

## Facile Design and Fabrication of Robust, Transparent, and Superhydrophobic Coating

한기덕, 용기중<sup>†</sup>, 백승현, 정용재, 문현식  
포항공과대학교  
(kyong@postech.ac.kr<sup>†</sup>)

Superhydrophobic surface has various values for practical uses in our life. Because of its high water proofing effect, it can be used for Anti-fouling/Anti-corrosion. Also It can be used for drag reduction to save energy at transportation on a fluid directly related to save money. However conventional superhydrophobic surfaces have always depended on expensive, sophisticated, and fragile roughness structures. Therefore, poor robustness has turned into the bottleneck for large-scale industrial applications of the superhydrophobic surfaces. To handle this problem, a superhydrophobic surface with firm robustness urgently needs to be developed.

In our works, Robust superhydrophobic surface could be made very easily by pretreated SiO<sub>2</sub> spray coating just with commercial spray adhesive. This method can be applied various substrates and even on sand-paper abrasion for 40cycle, superhydrophobicity was maintained that is impressive result for commercialization of superhydrophobic surface. Moreover, Transmittance could be increased by controlling spray solution concentration & spray cycle number.