

Supplementary Information:

Tunable superoleophobicity via harnessing the surface chemistry of UV responsive titania coatings

Jitesh Barman^{1,2*}, Sumit Kumar Majumder², Pritam Kumar Roy²,
and Krishnacharya Khare²

¹ *Electronic Paper Display Institute, South China Normal University, Higher Education Mega Center, Guangzhou-510006, P. R. China.*

*Email:jiteshb@m.scnu.edu.cn

² *Department of Physics, Indian Institute of Technology Kanpur, Kanpur, India-208016.*

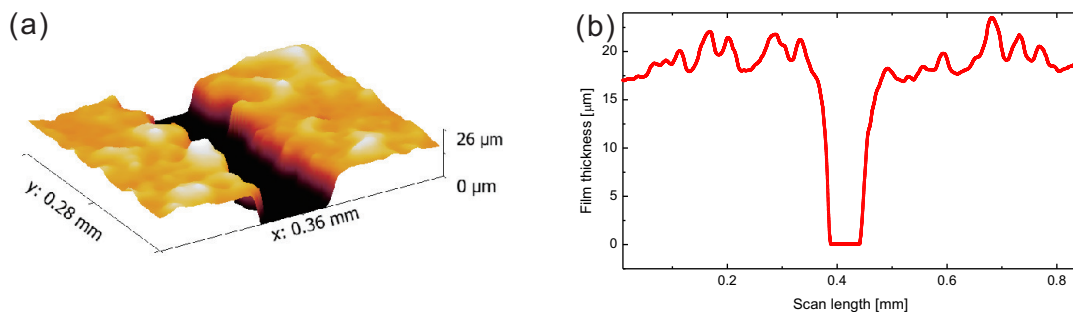


Figure S1: (a) 3D profilometry image of the titania coated Si substrate with a scratch on the coated film (b) Line scan showing the thickness and the surface feature of titania coated Si substrate.

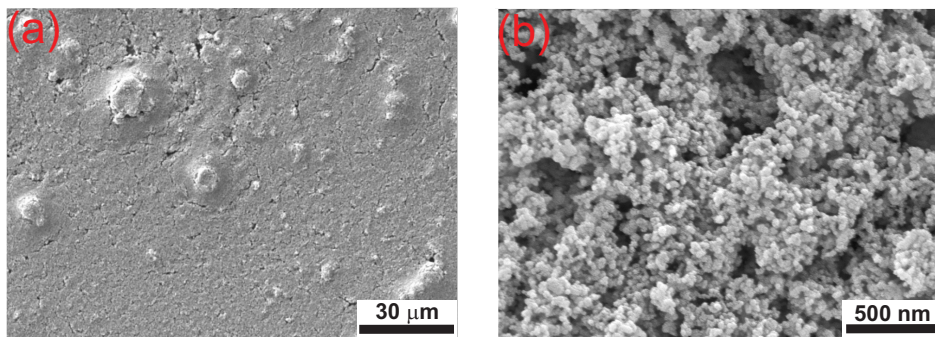


Figure S2: a) FE-SEM images of the spin coated titania surfaces showing less micron sized roughness with no reentrant property. (b) Magnified image displaying the nano porous structure of titania nanoparticles.

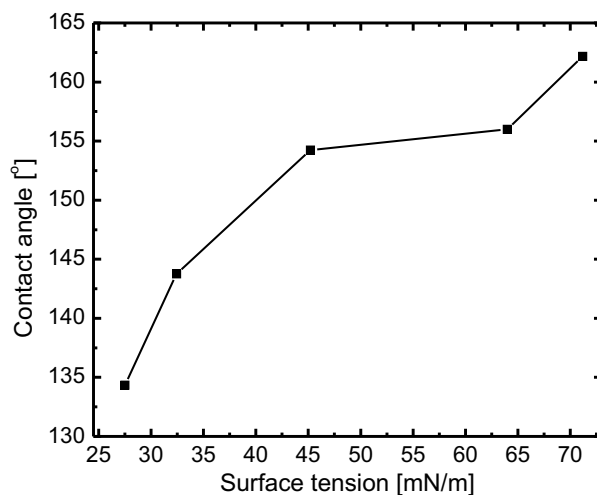


Figure S3: Apparent contact angles as function of test liquid surface tensions on oleophobic surface prepared by spin coating method.

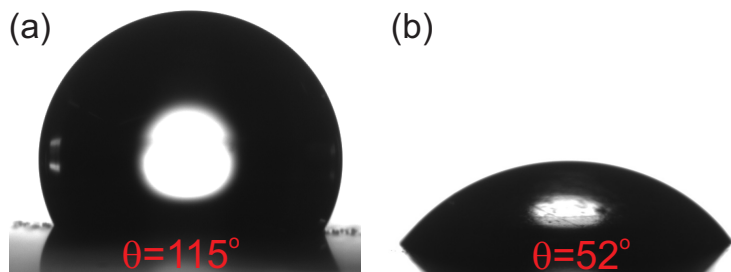


Figure S4: Young's contact angle of (a) water ($\gamma = 72 \text{ mN/m}$) and (b) decane ($\gamma = 23.3 \text{ mN/m}$) on PFDTs coated smooth Si substrate to show the effect of test liquid surface tension on the Young's contact angle.