化学科講演会

企画：理学部化学科

Synthesis and Study of Organometallic Photosensitizers for Dye-Sensitized Solar Cells and Photo-Electrochemical Cells

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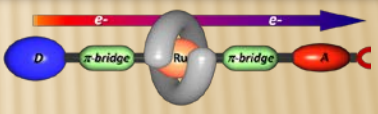
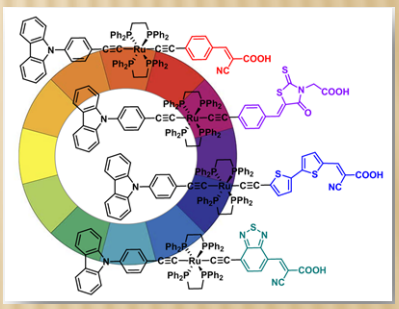
日時： **2018年10月31日（水） 16：30～17：30**

場所： **化学科第1講義室（理1-415）**

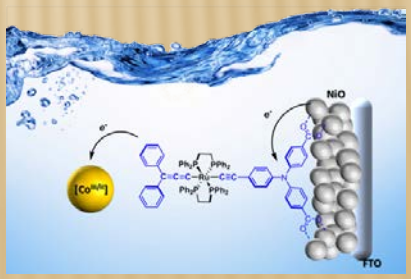
This presentation will give an overview our efforts in the design and synthesis of new π-conjugated organometallic complexes as next-generation dyes for photovoltaic and photo-electrochemical applications. In this context we recently developed new materials based on functionalized Ru-acetylide complexes that represent extended p-conjugated photoactive systems able to harvest a large part of the solar spectrum due to strong intramolecular charge transfers.

The new dyes were further embedded in different types of hybrid devices such as dye-sensitized solar cells (n-type and p-type DSSCs) and dye-sensitized photo-electrochemical cells designed for H_2 evolution from water (DS-PECs). The attractive optoelectronic properties of these new π-conjugated systems will be highlighted and their performance in the different kind of devices will be described.





Design of colorful push-pull dyes for DSSCs



Hybrid photocathode for DS-PEC

References: C. Olivier *et al. Chem. Eur. J.* **2014**, *20*, 7017 ; *J. Mater. Chem. A* **2015**, *3*, 18256 ; *RSC Advances* **2016**, 6, 19928 ; *Dalton Trans.* **2016**, 45, 2539 ; *Dyes and Pigments* **2018**, *158*, 326.