

**NUS Graduate School for Integrative Sciences and Engineering
Research Project Write-up**

Title of Project : Template-directed synthesis of novel supramolecular architectures and their applications as smart materials

Name of Supervisor : Asst. Prof. Wu Jishan

Contact Details: Department of Chemistry, National University of Singapore
3 Science drive 3, Singapore 117543
Phone: 6516 2677 Office: S7-03-03
E-mail : chmwuj@nus.edu.sg

Short Description

This project will be focused on supramolecular chemistry and their materials applications. The research will cover several aspects: (1) template-directed synthesis of novel supramolecular architectures such as polyrotaxanes, polycatenanes, molecular necklace, rotaxane dendrimers and molecular switches; (2) their self-assembly and switching behavior in films, on surface and in solution; (3) their applications as smart materials for drug delivery/release, gene delivery, responsive surface materials, and RGB displays etc....