

Facile Fabrication of Single-Walled Carbon Nanotube/Anatase Composite Thin Film on Quartz Glass Substrate for Translucent Conductive Photoelectrode

Yutaka Suwazono ¹, Takuro Murayoshi ², Hiroki Nagai ^{2,3} and Mitsunobu Sato ^{1,2,3,*}

¹ Applied Chemistry and Chemical Engineering Program, Graduate School, Kogakuin University, Tokyo 192-0015, Japan; bd19003@ns.kogakuin.ac.jp

² Electrical Engineering and Electronics Program, Graduate School, Kogakuin University, Tokyo 192-0015, Japan; cm21051@ns.kogakuin.ac.jp (T.M.); nagai@cc.kogakuin.ac.jp (H.N.)

³ Department of Applied Physics, School of Advanced Engineering, Kogakuin University, Tokyo 192-0015, Japan

* Correspondence: lccsato@cc.kogakuin.ac.jp; Tel.: +81-426-731-492

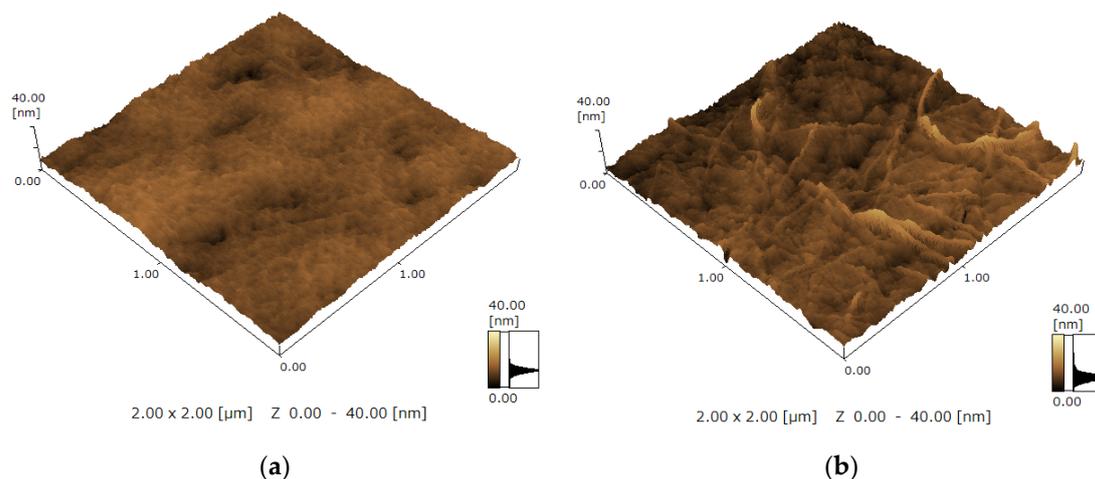


Figure S1. Atomic force microscopy (AFM) 3D surface appearances of (a) F_{TiO_2} and (b) F_{COMP} .

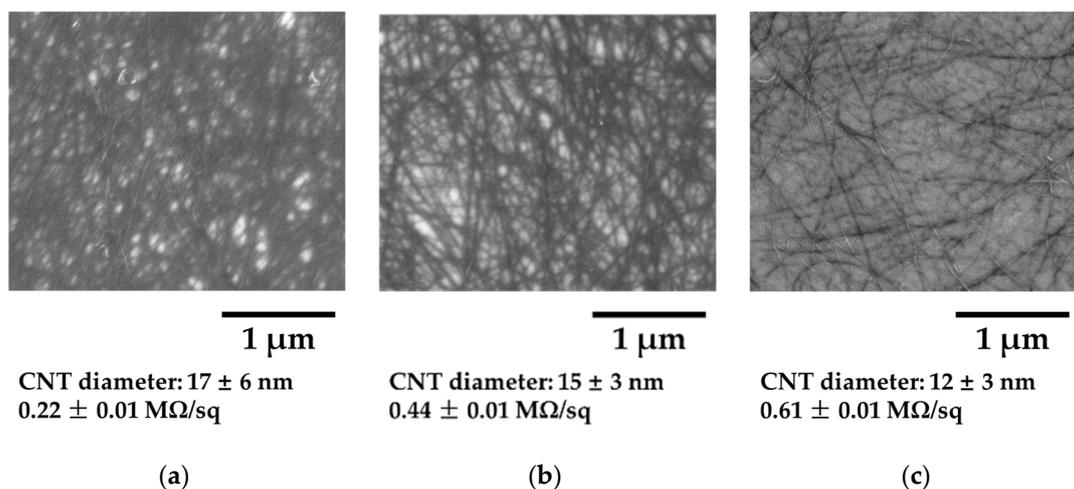


Figure S2. Surface morphologies of (a) F_{CNT} , (b) F'_{CNT} , and (c) F''_{CNT} observed by FE-SEM.

