

Curriculum Vitae

Satoshi Kaneko

Department of Chemistry, School of Science, Tokyo Institute of Technology
2-12-1-W4-10 Ookayama, Meguro-ku, Tokyo, 152-8551, Japan
E-mail: skaneko@chem.titech.ac.jp

Appointments

- Assistant professor, Department of Chemistry, Tokyo Institute of Technology (April 2014–)
- JSPS research fellow, Tokyo Institute of Technology (April 2012–March 2014)

Education

Tokyo Institute of Technology
Degree: Ph.D., Doctor of Science April, 2016,
Master of Science in Chemistry March, 2012
Bachelor of Science in Chemistry March, 2010

Thesis advisor: Professor Manabu Kiguchi

Teaching

- Chemistry Laboratory (2014–)
- Excise in General Chemistry (2014–)

Award

Poster award

- International School and Symposium on Molecular Materials & Devices “Highly Conductive Pyrazine Molecular Junction Showing Bi-Stable States”, Durham, UK, September, 2012.
- International School and Symposium on Molecular Materials “Electron Transport of Single Ce@C₈₂ Molecule Bridging between Metal Electrodes”, Tokyo, Japan, November, 2013.

Research Statement and Interests

This research aims to control the chemical and physical properties of single-molecule junctions, in which single molecules are sandwiched between metal electrodes. Single-molecule junctions have fascinating properties because of their low dimensionality and the existence of metal–molecule interfaces. Thus, they have attracted wide attention in the field of basic science and electric industry. Though many reports exist of the fascinating properties of single-molecule junctions, the extent to which their properties can be controlled is limited by their extremely small size. The main contribution of this research to this problem is the fabrication of a mechanically controllable and highly conductive single-molecule junction. Recently, the remarkable optical properties of molecules sandwiched between metals, and their interaction with the localized surface enhanced plasmon resonances of the metals, have been of great interest.