Yu-Min Yang (楊毓民 教授)
Professor

B.S.	Chem. Eng., Tatung Institute of Technology	1977
M.S.	Chem. Eng., National Cheng Kung University	1979
Ph.D.	Chem. Eng., National Cheng Kung University	1983

Phone	886-6-2757575-62633
Email	ymyang@mail.ncku.edu.tw
Office	Room 93610, Chemical Engineering Building

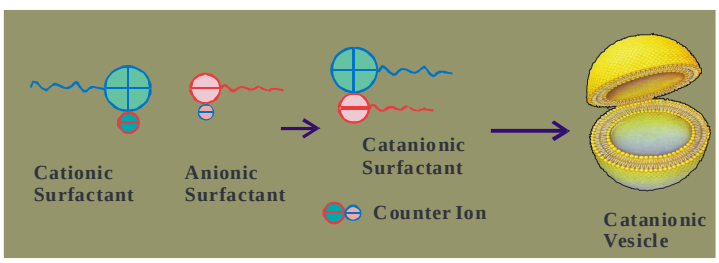
Research Interests:

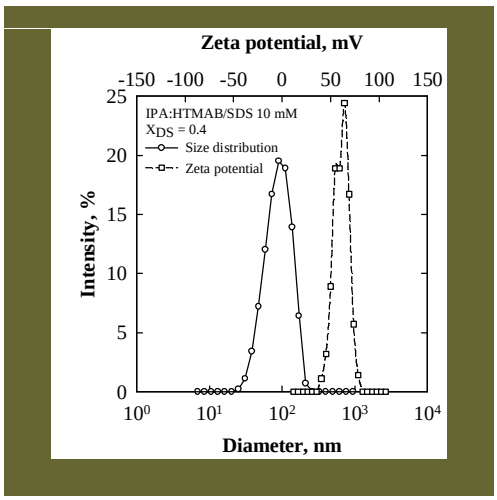
Nano-Colloidal Domain - where physics, chemistry, biology, and technology meet

Recent developments in many modern nano-technologies involve new materials or processes in which interfaces (or surfaces) and colloids play a crucial role. They reveal the interaction of a spectrum of disciplines in which physics, chemistry, biology, and technology intersect. Understanding and utilizing the special properties of molecules at interfaces constitutes goal of our research. These include some of the themes in nano-colloid science: self-assembly, construction of supramolecular architecture, nanoconfinement and compartmentalization, measurement and control of interfacial forces, and novel synthetic materials. A few of our current research topics which exemplify the breadth of our interests follows:

Preparation of catanionic vesicles and its applications in delivery and biomimetics

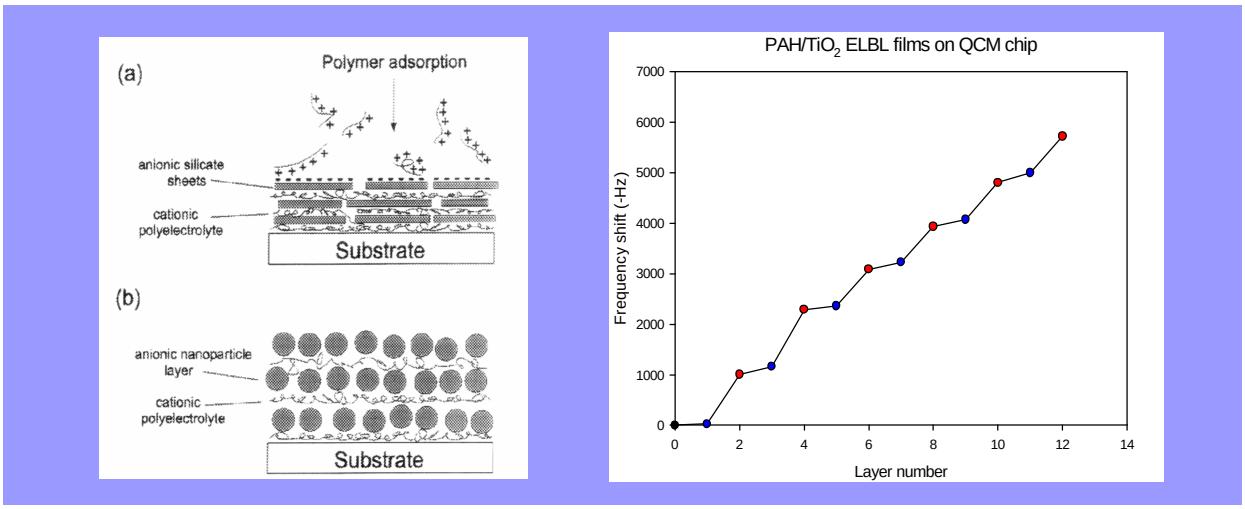
Novel liposome-like vesicular systems as carrier for drug and gene delivery and as model for biological cell membrane.

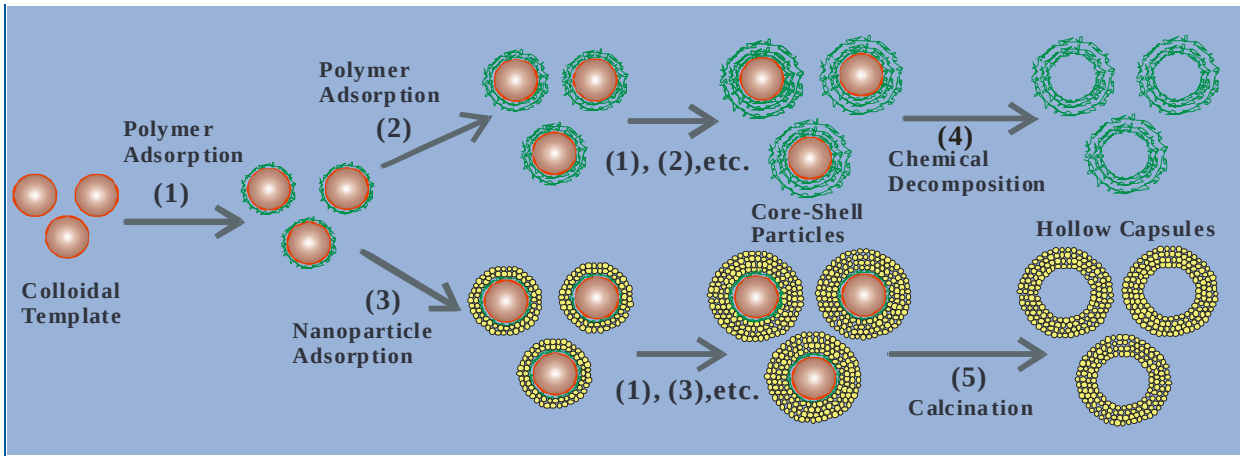




Creation of new hybrid materials by using layer-by-layer assembly strategy

By means of Langmuir-Blodgett deposition, electrostatic assembly, and self assembly, thin films, core/shell particles, and hollow capsules can be fabricated for potential applications such as dye sensitized solar cells (DSSCs) and microencapsulated phase-change materials (MCPCMs).





Micellar-enhanced ultrafiltration for environmental protection

Removal of metallic ions and organics by coupling ultrafiltration and ionic surfactant micelles.