



大学院GP・物理-化学合同セミナーのお知らせ (第120回化学コロキウム)

スコットランド、エジンバラ大学 Neil Robertson 博士をお招きして、
ジチオレン錯体を用いた色素増感太陽電池に関する講演会を開催します。

日時: 平成20年4月30日(水) 16:00 - 17:30

場所: 8号館301号室

講師: Dr. Neil Robertson (University of Edinburgh)

タイトル: New Dyes for Dye-Sensitised Solar Cells

概要: Dye-sensitised solar cells offer the possibility of low-cost photovoltaics using a light-harvesting dye bound to TiO_2 . Ru-complex dyes have been widely studied due to their favourable excited-state characteristics. We have studied a series of dyes of structure $[\text{Ru}(4,4'\{\text{CO}_2\text{H}\}\text{bipy})_2(\text{dithiolene})]$ where the acid-substituted bipy ligands bind the dye to TiO_2 and the dithiolene ligand is used to modify the electronic properties. The dyes have been characterised by electrochemical, spectroscopic, spectroelectrochemical, structural and computational methods to fully understand the electronic properties of the dye molecules. We have also carried out tests in DSSC through measurement of I-V data under illumination, incident-photon-to-current conversion efficiency and transient spectroscopy to determine kinetic parameters. These data will be discussed in terms of the target objectives to develop dyes with enhanced light absorption characteristics and with enhanced charge separation.

連絡先: 首都大学東京 理工学研究科 分子物質化学専攻 菊地耕一(内線3453)

kikuchi-koichi@c.metro-u.ac.jp