

## Preparation and their optical property of self-cleaning/UV blocking films

윤동신<sup>1,2</sup>, 이형석<sup>1,3</sup>, 이승호<sup>1</sup>, 유중환<sup>1,\*</sup>  
<sup>1</sup>요업(세라믹)기술원; <sup>2</sup>고려대학교 화학과;  
<sup>3</sup>한양대학교 화학공학과  
(jwyo@kicet.re.kr\*)

Investigations on self-cleaning/UV-blocking films are quickly increased because recently the film has been used in show windows, high-rise building, and car. In this study, we used various fillers like  $\text{TiO}_2$  and  $\text{SiO}_2$ -coated  $\text{TiO}_2$  to control UV-blocking and hydrophilicity for film prepared using those fillers and analyzed their optical property such as contact angle, UV-absorbance, transmittance, and haze. The hydrophilicity of the coated film gives different contact angle depending upon filler/UV resin ratios. Optical properties (transmittance and haze) can be explained based on particle amounts in film. Also, UV-absorbance was sensitively changed by contents of  $\text{TiO}_2$  or  $\text{SiO}_2$ -coated  $\text{TiO}_2$  in film.