

Zhi-Xun Shen

Experience, Service and Awards

Dr. Shen has been a Professor of Physics, Applied Physics, and SSRL since 2000, an Associate Professor (1996-2000), and Assistant Professor (1992-1996). He is also a Professor of Electrical Engineering by courtesy. Dr. Shen is currently the Director of the Geballe Laboratory for Advanced Materials. He is also the Director of X-Ray Laboratory for Advanced Materials at SLAC Campus. He is also the Co-Director of the Stanford-Chevron Program for Diamondoid Nanoscience.

He was a member-at-large of the executive committee of the Division of Condensed Matter Physics, American Physical Society. He was a member and vice-chair of the Basic Energy Science Advisory Committee, US Department of Energy. He was the chair of the Scientific Advisory Committee for the Advanced Light Source at the Lawrence Berkeley National Laboratory, and was a member of the executive committee of the Forum of International Physics, American Physical Society. He is a member of the Advisory Committee for the Physics Department of Tsing-Hua University and a member of the Editorial Board, Chinese Physics.

His awards include: Sloan Research Fellow (1993); Materials Science Research Award for Outstanding Scientific Accomplishment in Solid State Physics, Office of Basic Energy Science, Department of Energy (1994); American Physical Society Centennial Lecture (1999); Kammerlingh Onnes Prize (2000); The Takeda Foundation Techno-Entrepreneurship Award (2002), American Physical Society Fellow (2002).

Research Interests

Physics of Quantum Matter: including superconducting, magnetic, ferroelectric and dielectric materials, organic conductors and superconductors, low-dimensional compounds, quantum phase transitions, elementary excitations and collective modes, Kondo and mixed valence problem, magneto-resistive materials, metal-insulator transition.

Interaction between Light and Matter, and Advanced Spectroscopy, Scattering and Imaging Techniques: synchrotron radiation and free electron laser, high-resolution photoelectron spectroscopy with angle, spin and time resolution, inelastic x-ray scattering, laser based photoelectron spectroscopy and microscopy, soft x-ray emission, and Raman spectroscopy.

Physics of the Ultra-Small and Ultra-Fast: nanostructured materials, scanning microwave microscopy, time resolved photoemission spectroscopy, pump probe experiments.

Surface and interface properties of materials - metals, semiconductors, insulators, superconductors, thin film growth and characterization.

Education, Teaching and Publication

Dr. Shen received his Ph.D. in Applied Physics from Stanford University in 1989, M.S. from Rutgers University in 1985, and B.S from Fudan University in 1983.

He has mentored about thirty five graduate students and postdoctoral fellows; fifteen of them work in industry, business and government, while about twenty of them joined the faculty of major universities in North America, Asia and Europe

He has more than 200 publications, including 55 in three important journals of his field: Nature, Physical Review Letters, and Science. Six of his papers have been identified by the citation tracking algorithm of the Institute for Scientific Information (ISI) as among the most cited recent papers in its periodic surveys.