Contribution ID: **241** Type: **Invited Speaker**

Synthesis and fabrication of nanomaterials for applications in food and agriculture

Sunday 27 November 2016 15:15 (20 minutes)

Nanotechnology are beneficial for safe and efficient consumption of food, water and agricultural products. The NANOTEC-CU center of excellent on food and agriculture has focused the research in molecular design, synthesis and fabrication of nanomaterials for applications in the field of food and agriculture including chemical analysis and delivery systems. Various chromophores and fluorophores responsive to changes of physical environment and chemical contaminants are developed as the indicators for ensuring safety and quality of foods, drinking water and agricultural products. Molecular self-assemblies of amphiphilic molecules or large ⊠-conjugated arrays allow facile fabrications of nano-sized materials for simple and efficient applications of sensing, storing and delivery systems. Micellar incorporation of essential oil into edible natural polymers allows effective preservation and simple usage of Thai natural herbs in foods and drinks. Graphitic nanocarbon cluster are developed as an efficient delivery vehicle for biological active compounds and genetically important agents into cells and nucleus.

Keywords: Drug delivery, Food safety, Molecular self-assembly, Sensor, Vesicle

Author: Prof. SUKWATTANASINITT, Mongkol (Department of Chemistry, Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand)

Presenter: Prof. SUKWATTANASINITT, Mongkol (Department of Chemistry, Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand)

Session Classification: Heron 2

Track Classification: Nano-agriculture