Curriculum Vitae

Name: Jun Nakamura
Birth: November 28, 1968 (Shizuoka, Japan)
Citizenship: Japan

Job Status: Full Professor, Councilor
Department of Engineering Science,
The University of Electro-Communications (UEC Tokyo)

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Education:
Department of Materials Science and Engineering, School of Science and Engineering, Waseda University, Japan (04/1987 – 03/1991): B.Eng.
(Graduation thesis: Refinement of atomic scattering factor by DV-Xa calculations)
Department of Materials Science and Engineering, Graduate School of Science and Engineering, Waseda University, Japan (04/1991 – 03/1993): M.Eng.
(Master's thesis: Inhomogeneous charge transfer at the monolayer graphite/SiC(111)A interface)
Department of Materials Science and Engineering, Graduate School of Science and Engineering, Waseda University, Japan (04/1993 – 03/1996): Doctor of Engineering
(Doctoral dissertation: Structural stability and its electronic origin for surfaces and interfaces of covalently-bonded materials)

Employment (full-time):
Councilor (04/2024 – present)
The University of Electro-Communications (UEC Tokyo), Japan
Vice President (04/2020 – 03/2024)
The University of Electro-Communications (UEC Tokyo), Japan
Full Professor (04/2012 – present)
Department of Engineering Sciences,
The University of Electro-Communications (UEC Tokyo), Japan
Associate Professor (04/2009 – 03/2012)
Department of Engineering Sciences,
The University of Electro-Communications (UEC Tokyo), Japan
Associate Professor (04/2006 – 03/2009)
Department of Electronic-Engineering,
The University of Electro-Communications (UEC Tokyo), Japan
Research Associate (03/2001 – 03/2006)
Department of Electronic-Engineering,
The University of Electro-Communications (UEC Tokyo), Japan

Special Postdoctoral Researcher (04/1998 - 02/2001)
Surface and interface laboratory,
The institute of Physical and Chemical Research (RIKEN), Japan
Research Lecturer (06/1997 - 03/1998)
Kagami memorial laboratory for materials science and technology,
Waseda University, Japan
Postdoctoral Research Fellow (04/1997 - 05/1997)
Research Fellow of the Japan Society for the Promotion of Science, Japan
Research Associate (04/1995 - 03/1997)
School of Science and Engineering,
Waseda University, Japan

Research Interests:
Subject: Nano-scale Science and Technology using computational sciences
(1) Structural stability and electronic states of nano-scale materials
(2) Materials design by computer simulation
(3) Applications of theoretical solid state physics to design nano-scale materials and devices, specifically, first-principles evaluations of magnetic properties, optical properties, dielectric properties, and transport properties
(4) Quantum effects and their application to nano-scale devices
(5) Development of an original first-principles simulation system
(6) Development of evaluation techniques for nano-scale materials
(7) Surface science and crystal growth

Recent Publications (selected):
"Visualization of the local dipole moment at the Si(111) surface using DFT calculations"
Scientific Reports 15, 7436 (1-7) (2025); DOI: 10.1038/s41598-025-91645-1
Akira Sumiyoshi, Kohei Yamasue, Yasuo Cho, Jun Nakamura

"B-Doped Fullerene as a Potential Metal-Free Catalyst Material for CO Reduction Reaction"
J. Phys. Chem. C 128, 9513-9519 (2024). J. Phys. Chem. C 128, 9513-9519 (2024); DOI: 10.1021/acs.jpcc.4c01468
Arikasuci Fitonna Ridassepri, Yutaro Umejima, and Jun Nakamura

"Theoretical prediction of two-dimensional II-V compounds"
Phys.Rev.Mat. 7, 014006 (1-10) (2023). DOI: 10.1103/PhysRevMaterials.7.014006
Lucia G. Arellano, Takayuki Suga, Taichi Hazama, Taichi Takashima, Miguel Cruz-Irisson, and Jun Nakamura

"Tunable electronic properties of silicon nanowires as sodium-battery anodes"
Int. J. Energy Res. 46, 17151-17162 (2022). DOI: 10.1002/er.8378
Lucia Guadalupe Arellano, Fernando Salazar, Álvaro Miranda, Alejandro Trejo, Luis Antonio Pérez, Jun Nakamura, and Miguel Cruz-Irisson

"Size optimization of a N-doped graphene nanocluster for the oxygen reduction reaction"

ACS Omega 7, 3093-3098 (2022). DOI: 10.1021/acsomega.1c06509
Haruyuki Matsuyama and Jun Nakamura

"Pyrolysis-Free Oxygen Reduction Reaction (ORR) Electrocatalysts Composed of Unimolecular Layer Metal Azaphthalocyanines Adsorbed onto Carbon Materials"
ACS Appl. Energy Mat. 4, 14380-14389 (2021). DOI: 10.1021/acsaem.1c03054
Hiroshi Yabu, Koki Nakamura, Yasutaka Matsuo, Yutaro Umejima, Haruyuki Matsuyama, Jun Nakamura, and Koju Ito

"Fe azaphthalocyanine unimolecular layers (Fe AzULs) on carbon nanotubes for realizing highly active oxygen reduction reaction (ORR) catalytic electrodes"
NPG Asia Materials 11, 57 (1-12) (2019). DOI: 10.1038/s41427-019-0154-6
H.Abe, Y.Hirai, S.Ikeda, Y.Matsuo, H.Matsuyama, J.Nakamura, T.Matsue, and H.Yabu

"Atomic structure and passivated nature of the Se-treated GaAs(111)B surface"
Sci. Rep. 8, 1220 (1-8) (2018).
A.Ohtake, S.Goto, and J. Nakamura

"Formation of Water Layer on Graphene Surfaces"
ACS Omega 2, 2184-2190 (2017).
A.Akaishi, T.Yonemaru, and J.Nakamura

"Mn-Induced Surface Reconstructions on GaAs(001)"
J. Phys. Chem. C 120, 6050-6062 (2016).
A.Ohtake, A.Hagiwara, K.Okukita, K.Funatsuki, and J. Nakamura