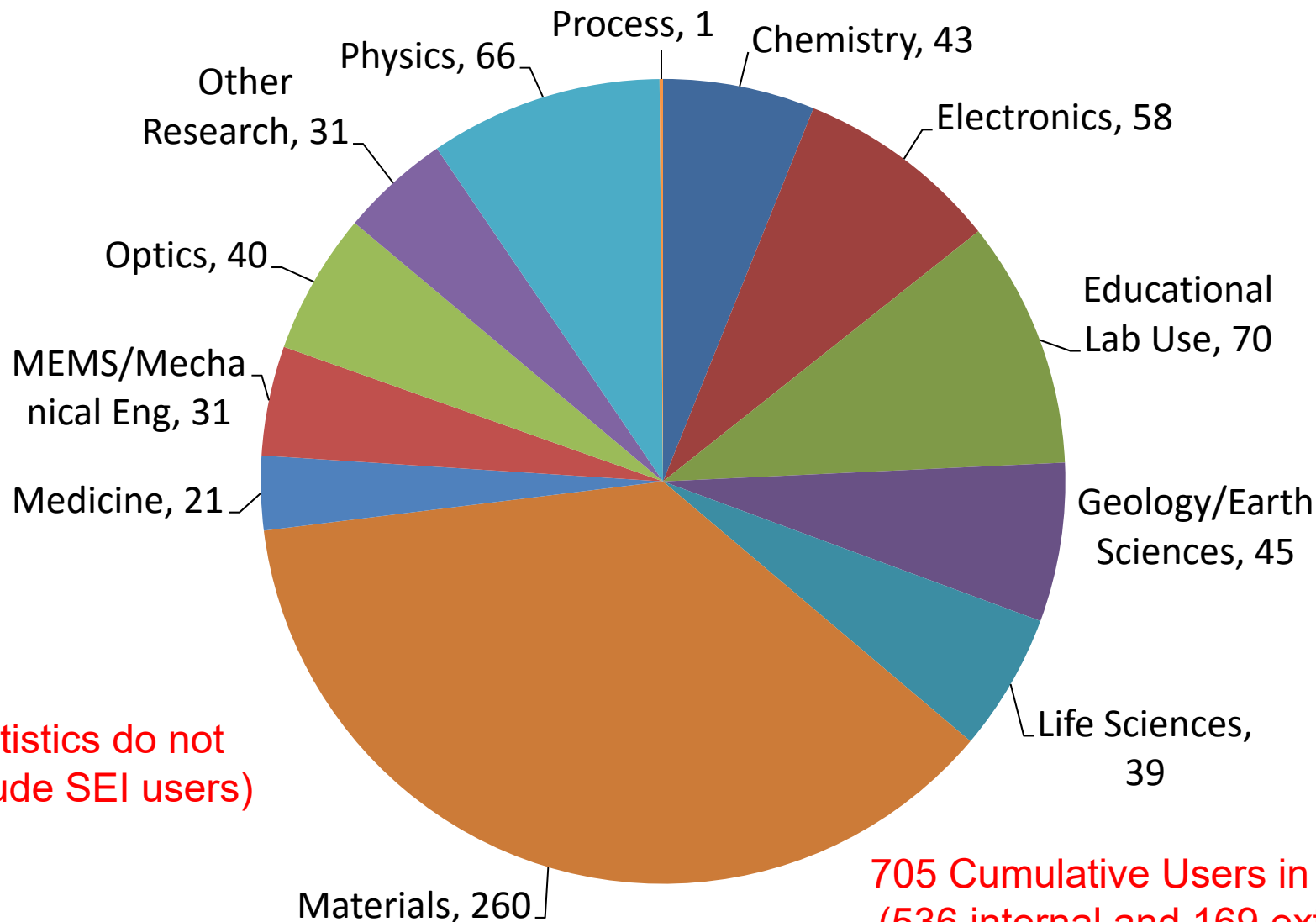https://nanohub.org/members/9736/usage
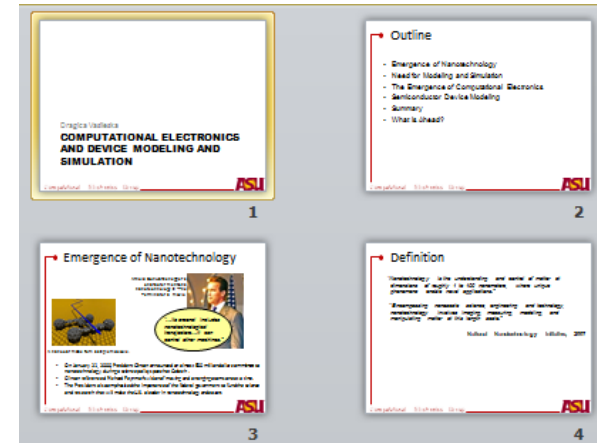
Network Activities

- Science Outside the Lab

- Workforce development sub-committee

  Thornton (ASU), Gamble (UW), Healy (GA Tech),
  McNamara (Louisville), Sellmyer (Nebraska), Wilson (Harvard)

  Kick-off meeting held 7 Nov 2016. Addressed several questions related to leveraging NNCI capabilities for community colleges and local industries. Several action items….

User Statistics

NCI Southwest

ASU

(Statistics do not include SEI users)

705 Cumulative Users in Year 1
(536 internal and 169 external)

Pie chart segments:
- Process, 1
- Chemistry, 43
- Electronics, 58
- Educational Lab Use, 70
- Geology/Earth Sciences, 45
- Life Sciences, 39
- Materials, 260
- Medicine, 21
- MEMS/Mechanical Eng, 31
- Optics, 40
- Other Research, 31
- Physics, 66

Future Plans

- Recruit Science Outside the lab participants from across the NNCI

- Complete the first stage of the Virtual Field Trip on-line classroom

- Continue building links to non-traditional users in the geological and health-care communities

- Develop entrepreneurship 'boot-camp' program