Hiroshi Yamamoto

Professor, Institute for Molecular Science

Professor, Department of Structural Molecular Science, Graduate University for Advanced Studies

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Education

1993 B.S. in Chemistry (The University of Tokyo)

1995 M.S. in Chemistry (The University of Tokyo)

1998 Ph. D in Chemistry (The University of Tokyo)

Academic Experience

1998-1999: Research Associate, Gakushuin University

1999-2000: Special Postdoctoral Researcher, RIKEN

2000-2007: Research Scientist, RIKEN

2007-2012: Senior Research Scientist, RIKEN

2012-present: Professor, Institute for Molecular Science

Awards and Honors

2009: CrystEngComm Prize

2009: Award for the Young Distinguished Scientist of the Japan Society for Molecular Science

2009: RIKEN-ASI Award for the Young Scientist

Selected Publications

1. "Organic phase-transition transistor with strongly correlated electrons"
   H. M. Yamamoto, M. Suda, Y. Kawasugi,
   Jpn. J. Appl. Phys., **57**, 03EA02 (2018).
2. "Mott Transition by an Impulsive dielectric Breakdown"
   H. Yamakawa, T. Miyamoto, T. Morimoto, T. Tanishige, H. Yada, N. Kida, M. Suda, H. M. Yamamoto, R. Kato, K. Miyagawa, K. Kanoda and H. Okamoto,
   Nature Mater., **16**, 1100-1105 (2017).
3. "Electron–hole doping asymmetry of Fermi surface reconstructed in a simple Mott insulator"
   Yoshitaka Kawasugi, Kazuhiro Seki, Yusuke Edagawa, Yoshiaki Sato, Jiang Pu, Taishi Takenobu, Seiji Yunoki, Hiroshi M. Yamamoto, and Reizo Kato,
   Nature Commun., **7**, 12356 (2016).
4. "Light-induced Superconductivity using a Photoactive Electric Double Layer"
   M. Suda, R. Kato and H. M. Yamamoto,
   Science **347**, 743-746 (2015).
5. "Strain-Tunable Superconducting Field-Effect Transistor with an Organic Strongly-Correlated Electron System"
   M. Suda, Y. Kawasugi, T. Minari, K. Tsukagoshi, R. Kato, and H. M. Yamamoto,
   Adv. Mater., **26**, 3490-3495 (2014).
6. "A strained organic field-effect transistor with a gate-tunable superconducting channel"
   H. M. Yamamoto, M. Nakano, M. Suda, Y. Iwasa, M. Kawasaki and R. Kato
   Nature Commun. **4**, 2379/1-2379/7 (2013).
7. "Highly Mobile Gapless Excitations in a Two-Dimensional Candidate Quantum Spin Liquid"
   Minoru Yamashita, Norihito Nakata, Yoshinori Senshu, Masaki Nagata, Hiroshi M. Yamamoto, Reizo Kato, Takasada Shibauchi, Yuji Matsuda
   Science, **328**, 1246-1248 (2010).
8. "Field-induced carrier delocalization in the strain-induced Mott insulating state of an organic superconductor "
   Y. Kawasugi, H. M. Yamamoto, N. Tajima, T. Fukunaga, K. Tsukagoshi, and R. Kato
   Phys. Rev. Lett, **103**, 116801/1-116801/4 (2009)
9. "Supramolecular Insulating Networks Sheathing Conducting Nanowires Based on Organic Radical Cations"
   H. M. Yamamoto, Y. Kosaka, R. Maeda, J. Yamaura, A. Nakao, T. Nakamura, and R. Kato
   ACS Nano, **2**(1), 143-155 (2008).
10. "Coexistence of Conducting and Magnetic Electrons Based on Molecular π -Electrons in the Supramolecular Conductor (Me-3,5-DIP)[Ni(dmit)$_2$]$_2$"
    Y. Kosaka, H. M. Yamamoto, A. Nakao, M. Tamura, and R. Kato
    J. Am. Chem. Soc., **129**(11), 3054-3055 (2007).