

**【NP-19】**

## **A New Patterning Method Using TiO<sub>2</sub> Photocatalysis**

장영진, 박미현, 황한나, 서은경, 성명모  
국민대학교 화학과

The TiO<sub>2</sub> is, a well-known photocatalyst for organic pollutant treatment, efficiently decompose the alkylsiloxane monolayers under ultraviolet(UV) illumination in air. In our work, self-assembled monolayers(SAMs) of octadecyltrichlorosilane(OTS) were prepared on a Si substrate. The OTS based-SAMs were irradiated with UV of 254 nm in air through a TiO<sub>2</sub> mask. The TiO<sub>2</sub> mask image was printed on the SAMs as a removed/unremoved pattern. The patterned SAMs were define and direct the selective deposition of TiO<sub>2</sub> thin films using atomic layer deposition(ALD). We have characterized the resulting with atomic force microscopy(AFM) and scanning electron microscopy(SEM).