

Séminaire

Jeudi 4 juillet 2024 à 10h30
Amphithéâtre Henri Benoît

Yoshimitsu Itoh

Department of Chemistry and Biotechnology
 University of Tokyo, Japan

Interfacial Molecular Engineering for Functional Materials

In this seminar, Prof. Yoshimitsu Itoh will talk about the development of functional material by delicate manipulation of interfacial interactions. Here, the “interface” includes not only the molecular interfaces but also the molecular-solvent interfaces and molecular-electrode interfaces. His unique strategy led to the realization of E-field/photo dual responsive columnar liquid crystals^[1], E-field responsive cholesteric displays^[2], E-field responsive self-assembled monolayers^[3], photo-suspendable supramolecular polymerization^[4], fluorine nanochannel for desalination^[5], and luffa-like nanomembrane^[6]. In the presentation, he will mainly talk about the usage of E-field for the engineering of interfaces for dedicated functional molecular assembly.

[1] *Science* **2019**, 363, 161; *J. Am. Chem. Soc.* **2019**, 141, 10033; *Chem. Asian. J.* **2022**, e202200223; *Chem. Sci.* **2024**, 15, 4068–4074.

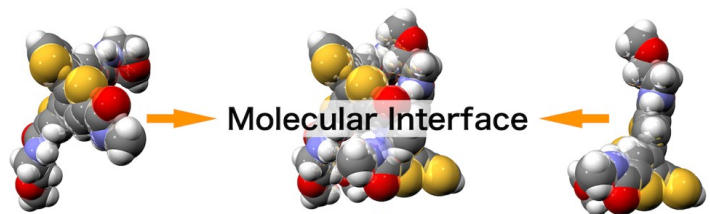
[2] *Adv. Mater.* **2016**, 28, 4077; *J. Am. Chem. Soc.* **2018**, 140, 10946.

[3] *Science* **2015**, 348, 555; *Chem. Asian. J.* **2020**, 15, 3321.

[4] *Nature Commun.* **2017**, 8, 346; *J. Am. Chem. Soc.* **2021**, 143, 5121; *J. Am. Chem. Soc.* **2022**, 144, 7080.

[5] *Science* **2022**, 376, 738.

[6] *Submitted for publication.*



Engineering into Novel Functional Materials

Les personnes souhaitant rencontrer Y. Itoh sont priées de prendre contact avec Nicolas Giuseppone.

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Biography



Dr. Yoshimitsu Itoh received a Ph.D. degree for experimental and theoretical investigations of organo-fluorine compounds under the direction of Prof. Koichi Mikami at Tokyo Institute of Technology in 2006. Then, he started his first postdoctoral research focusing on organometallic catalysis with Prof. Eiichi Nakamura at the University of Tokyo. His second postdoctoral research was completed at Columbia University starting from 2007 with Prof. Colin Nuckolls working on self-assembled monolayers and organic field-effect transistors. In 2008, he began his academic career at the University of Tokyo as an assistant professor in the research group of Prof. Takuzo Aida. He was promoted to Lecturer in 2016 and then to Associate Professor in 2018. In 2022, he successfully started his independent research group named Interfacial Molecular Engineering Lab. His current research interest is to engineer the interface between molecules, and between molecules and surfaces to develop innovative materials based on organic chemistry, polymer chemistry, supramolecular chemistry, and electrochemistry.

Les personnes souhaitant rencontrer Y. Itoh sont priées de prendre contact avec Nicolas Giuseppone.