

平成 30 年度第 3 回 VBL セミナー

3rd VBL Seminar, 2018

日時：平成 30 年 11 月 12 日（月）13 時 00 分～14 時 30 分

場所：工学部 1 号館 4 階 141 講義室

講師：Cyrille Boyer 特任教授（VBL 外国人客員教員、University of New South Wales（豪州））

題目：**Precision Polymer Synthesis Using Visible Light**

要旨： In the last 10 years, visible-light-regulated polymerization has generated lot of interests, as it confers a range of new opportunities for the synthesis of functional polymers and materials. These polymerizations are usually controlled using a photoredox catalyst (molecule which can absorb light and performs redox reactions). Under light, these catalysts can transfer an electron or energy and then catalyze chemical reactions. Such catalysts have been successfully employed in organic synthesis as well as polymer synthesis. The first example in polymer synthesis was reported by Fors and Hawker for an atom transfer radical polymerization. Inspired by this work, we have implemented these catalysts in reversible addition-fragmentation chain-transfer polymerization, named photoinduced electron/energy transfer – reversible addition fragmentation chain transfer (PET-RAFT) polymerization. In the last five years, we have developed a range of photocatalysts able to activate PET-RAFT polymerization under various conditions. The recent development has solved important challenges in polymer chemistry, such as the development of oxygen-tolerant polymerization, polymerization mediated by near-infrared, metal-free polymerization, and spatial-, temporal- and sequence- controlled polymerization as well as allowed the synthesis of complex materials.

問い合わせ先：

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