Short Curriculum Vitae

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PERSONAL DATA:

Born March 26, 1949, in Taishan, Guangdong, China; naturalized U.S. citizen, 1961; married with three children

EDUCATION:

- University of California at Berkeley, Ph.D. in Physics, 1976
- University of California at Berkeley, A.B. in Physics and Mathematics, 1972

SCIENTIFIC CAREER:

- Professor of Physics, University of California, Berkeley, 1984-present
- Senior Faculty Scientist, Lawrence Berkeley National Laboratory, 1993-present
- Scientific Director, Theory Facility, the Molecular Foundry, 2001-2011
- Faculty Scientist, Lawrence Berkeley National Laboratory, 1981-93
- Associate Professor of Physics, University of California, Berkeley, 1980-84
- Assistant Professor of Physics, University of Pennsylvania, 1979–80
- Visiting Scientist, AT&T Bell Laboratories, Murray Hill, 1979
- Postdoctoral Fellow, I.B.M. Watson Research Center, 1977-79
- NSF Postdoctoral Fellow, University of California, Berkeley, 1976

HONORS/AWARDS (reversed chronological order)**:**

- Materials Theory Award of the Materials Research Society, 2015
- Inaugural Simons Fellow in Theoretical Physics, Simons Foundation, 2012
- Visiting Member, Institute for Advanced Study, Hong Kong US&T, 2011-present
- Member, American Academy of Arts & Sciences, 2009
- Academician, Academia Sinica, Republic of China (Taiwan), 2008
- Mork Family Distinguished Lecturer, University of Southern California, 2008
- Distinguished Research Chair Professor, National Taiwan University, Taiwan, 2007-10
- Fellow, American Association for the Advancement of Science, 2006
- Closs Lecturer, University of Chicago, 2006
- Outstanding Overseas Chinese Award, Chinese Consolidated Benevolent Association, 2005
- Member, National Academy of Sciences, 2005
- Richard P. Feynman Prize in Nanotechnology (Theory), Foresight Institute, 2003
- Davisson-Germer Prize in Surface Physics, American Physical Society, 1999
- Aneesur Rahman Prize for Computational Physics, American Physical Society, 1996
- Outstanding Performance Award, Lawrence Berkeley National Laboratory, 1995
- Sustained Outstanding Research in Solid State Physics Award, U.S. Department of Energy, 1993
- Municipal Chair Professor, Joseph Fourier University, France, 1990
- John S. Guggenheim Foundation Fellow, 1989-90

- Eminent Visiting Scholar, University of Tokyo, 1989
- Professor, Miller Institute for Basic Research in Science, 1986–87, 1995
- Fellow, American Physical Society, 1985
- Alfred P. Sloan Foundation Fellow, 1980–82
- National Science Foundation Fellow, 1977

PRINCIPAL RESEARCH INTERESTS

Theoretical condensed matter physics and nanoscience with emphasis on: electronic and structural properties of crystals, surfaces, interfaces and clusters; quasiparticle and optical excitations; electron correlation effects in bulk and reduced-dimensional systems; graphene, carbon and BN nanotubes, quasi-2D materials beyond graphene and related nanostructures; superconductivity; topological insulators; electron transport through single molecules.

SCHOLARLY CONTRIBUTIONS

- More than **550** scientific publications, with over **51,000** ISI Web of Science citations and an **h-index** of **113,** as of December 2015 (over **68,800** citations and **h-index** of **127** on Google Scholar)**.** Yearly number of WofS citations is currently at >4,000/year and growing.
- Identified by the ISI Web of Science as one of the most highly cited researchers in the field of physics, and one of the 25 most highly cited authors in nanoscience.
- Publications include **10** *Nature*, **7** *Science*, **124** *Phys. Rev. Lett.*, **5** *Nature Phys*., **3** *Nature Materials*, **4** *Nature Nanotech*., **3** *Nature Commun*., **21** *Nano Lett.,* **3** *ACS Nano,* **4** *Applied Phys. Lett.,* **3** *PNAS*, **214** *Phys. Rev. B* articles, etc.
- Awarded **7** U.S. patents
- Co-editor of **3** books: *Quantum Theory of Real Materials* (Kluwer Academic Press, Boston, 1996); *The Optical Properties of Materials,* MRS Symp. Proceed. Vol. 579 (MRS, Warrendale PA, 2000); *Conceptual Foundations of Materials: A Standard Model for Ground- and Excited-State Properties* (Elsevier, Amsterdam, 2006).
- Originator of **3** widely-use *ab initio* computational materials research packages: the density functional electronic structure code “PARATEC”, the excited-state properties code “BerkeleyGW”, and the Wannier functions based electron-phonon coupling code “EPW”. All are available freely to users worldwide.
- More than **500** invited talks at conferences, universities and research institutions.
- Supervised over **35** PhD students and over **50** postdoctoral fellows.

SELECTED PROFESSIONAL AND SERVICE ACTIVITIES (SINCE 2005)

Professor Louie was a founding scientific director of the Molecular Foundry (a U.S. Dept. of Energy National Nanoscience Center) until 2011, and an editor of the journal *Solid State Communications,* 1994-2011. He served on numerous national/international committees, panels, and boards. Selected recent activities include: Executive Committee of the American Physical Society (APS) Div. of Materials Physics, 2005-08; APS Adler Award Committee, 2005; Visiting Committee, ISSP, U of Tokyo, 2005; Class Membership Committee, National Academy of Sciences (NAS), 2006-09; Organizer, U.S.-Taiwan Workshop on Nanoscience, 2006; Chair, Advisory Committee of the Inst. of Atomic and Molecular Sciences, Academia Sinica, Taiwan, 2007 –; Science Council, Asia Pacific Center for Theoretical Physics, Korea, 2009 -; Scientific Committee, Cariplo Foundation (Italy), 2009–2014; DOE Basic Energy Sciences (BES) Review Panel, Ames National Lab, 2010; Physical Sciences Panel, Research Grants Council, Hong Kong, 2010—; Visiting Member, Inst. of Advanced Study, Hong Kong U of Science & Techn., 2011–; Chair, NAS Class III International Temporary Nominating Group, 2011- ; Organizer, 15th Intern. Conf. on the Science and Application of Nanotubes (NT14), 2012–; Senior Advisory Council, Molecular Foundry, LBNL, 2012–; Search Committee, President of Asian Pacific Center for Theoretical Physics, South Korea—; External Review Board, Area of Excellence Centers, Hong Kong, 2012—; DOE-BES Review Panel, Oak Ridge National Lab, 2012; NAS William Baker Award Committee, 2013; Organizer, 17th Int. Workshop on Computational Physics and Materials Science, ICTP, Italy, 2015; Int. Scientific Advisory Board of the Institut Catala de Nanociencia i Nanotechologia (ICN2), Barcelona, Spain, 2015- ; among others.