

Supplementary Information for:

**X-ray Irradiation induced Reversible Wettability Modification of
Titanium NRAs**

Weipeng Wang,¹ Zheng Xie,^{1,2} Zhengcao Li,¹ and Zhengjun Zhang³

¹ *State Key laboratory of New Ceramics and Fine Processing, School of Materials
Science and Engineering, Tsinghua University, Beijing 100084, P.R. China.*

² *High-Tech Institute of Xi'an, Shanxi 710025, China*

³ *Key Laboratory of Advanced Materials (MOE), School of Materials Science and
Engineering, Tsinghua University, Beijing 100084, P.R. China*

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1, Supporting Figures and Captions

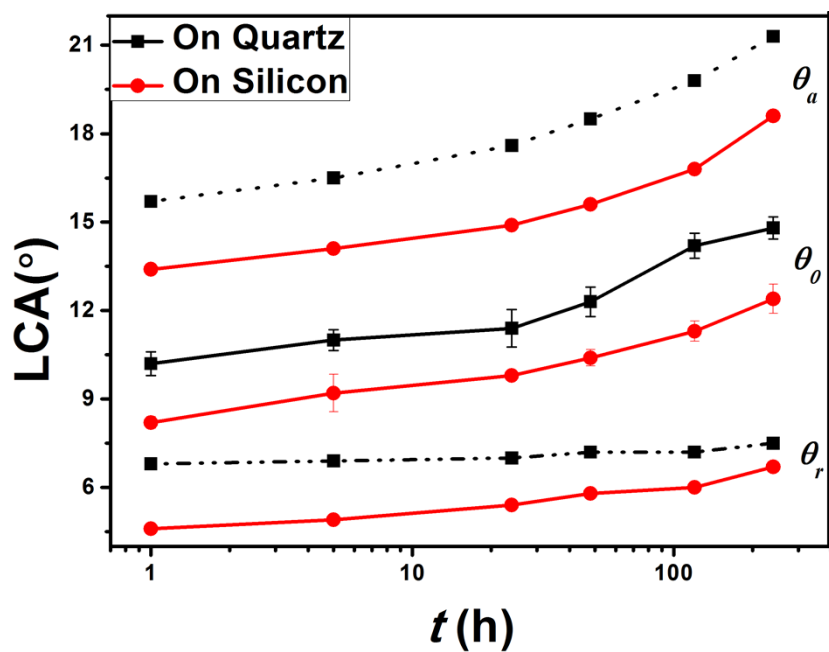


Figure S1 Liquid contact angle variation with time of Ti NRAs deposited on quartz (square) and Silicon (round) substrate with typical graph illustrated. Dynamic advancing angle (θ_a) and receding angle (θ_r) were also illustrated.

