## **Supplementary Material**

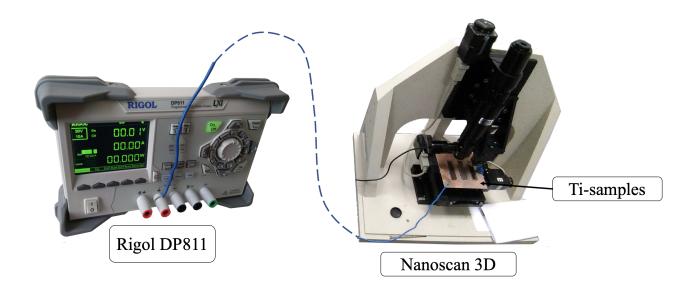


Fig. S1. (Color online) Wiring diagram of the electric potential supply with Ti-samples when testing the elastic modulus.

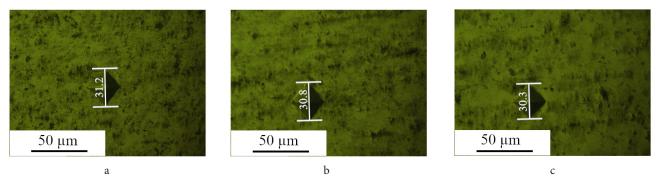


Fig. S2. (Color online) Vickers microhardness indent marks of commercially pure titanium under different electric potentials (without applying of electric potential (a), 0.5 V (b), 1 V (c)).