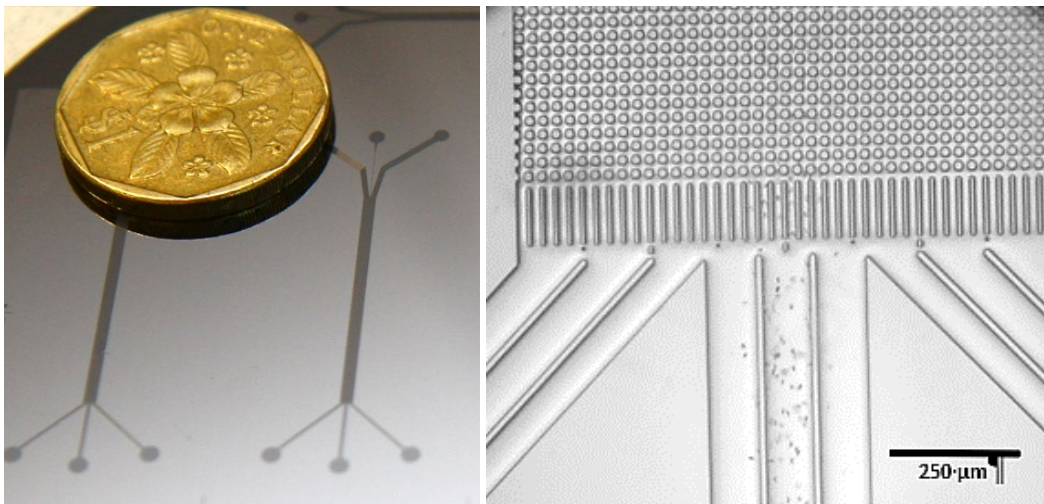


BN4404 BIOMEMS

WHAT IS THIS MODULE ABOUT?

Microelectromechanical systems (MEMS) have been developed for a wide range of biomedical applications. Advances in micro-fabrication and nanotechnology have enabled the reduction in size and increase in efficacy of miniaturized devices. These microdevices, with components as large as hundreds of microns, have potential uses ranging from the analysis of biomolecules to disease diagnosis, prevention and treatment. This module will focus on major topics such as photolithography, soft lithography, silicon etching, Nanoimprinting, device surface modification, DNA microarray, micro-PCR, and microfluidic biochips. This module will be taught by Prof Zhang Yong (biezy@nus.edu.sg).



WHY YOU SHOULD CONSIDER THIS MODULE

This module is designed to introduce students to this multi-disciplinary field and provide them with background, fundamentals and up-to-date information on the latest developments in bioMEMS. At the end of this module, students will have a good knowledge of standard microfabrication techniques, and understand the major categories and working principles of biomedical microdevices, the interactions between biomolecules and cells in these microdevices, and how to use these microdevices for biomedical applications.



College of Design and Engineering
Department of Biomedical Engineering