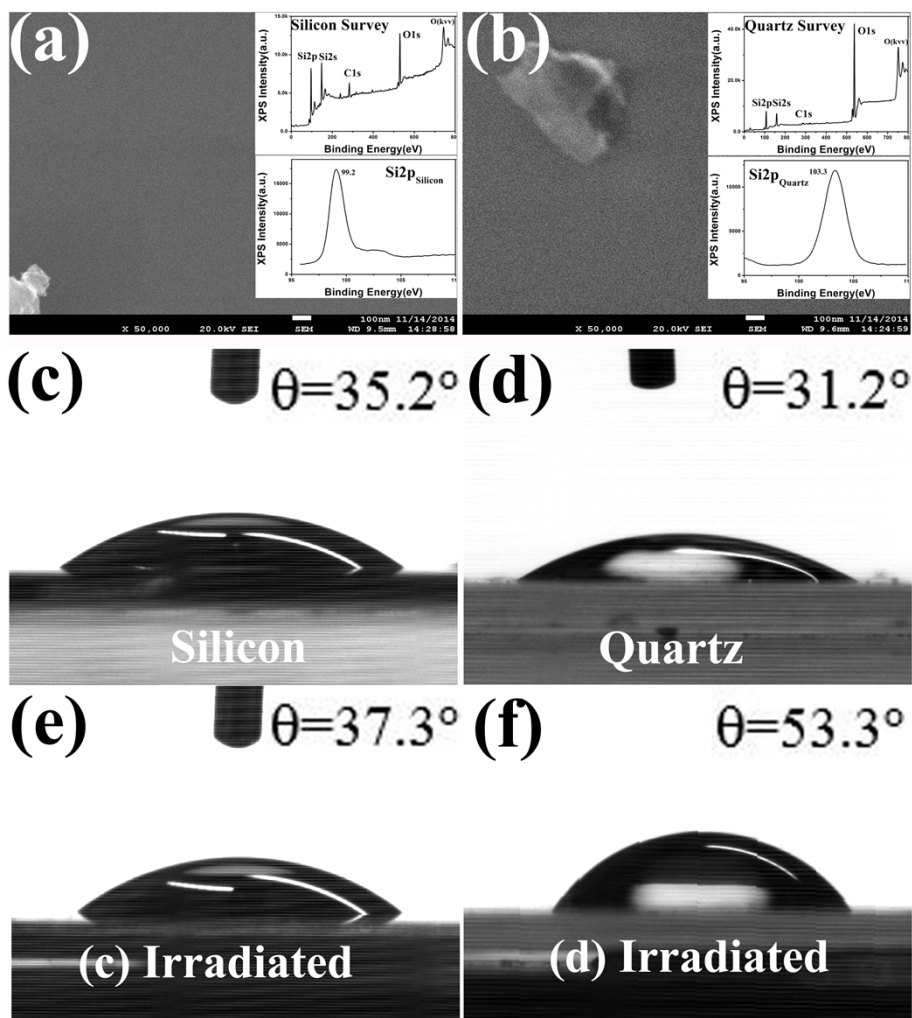


Figure S2 Surface SEM and XPS spectrums of blank Silicon (a) and quartz (b) substrates, respectively. The objects in SEM were artificially introduced only to favor the focusing during observations as the surfaces are very smooth. (c-f) refer to the contact angle evolution of blank silicon wafer (c, e) and quartz substrate (d, f) upon irradiation, respectively.

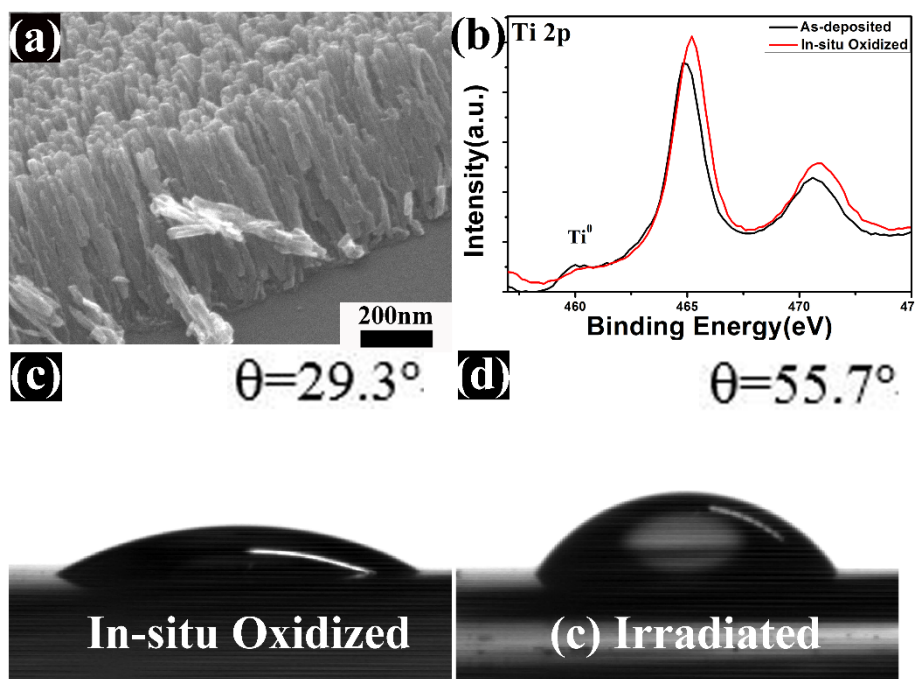


Figure S3 Morphology (a), Titanium XPS (b) and wettability (c, d) characterizations of *in situ* oxidized Ti NRAs film. High resolution XPS of as-deposited and *in situ* oxidized Ti NRAs film were illustrated for comparison in S3(b)