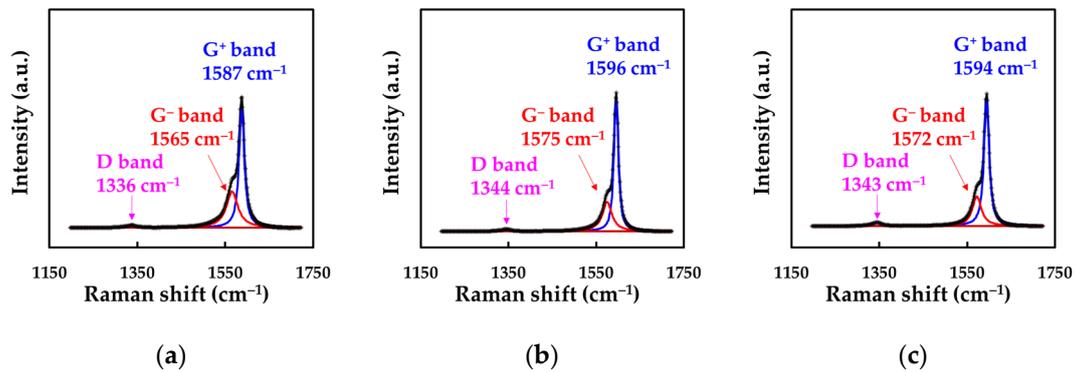


Figure S3. The Raman spectra of (a) F_{CNT} , (b) F'_{CNT} , and (c) F''_{CNT} . The dotted line indicates the original Raman spectra.

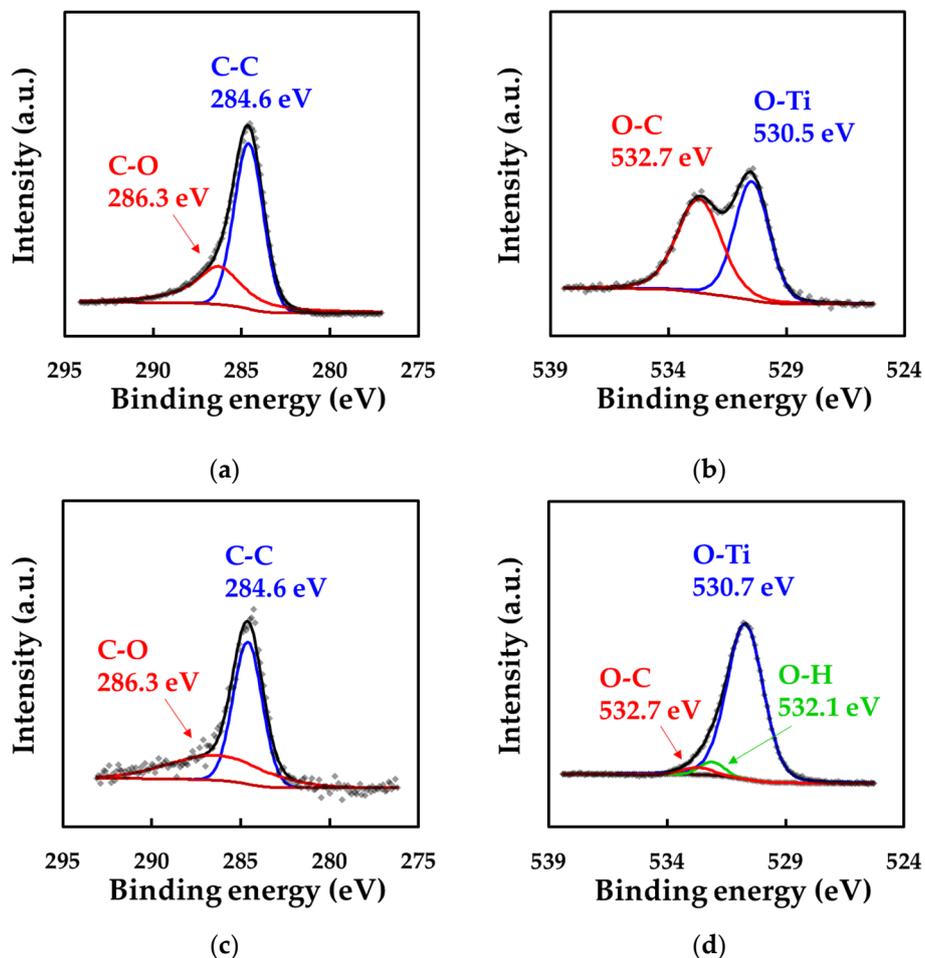


Figure S4. C 1s and O 1s XPS spectra of (a,b) $F_{Titania}$ and (c,d) F_{COMP} , respectively, after Ar^+ ion beam bombardment at a voltage of 150 V for 15 s. The dotted line represents the original XPS data. The solid brown line indicates the Shirley baseline. The colored curves indicate the theoretically fitted curves by assuming a Voigt distribution.