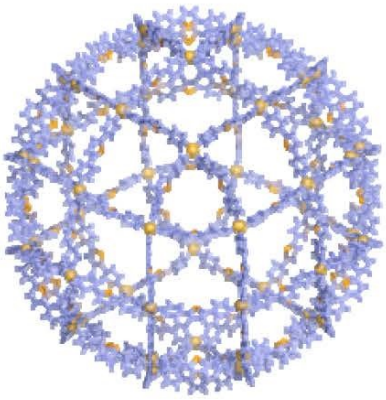
Inaugural
Ojima Distinguished Lecture

Dr. Makoto Fujita

University Distinguished Professor
Department of Applied Chemistry,
The University of Tokyo

"Coordination Self-Assembly: From Origins to the Latest Advances"



2020 Clarivate Citation Laureate
2019 Japan Academy Prize
2019 Imperial Prize
2019 Paul Karrer Medal
2018 Wolf Prize in Chemistry
2014 Fred Basolo Medal
2014 Medal with Purple Ribbon
2014 ISNSCE Award
2013 A. C. Cope Scholar Award
2013 The Chemical Society of Japan Award

Wolf Prize citation: for conceiving metal-directed assembly principles leading to large highly porous complexes

Friday, April 29, 2022
4:00 PM
Charles B. Wang Center, Theater

Molecular self-assembly based on coordination chemistry has made an explosive development in recent years. Over the last >30 years, we have been showing that the simple combination of transition-metal's square planer geometry (a 90 degree coordination angle) with pyridine-based bridging ligands gives rise to the quantitative self-assembly of nano-sized, discrete organic frameworks. Representative examples include square molecules (1990), linked-ring molecules (1994), cages (1995), capsules (1999), and tubes (2004) that are self-assembled from simple and small components. Originated from these earlier works, current interests in our group focus on i) molecular confinement effects in coordination cages, ii) solution chemistry in crystalline porous complexes (as applied to "**crystalline sponge method**"),[1] and iii) and giant self-assemblies[2], as disclosed in this lecture.

[1] Y. Inokuma, S. Yoshioka, J. Ariyoshi, T. Arai, Y. Hitora, K. Takada, S. Matsunaga, K. Rissanen, M. Fujita, *Nature* **2013**, *495*, 461-466.
[2] D. Fujita, Y. Ueda, S. Sato, N. Mizuno, T. Kumasaka, M. Fujita, *Nature* **2016**, 540, 563.

Stony Brook University **Department of Chemistry**

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