

Research Administration: To build interdisciplinary programs, across schools and universities through effective analysis, consensus building, and strategic investment of resources

Established NSF supported National Nanotechnology Infrastructure Network (NSF-NNIN) Site at Washington University in St. Louis:

1. Opened dialogue with Cornell University and solicited the possibility to include WUSTL as a new site added to the existing NSF-NNIN with other 13 institutions across the nation for an NSF grant renewal effort (11/2007)
2. Received invitation from Cornell University to join the NSF-NNIN renewal effort and appointed as the PI by the Dean of SEAS and Vice Chancellor for Research. The Program was designed to report to the Vice Chancellor's office for Research (1/2008).
3. Opened direct dialogue with Chancellor Wrighton, Provost Macias, Professor Solin – the Director of Center for Materials Innovation (CMI) – and we identified the future home of shared research facilities for both NNIN-WUSTL and CMI to be located at the Earth & Planetary Science (EPS) Building (4/2008).
4. Represented SEAS to participate key discussion on financial plan for the renovation of research facilities with Vice Chancellor Office for Research and Vice Chancellor for Finance.
5. Represented SEAS to design research facilities, perform cost analysis, and develop business plans for future operation of the facilities (6-8/2008)
6. Received financial support from A&S and CFU with capital commitment for renovating 8000 sqft space in the EPS building (8/27/2008).
7. Represented SEAS to oversee facility renovation and solicited equipment funding to develop unique technical capabilities at the NNIN-WUSTL (10/2008-2/2009).
8. Built NNIN-WUSTL staff team and recruited three technical staff and one administrative staff (1/2009-2/2009).
9. Established the Nano Research Facility – the new site of NNIN at WUSTL– for operation and launched the website at www.nano.wustl.edu (3/1/2009).
10. Organized “1st Nanotechnology Symposium for Public Health, Environment, and Energy” with invited speakers from other institutions, federal agencies (NSF, NCI, FDA, DOE), and faculty/students from SEAS, A&S, and WUSM, as well as UMSL, STL, and Mizzou (9/24-25, 2009 & Appendix 5 for a copy of the program and 207 participant statistics).

Established St. Louis Institute for Nanomedicine

1. Represented SEAS and collaborated with Wickline (WUSM) and Wooly (A&S) to work on the grant application of Missouri Life Science Research Board (MLSRB) for establishing St. Louis Institute for Nanomedicine (6-9/2009).
2. Represented SEAS and Danforth campus to serve on the executive committee for the Institute in collaboration with SOM, UMSL, SLU, and community colleges (2009-2012).

Participated in grant applications for research infrastructure, major instrumentation, international research collaboration, graduate traineeship, and education outreach

1. NSF–National Nanotechnology Infrastructure Network (NSF-NNIN)
PI–Dong Qin, \$2,500,000 (3/2009-2/2014)
PI–Dong Qin, NSF-NNIN-REU, \$187,500 (3/2009-2/2014)

- PI–Dong Qin, NSF-NNIN-ARRA-MRI, \$390,000 (9/2009-8/2010)
2. MLSBR–St. Louis Institute for Nanomedicine
PI – Sam Wickline (WUSM); Co-PI – Dong Qin, \$1,500,000 (2009-2012)
 3. NSF–MRI: Acquisition of a Reactive Ion Etching, Inductively Coupled Plasma Tool for Nanofabrication
PI–Stuart Solin (A&S), Co-PIs: Viktor Gruev (SEAS), William Buhro (A&S) and Dong Qin, \$373,450
 4. NIH–NCRR-SIG: Integrated Two Photon/Photoacoustic Confocal Systems
PI–Lihong Wang (SEAS) with 9 participants from SEAS, A&S, and WUSM, \$1,300,000, 2009 (Dong Qin provided support and coordination, this proposal received an NIH impact score of 10, which is the best of (10-90)).
 5. MLSRB–Acquisition of a TEM with Cyro and Tomography for Biological Applications
PI–Robert Blankenship (A&S), Co-PIs–Howard Berg (Donald Danforth Plant Science Center), and Dong Qin, \$1,000,000, 2009, pending
 6. NSF–RET–Bring Nanotechnology to the Classroom
PI–Dong Qin, \$236,425, 2010-2013, 2010, pending
 7. NSF–PIRE Pre-proposal: International Partnerships for Responsible Development of Nanotechnology
PI–Dong Qin, \$3,113,620, 2010-2015, declined
 8. NSF–RET–Building the Nanotechnology Workforce for Tomorrow
PI–Dong Qin and Co-PI–Chris Roman (Saint Louis Science Center), \$373,425, 2009-2012, declined
 9. IGERT: Discovering Nanomaterials for Life Science Applications
PI–Younan Xia (SEAS); Co-PIs–Daren Chen (SEAS), Sophia Hayes (A&S), Stavros Thomopoulos (Orthopedic Surgery, WUSM), and Dong Qin, 2009-2014, declined
 10. NIH–NCRR-SIG program: Ultrasonic Imaging System with Linear Array Technology and Color Doppler
PI–Lihong Wang (SEAS) with 15 participants from SEAS, A&S and WUSM, \$400,000, 2009, declined (Dong Qin provided support and coordination).

Worked with Vice Chancellor’s Office for Research:

1. Represented SEAS to participate in Associate Dean for Research Working Group
2. Served on the task force committee to assess the current practices at Washington University and WUSM with regard to the manufacture or modification of products used in human and animal research and clinic care.

Academic Activities: To cultivate a synergetic environment to promote undergraduate research experience across disciplines.

Financial Support

1. Fidelity Foundation in collaboration with faculty in the Hope Center for Neurological Disorders and Biomedical Engineering at WUSTL, 2008
2. Washington University Start-up (2008-2011)

Supervision of Undergraduates

- Nathaniel Hogrebe (University of Dayton, Summer 2008)

- Charles Yoon (EECE, WUSTL, Summer 2008 & Fall 2009)
- Stephanie Suen (EECE, WUSTL, Summer 2008)
- Kyle Oetjen (EECE, WUSTL, Summer 2009)
- Sarah Canniff (EECE, WUSTL, Summer 2009)
- Nathan Banka (MASE, WUSTL, Summer 2009)
- Amelia Chen (Grade-10, STL)
- Phyllis Wang (EECE, WUSTL, Fall 2009)
- Faculty advisor of 16 EECE freshmen, 2009

Research Projects (Appendix 6 for whitepaper)

- Surface-Enhancement Raman Scattering (SERS) of metallic nanostructures
- Soft lithography for rapid prototyping of substrates for SERS

Publications

- Soft lithography for micro- and nanoscale patterning, Dong Qin, Younan Xia, and George M. Whitesides, Nature Protocols, 2009, in press.
- Solvent-Assisted Molding in Capillaries: Rapid Prototyping of Single- and Multiple-Layered Structures at Micro- and Nano-Scale, in preparation.