

# 第463回触媒科学研究所コロキウム

その場・オペランド分光法 ～偏差値40からの海外研究生活～

In situ/operando spectroscopy

～Research life overseas from the standard score of 40～

## Nobutaka Maeda

(Kyushu University, WPI-I2CNER-CESD)

2024年1月11日(木) 15:00–16:30

(創成科学研究棟 4階 会議室B、C)

<http://www.cat.hokudai.ac.jp/access.html>



Dating back to my school days, I did not really study, but was totally absorbed in sports (long distance). However, my encounter with in situ/operando vibrational spectroscopy turned my research life upside down. This seminar first introduces my unique career step overseas as a Japanese scientist and then presents the concept and theory of modulation excitation IR spectroscopy (MES-IR). MES-IR is a powerful tool to uncover underlying mechanisms at solid-gas and solid-liquid interfaces of heterogeneous catalysis. Of several applications, I demonstrate two cases: (1) heterogeneous asymmetric catalysis, (2) methanol synthesis from carbon dioxide.

**1979:** Born in Sapporo

**1998–2007:** Kanagawa University (Bs, Ms, PhD), スポーツ推薦 駅伝部

**2007–2023:** Yamanashi University, ETH Zurich, Italian Institute of Technology, Dalian University of Technology, Dalian Institute of Chemical Physics, Zurich University of Applied Sciences (postdoc, senior scientist, associate professor)

**2023 Aug. – present:** Kyushu University, WPI-I2CNER-CESD (associate professor)

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