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- 日本 東京工業大學 碩士，民國九十年
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- M.Sc. Tokyo Institute of Technology, Japan, 2001
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主要研究領域

- 高分子・超分子光電材料
 - 高分子半導體合成
Synthesis of semiconducting polymers
 - 高分子光電材料與元件（有機太陽能電池・有機場效電晶體）
Fabrication of polymer based electronic devices
 - 超分子光學材料
Supramolecular opto-electronic materials

Main Research Interests

- **Organic opto-electronic materials and devices**

My research interests are synthesis of new semiconducting polymers using organometallic catalysts, characterization, and fabrication of organic electronic devices which involve organic solar cells and organic thin film transistors. I have also focused on supramolecules such as rotaxanes which can control molecular structure by external stimuli e.g photo-irradiation and thermal stimulation in single crystal state. The single crystal should have a completely aligned structure, and will therefore lead to new type of optical, switching, and memory devices with nano-scale order of resolution.

代表作 (Selected Publications)

- Tomohito Ide,* Wei-Ci Huang, **Masaki Horie,*** “Tris-Azo Triangular Paraphenylenes: Synthesis and Reversible Interconversion into Radial π -Conjugated Macrocycles”, *J. Am. Chem. Soc.* **2024**, 146, 10246-10250.
- Fumi Nishino, Peter Krüger, Chi-Hsien Wang, Ryohei Nemoto, Yu-Hsin Chang, Takuya Hosokai, Yuri Hasegawa, Keisuke Fukutani, Satoshi Kera, **Masaki Horie***, Toyo Kazu Yamada,* “Reversible Sliding Motion by Hole-Injection in Ammonium-Linked Ferrocene, Electronically Decoupled from Noble Metal Substrate by Crown-Ether Template Layer”, *Small* **2024**, 2408217.
- Chi-Hsien Wang, Yi-Chia Lin, Surojit Bhunia, Yuanning Feng, Pramita Kundu, Charlotte L. Stern, Pei-Lin Chen, J. Fraser Stoddart, **Masaki Horie,*** “Photoswitching and Thermal Phase Transitions of Azobenzene- and Crown Ether-Based Complexes in Polymorphic Crystals”, *J. Am. Chem. Soc.* **2023**, 145, 21378-21386.
- Chi-Hsien Wang, Hong-Kai Chang, Kai-Jen Chen, Dao-Hong Huang, Chiung-Ju Chang, Kuan-Hung Huang, Yao-De Chiu, **Masaki Horie,*** “Facile photoresponsive actuators based on ferrocene-doped poly(butyl methacrylate)”, *ACS Appl. Mater. Interfaces* **2023**, 15, 38846-38856.
- Chi-Hsien Wang, Kai-Jen Chen, Tsung-Huan Wu, Hung-Kai Chang, Yoshitaka Tsuchido, Yoshihisa Sei, Pei-Lin Chen, **Masaki Horie***, “Ring rotation of ferrocene in interlocked molecules in single crystals”, *Chem. Sci.* **2021**, 12, 3871-3875.
- Shao-Chi Cheng, Kai-Jen Chen, Yuji Suzaki, Yoshitaka Tsuchido, Ting-Shen Kuo, Kohtaro Osakada, **Masaki Horie***, “Reversible Laser-Induced Bending of Pseudorotaxane Crystals”, *J. Am. Chem. Soc.* **2018**, 140, 90-93.
- Kai-Jen Chen, Ya-Ching Tsai, Yuji Suzaki, Kohtaro Osakada, Atsushi Miura, **Masaki Horie***, “Rapid and reversible photoinduced switching of a rotaxane crystal”, *Nat. Commun.* **2016**, 7, 1332.
- **Masaki Horie,*** Yuji Suzaki, Daisuke Hashizume, Tomoko Abe, Tiendi Wu, Takafumi Sassa, Takuya Hosokai, Kohtaro Osakada, “Thermally-Induced Phase Transition of Pseudorotaxane Crystals: Changes in Conformation and Interaction of the Molecules and Optical Properties of the Crystals”, *J. Am. Chem. Soc.* **2012**, 134, 17932-17944.

