

Femtosecond Laser-Induced Nano-Joining of Volatile Tellurium Nanotube Memristor

Yongchao Yu ^{1,2}, Pooran Joshi ³, Denzel Bridges ¹, David Fieser ¹ and Anming Hu ^{1,*}

¹ Department of Mechanical, Aerospace and Biomedical Engineering, University of Tennessee Knoxville, 1512 Middle Drive, Knoxville, TN 37996, USA

² School of Mechanical and Aerospace Engineering, Nanyang Technological University, 50 Nanyang Ave., Singapore 639798, Singapore

³ Oak Ridge National Lab, 1 Bethel Valley Rd., Oak Ridge, TN 37831, USA

* Correspondence: ahu3@utk.edu

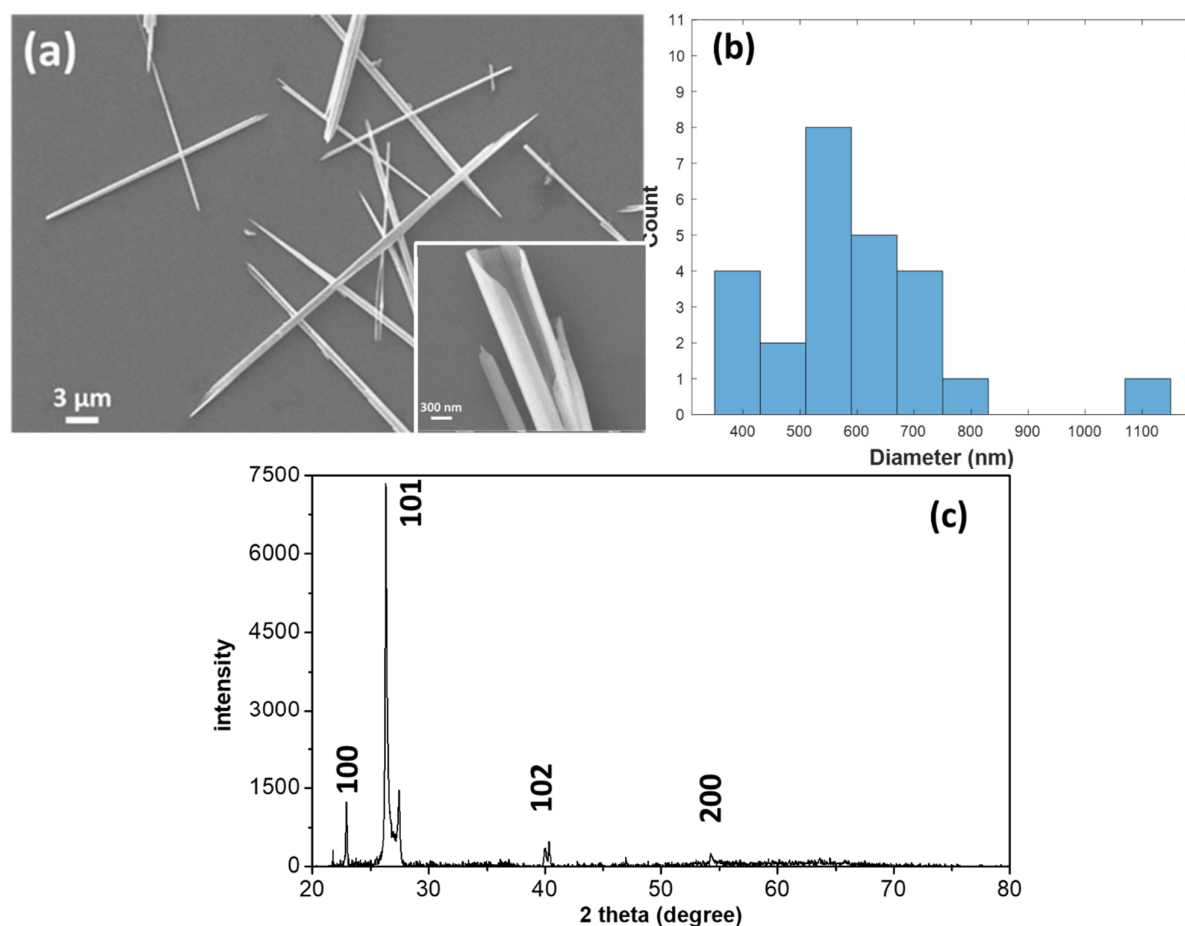


Figure S1. SEM images of (a) synthesized Te nanotubes and an enlarged SEM image of Te nanotubes in the inset to Fig. s1(a); (b) the distribution of nanotube's diameter, and (c) XRD analyses for synthesized Te nanotubes.

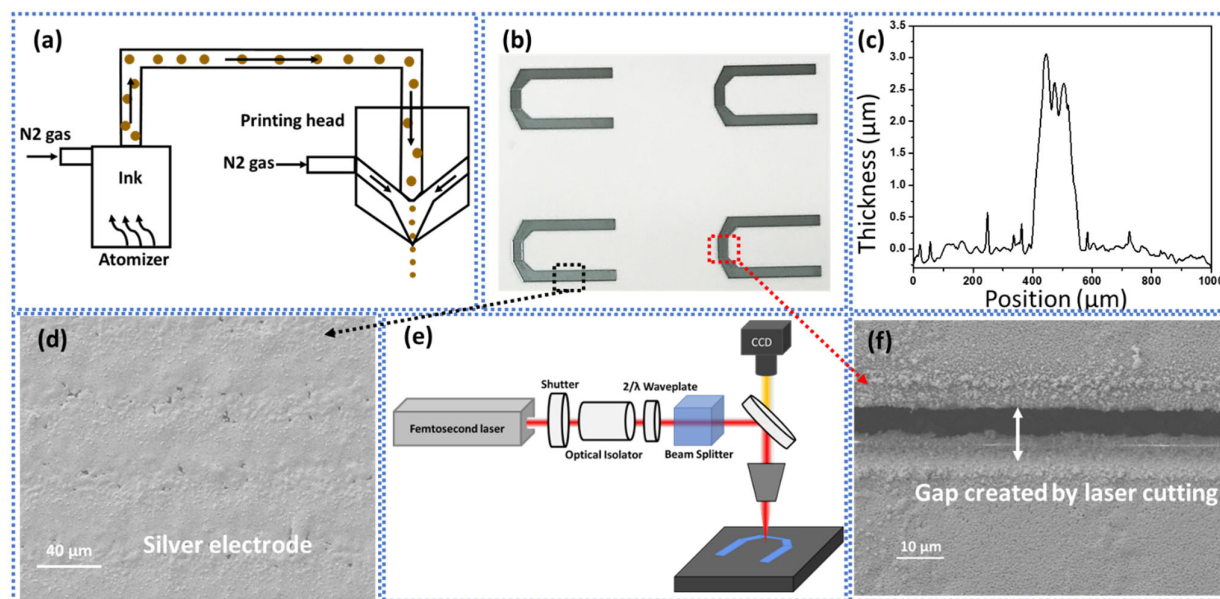


Figure S2. (a) Schematic of the aerosol jet printing process, (b) an image of silver electrodes printed by aerosol jet printing, (c) the thickness measurement result for the silver electrode, (d) an SEM image of printed silver electrode's surface after curing, (e) the schematic of the laser-processing setup, and (f) an SEM image of the gap created by laser cutting process.