Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Solution Processed Multifunctional Transparent Conductive Films Based on Long Silver Nanowires/Polyimide Structure with Highly Thermostable and Antibacterial Properties

Yan Yu [a], Wenfeng Shen [a*], Fan Li [b], Xingzhong Fang [a], Hong Duan [b], Feng Xu [a], Yonghua Xiong [b], Wei Xu and Weijie Song [a*]

[a] Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences, Ningbo, Zhejiang 315201, China

[b] State Key Laboratory of Food Science and Technology, Nanchang University, Nanchang, Jiangxi 330047, China

*Email: wfshen@nimte.ac.cn (W. Shen); weijiesong@nimte.ac.cn (W. Song).

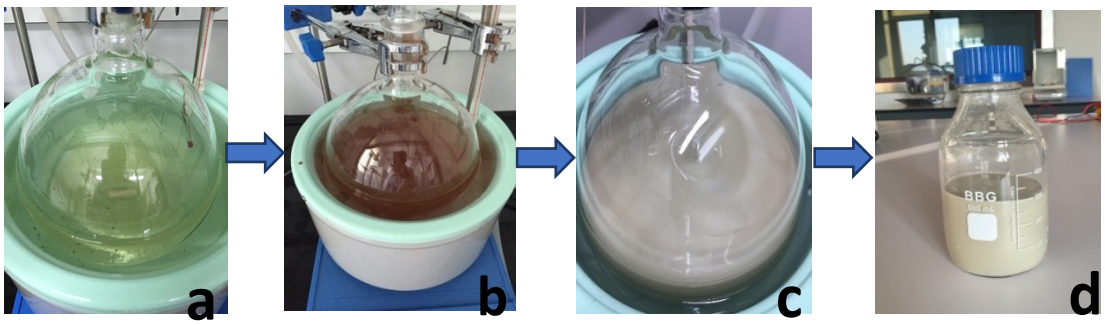

Figure S1. Preparation process of AgNWs. (a) The begin of the reaction (Mixed solutions color: light yellow); (b) During the reaction (Brown); (c) The end of the reaction (gray); (d) AgNWs solutions after centrifuged cleaning.

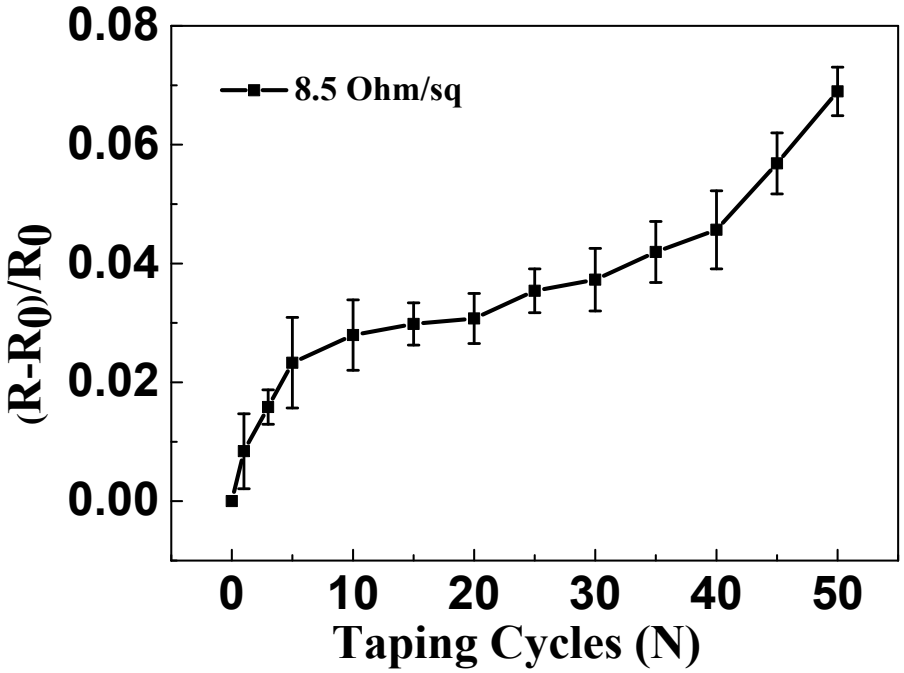

Figure S2. Sheet resistance change of the AgNW/PI TCF with 3M taping test.

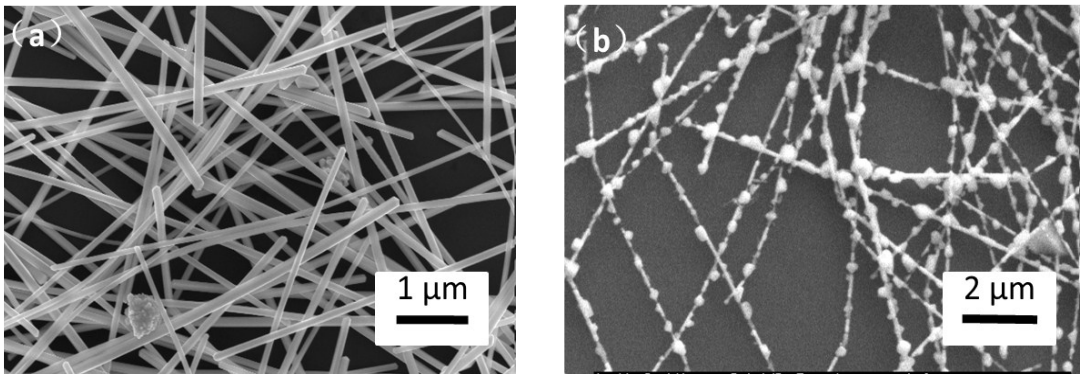

Figure S3. Surface morphologies of pure AgNW film before (a) and after (b) annealed at 250 °C for 1 h.

