



## “Development of mononuclear metal complexes for photocatalytic CO<sub>2</sub> reduction”



**Dr. Jieun Jung**

Lecturer  
Department of Chemistry,  
Graduate School of Science,  
Nagoya University

### Abstract

Photocatalytic reduction of carbon dioxide (CO<sub>2</sub>) is recognized as an important research area owing to problems related to the depletion of fossil fuels and environmental problems. Typical examples of CO<sub>2</sub> photo-reduction by transition metal complexes were achieved by a combination of a photosensitizer (PS) and a catalyst (Cat). On the other hand, single-active-site metal complexes acting as both PS and Cat are alternative photocatalysts where photoinduced electron transfer from the PS to the Cat process is dispensable. In my talk, I'll introduce tetradentate PNNP-type metal complexes for the photocatalytic CO<sub>2</sub> reduction and their reaction mechanisms.

### References

- [1] K. Kamada, J. Jung\*, S. Saito\* et al., *J. Am. Chem. Soc.* 2020, **142**, 10261.
- [2] K. Kamada, J. Jung\*, S. Saito\* et al., *Synlett* 2022, **33**, 1137.
- [3] K. Kamada, J. Jung\*, S. Saito\* et al., *Chem. Commun.* 2022, **58**, 9218.

Date: November 7 (Mon), 2022

Time: 17:00-18:00

Place: 2F Seminar Room (A207), iCeMS Main Building

Registration: Click [here](#)

Contact: KUIAS iCeMS, Taniguchi Group  
(Secretary, Reiko Otsuka, [otsuka.reiko.2n@kyoto-u.ac.jp](mailto:otsuka.reiko.2n@kyoto-u.ac.jp))