

## Synthesizing TiO<sub>2</sub> on Mica Surface and Its Photocatalytic Activity

김도희, 김도현<sup>†</sup>

KAIST

(dohyun.kim@kaist.edu<sup>†</sup>)

Titania (TiO<sub>2</sub>) is used as a photocatalyst which changes volatile organic compounds into nontoxic materials such as carbon dioxide and water. One of the applications of titania is to prevent SBS (Sick Building Syndrome). However, it has a poor dispersion and it is difficult to expose titania to light when used with a paint. Mica, one of the sheet-structured mineral, is easy to exfoliate and exfoliated mica can be used as a substrate for materials active in chemical reaction. In this research, mica was exfoliated and titania was synthesized on the surface of the mica under acidic condition. The strategy to increase durability and quantity of titania deposition on the mica and the photocatalytic activity of the titania-mica composite will be discussed.