



**Frontier Chemistry Center**  
フロンティア化学教育研究センター

**先端学術講演会**

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Title: **Iron-Catalysis and Their Applications  
in Functional Material Synthesis**

Speaker: **Prof. Rui Shang**

The University of Tokyo, Japan

Date: 16:30~18:00, Thursday, October 17<sup>th</sup>, 2024

Place: Seminar Room 2,  
Frontier Research in Applied Sciences Building

Co-sponsor: Institute for Chemical Reaction Design and Discovery  
(WPI-ICReDD)



Abstract:

So far, the catalytic synthesis of organic molecules of interest in developing electronic material heavily relies on using precious metals. The cost and scarcity of these precious metals cause impending problems in the mass production. In contrast, iron as the most abundant metal on the earth has the merits for use as a catalyst for synthesis of conjugated organic molecules because of its intrinsic redox and organometallic reactivity. Iron's low cost, low toxicity, abundance, and ubiquity ideally conform to the spirit of sustainable development goals. In this presentation, new types of recently achieved iron-catalyzed reactions for developing organic electronic materials and their molecule function in electronic devices will be introduced.

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