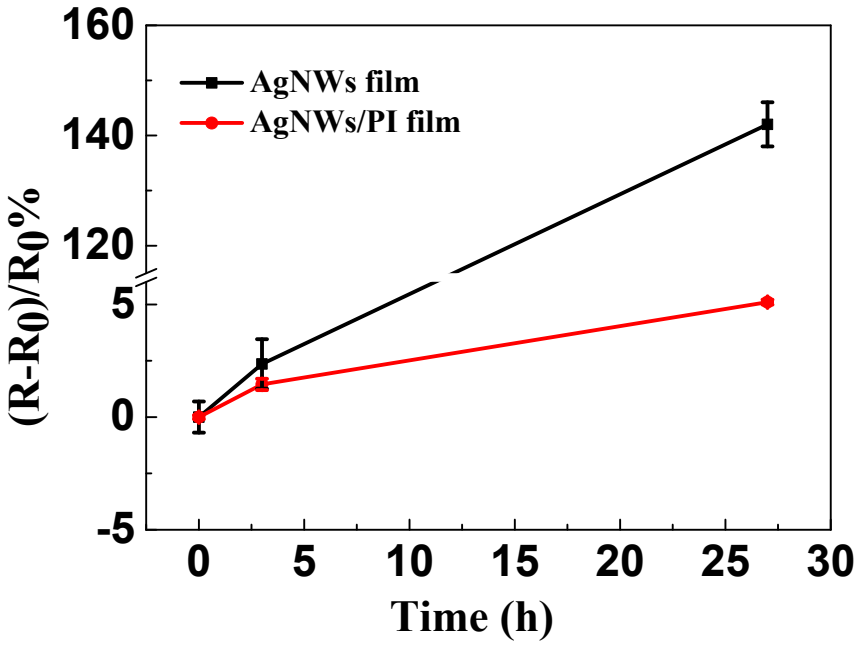

Figure S4. The change of the sheet resistance after the thermal moisture test in a humidity chamber (121℃, 97% relative humidity).

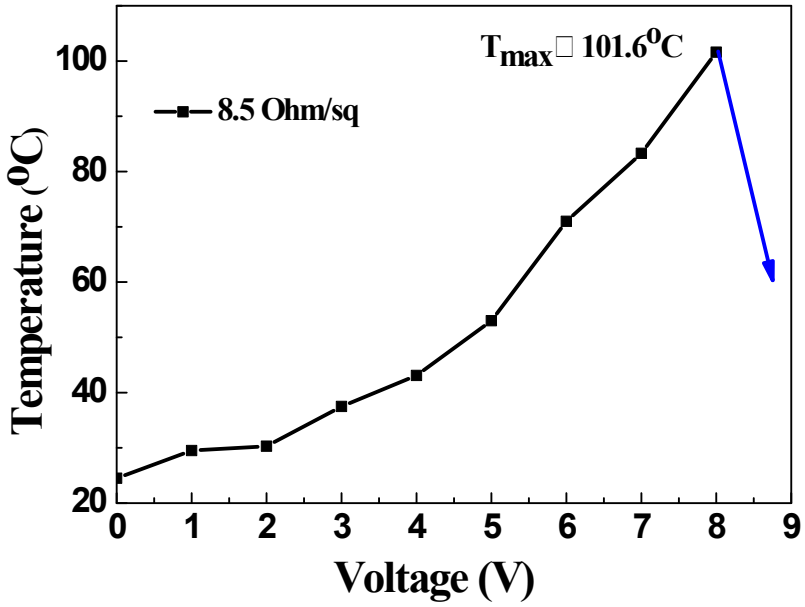

Figure S5. Temperature change of the AgNW/PI TCF (Rs = 8.5 Ohm/sq) with different input voltages.

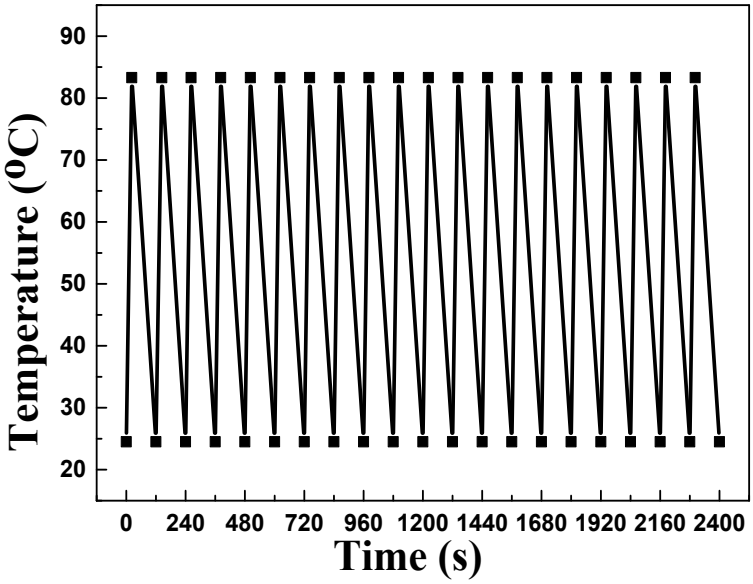

Figure S6. Cycling performance of AgNW/PI TCF with sheet resistance of 8.5 ohm/sq.