Supporting Information

An effective method to significantly enhance the robustness and adhesion-to-substrate of high transmittance superamphiphobic silica thin films

Zhi Geng^{a,b}, Junhui He^{a,*}

^a Functional Nanomaterials Laboratory, Center for Micro/Nanomaterials and Technology and Key Laboratory of Photochemical Conversion and Optoelectronic Materials, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Zhongguancundonglu 29, Haidianqu, Beijing 100190, China

^b University of Chinese Academy of Sciences, Beijing 100864, China

* To whom correspondence should be addressed. Tel.: +86-10-82543535; Fax: +86-

10-82543535; e-mail: jhhe@mail.ipc.ac.cn



Fig. S1 TEM images of 20 nm silica nanoparticles (a), 60 nm hollow silica nanospheres (b), and mesopore silica nanosheets (c).



Fig. S2 AFM images of the coatings by 0 h (a) and 3 h (b) CVD TEOS treatments,

respectively.



Fig. S3 Digital images of contact angles for water and ethylene glycol of the coatings

by 3 h TEOS CVD treatment at 40°C (a, b) and 80°C (c, d), respectively.



Fig. S4 Surface morphologies of the coatings by 3 h TEOS CVD treatment at 40°C

(a) and 80°C (b), respectively.



Fig. S5 SEM images of the coating by 3 h TEOS CVD treatment at 40°C after 4H (a, b) and 5H (c, d) pencil scratching tests, respectively and of the coating by 3 h TEOS CVD treatment at 80°C after 4H (e, f) and 5H (g, h) pencil scratching tests,

respectively.