

PHOTOINDUCED GENERATION OF NANOSTRUCTURED LIPOSOMES AND LANGMUIR-SCHAEFER FILMS FOR BIOSENSORS

Jong-Man Kim,¹ Jae-Taek Cho,² Kwang-Duk Ahn,¹ Dong June Ahn²

¹Molecular Engineering Laboratory, Life Sciences Division
Korea Institute of Science and Technology

P.O. Box 131, Cheongryang, Seoul 130-650

²Department of Chemical Engineering, Korea University

Anam-dong, Seongbuk-ku, Seoul 136-701, Korea

Recently, the development of efficient sensor systems with extended p-conjugation has gained much attention in fundamental and applied research areas. Signal transferring in p-conjugated polymers is advantageous over conventional small molecule chemosensors since signal amplification can occur within polymer backbone. In this regard, self-assembled and polymerized diacetylenes (PDAs) are attractive for use in sensory systems. The conjugated backbone of alternating double and triple bonds of PDAs results in strong absorption bands in the visible spectrum. A unique property of PDAs arises from the apparent blue to red color transition which occurs in response to stimuli such as pH, temperature, solvent, mechanical stress, and ligand-receptor interaction. In this presentation, our recent investigations on color transition of PDAs for biosensors will be discussed

(This work is supported by grants from KMOST, KMCIE, KOSEF)

