

Superhydrophobic Surface Modification Based on PTFE Coated AAO Template

Wednesday, May 20, 2015 2:00 PM (3h 30m)

In this research, the superhydrophobic texture based on PTFE coated AAO template surface modification. The AAO template was successfully achieved from high purity aluminium sheet by two-step anodization process in 0.3 M of oxalic acid at 40V 0 degree Celsius. The AAO template was then future widened in 5% phosphoric acid at variable period during 0 to 80 min. the effect of widening period on pore size was investigated by field-emission scanning electron microscope (FE-SEM). From FE-SEM image illustrates that the pore diameter of the template enlarges as function of widening period. Finally to achieve the extreme superhydrophobic surface, PTFE was sputtered on top of the AAO template through rf magnetron sputtering in 5 min. Regarding with the static contact angle, the superhydrophobic performance increasingly improve.

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Session Classification: Poster-1

Track Classification: Surface, Interface and Thin Film