

Curriculum Vitae

Atsushi Oshiyama

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Personal Data

Born November 9, 1952, in Kofu, Japan; married with two children

Education

The University of Tokyo, Ph. D. in Physics, 1981

The University of Tokyo, MS in Physics, 1978

The University of Tokyo, BS in Physics, 1976

Scientific Career

- Designated Professor, Institute of Materials and Systems for Sustainability, Nagoya University, 2017 – present
- Professor Emeritus, The University of Tokyo, 2018 – present
- Professor Emeritus, University of Tsukuba, 2008 – present
- Professor, The University of Tokyo (Department of Applied Physics), 2007 – 2018
- Professor, University of Tsukuba (Institute of Physics), 1995 – 2007
- Principal Scientist, NEC Corporation (Fundamental Research Laboratory & Microelectronics Research Laboratory), 1984 – 1995
- Researcher, IBM Watson Research Center, 1983 – 1984
- Research Associate, The University of Tokyo (Department of Physics), 1981 – 1983
- Visiting Professors at Hokkaido University (1992-1993), Tohoku University (1999-2000)
- Visiting Researcher, National Institute of Advanced Industrial Science and Technology (AIST), 2001 - 2005

Principal Research Interests

Theoretical and computational condensed matter science: electronic and structural properties of solids, surfaces, interfaces and defects inherent to the systems; correlation between atomic structures and electronic properties in nano-materials and nano-structures; electronic properties of two-dimensional materials such as graphene, silicene etc; mechanism of thin-film growth and interface formation in technologically important device structures; computational science approach (computics) toward the progress in materials science.

Scholarly Contributions

- More than **380** scientific publications with an **h-index of 47** (ISI Web of Science) as of April 2019 (**h-index of 52** on Google Scholar). Most frequently cited 10 publications (Web of Science and in parentheses Google Scholar):
 1. N. Hamada, S. Sawada and A Oshiyama, "New One-Dimensional Conductors:

- Graphitic Microtubules", Phys. Rev. Lett. 68, 1579-1582 (1992). **#cited = 2908 (4353)**
2. S. Saito and A. Oshiyama, "Cohesive Mechanism and Energy Bands of Solid C60", Phys. Rev. Lett. 66, 2637-2640 (1991). **#cited =915 (1188)**
 3. S. Okada, S. Saito and A. Oshiyama, "Energetics and Electronic Structures of Carbon Nanotubes Encapsulating C60", Phys. Rev. Lett. 86, 3835-3838 (2001). **#cited = 357 (432)**
 4. S. Okada and A. Oshiyama, "Magnetic Ordering in Hexagonally-Bonded Sheets with First-Row Elements", Phys. Rev. Lett. 87, 146803 (2001). **#cited = 268 (361)**
 5. R. Car, P. J. Kelly, A. Oshiyama and S. T. Pantelides, "Microscopic Theory of Atomic Diffusion Mechanisms in Silicon", Phys. Rev. Lett. 52, 1814-1817 (1984). **#cited =260 (378)**
 6. Sugino and A. Oshiyama, "The Si Vacancy: Successful Description within the Local Density Approximation", Phys. Rev. Lett. 68, 1858-1861 (1992). **#cited = 213 (239)**
 7. S. Saito and A. Oshiyama, "Electronic Structure of Si₄₆ and Na₂Ba₆Si₄₆" Phys. Rev. B 51, 2628-2631 (1995). **#cited = 151 (194)**
 8. Z.-X. Guo, S. Furuya, J.-I. Iwata and A. Oshiyama, "Absence and Presence of Dirac Electrons in Silicene on Substrates" Phys. Rev. B 87, 235435 (2013). **#cited=147 (179)**
 9. S. Saito and A. Oshiyama, "Ionic Metal KxC60: Cohesion and Energy Bands", Phys. Rev. B44, 11536-11539 (1991). **#cited=121 (124)**
 10. S. Okada, S. Saito, A. Oshiyama, "New Metallic Crystalline Carbon: Three-Dimensionally Polymerized C60 Fullerite" Phys. Rev. Lett. 83, 1986-1989 (1999). **#cited=120 (147)**
- More than **90** invited talks at conferences.
 - Supervised **11** PhD students, **20** Master course students and over **30** postdoctoral fellows

Selected Prizes and Grants

- ACM Gordon Bell Prize (Peak Performance) 2011
- Scientific Research on Innovative Areas, MEXT Japan "Materials Design through Computics" 2010 – 2014 (<http://computics-material.jp/>)
- JST-CREST "Construction of Nano-Architecture Based on Computational Quantum Theoretical Science" 2005 – 2011
(http://www.jst.go.jp/kisoken/crest/ryoikiarchive/multi/en/theme/01_Oshiyama.html)

Selected Professional and Service Activities

- Member of Program Committee, 21st International Conference of Physics of Semiconductors, Beijin, 1992
- Member of Program Committee, 25th International Conference of Physics of Semiconductors, Osaka, 2000
- Chair of Program Committee, 23rd International Conference on Defects in Semiconductors, Awaji, 2005
- Trustee, University of Tsukuba, 2002-2004
- Head, Institute of Physics, University of Tsukuba, 2002 – 2004
- Representative, Nanoscience Research Project, University of Tsukuba, 2005-2008
- Head, Department of Applied Physics, The University of Tokyo, 2010