グローバル COE 物質科学イノベーション講演会

演 題： ***Self-assembly assisted synthesis of functional materials***

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場 所：理学部７号館・7-219 室

要 旨：

Emerging demands for miniaturized devices are turning widely used top-down lithographic methods into an outdated technology. Manufacturing complex structures with a long range lateral order and orientation have been investigated by many research groups. On the other hand, the bottom-up approach, a less prevalent approach so far, makes use of self-organizing components in which the shape and structural control stems from the selection of choice of material and self-organization conditions. The latter method is actively investigated in our lab to achieve bulk materials and thin films with interesting structure and properties. Subtle adjustments in casting conditions allow remarkable control in film morphologies. Our current research focuses on the design of conjugated polymers, preparation of hybrid materials, self-assembly on various substrates and potential applications of such materials. In this talk, the fabrication of micro-structured blue light-emitting thin films of a functionalized amphiphilic poly(*p*-phenylene)s (PPPs) and its hybrids of various nanomaterials is reported as potential candidates for advanced electronic and optical applications. In addition, we demonstrate how an interplay of weak molecular interactions afford large area of periodic and intricately patterned conjugated thin polymer-nanoparticle hybrid films.

本講演は『化学研究総合講義Ⅱ』の一部として認定されております

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