

### Sodium Silicate-based Titania-Silica Composite by Sol-gel Method

Askwarhlonga<sup>1</sup>, 김종길<sup>1,2</sup>, 박진구<sup>2</sup>, 프라딕사라와테<sup>1</sup>,  
김희택<sup>1,\*</sup>

<sup>1</sup>한양대학교; <sup>2</sup>이엔비나노텍(주)  
(khtaik@hanyang.ac.kr\*)

A simple and versatile sol-gel method was used to synthesize Titania-silica composite with desired morphology. Sodium silicate, being one of the inexpensive silica precursors, was successfully used in the present study. The titania source was  $\text{TiOCl}_2$  stock-solution prepared by reacting  $\text{TiCl}_4$  and water. Cetyltrimethylammoniumbromide(CTAB) was used in order to tailor the morphology of the final product to produce material with desired properties. The final product obtained is suitable for industrial application as a substitute for tetraethoxysilane-based titania-silica composite.