## マテリアルサイエンス系セミナー(第7回)

# **New Photonic Materials** from Supramolecular Templating

講演者: Professor Mark MacLachlan

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### 時:平成29年8月7日(月)15:30~17:30 Η 場

## 所:知識科学系講義棟2階 中講義室

### 講演要旨:

Complex supramolecular structures are abundant in nature. Spider silk and nacre, for example, are two natural materials whose impressive mechanical properties arise from their hierarchical structures. Inspired by these and other examples, chemists are turning to natural materials to construct new substances with fascinating properties.

Cellulose nanocrystals (CNCs) obtained from biomass self-assemble into a helicoidal arrangement that mimics the organization of mesogens in chiral nematic (cholesteric) liquid crystals. This organization can be used as a template to construct composite films of CNCs and other materials, such as silica and polymers. By removing one component - either the CNCs or the matrix - one is left with a mesoporous film with a chiral nematic arrangement of holes.

In this talk, I will discuss our recent developments in this area, templating new materials with photonic properties.

#### 講演者略歴:

Mark MacLachlan received his B.Sc. degree in chemistry at UBC and Ph.D. degree from the University of Toronto (1999). After an NSERC Postdoctoral Fellowship at M.I.T., he returned to UBC to begin his independent career. Mark's research interests span supramolecular chemistry, macrocycle chemistry, nanomaterials, mesoporous materials, photonic structures, and biopolymers. He has received an E. W. R. Steacie Memorial Fellowship (2012-2014), the Strem Award for Pure or Applied Inorganic Chemistry from the Canadian Society for Chemistry (CSC) (2013), the Rutherford Medal of the Royal Society of Canada (RSC) (2013), the Steacie Prize (2014), and the Award for Excellence in Materials Chemistry of the CSC (2015). He is a Fellow of the Royal Society of Canada and holds the Canada Research Chair in Supramolecular Materials.

> 参加申込・予約は不要です。直接会場にお越しください。 お問合わせ先:共通事務管理課 共通事務第三係 (E-mail:ms-secr)