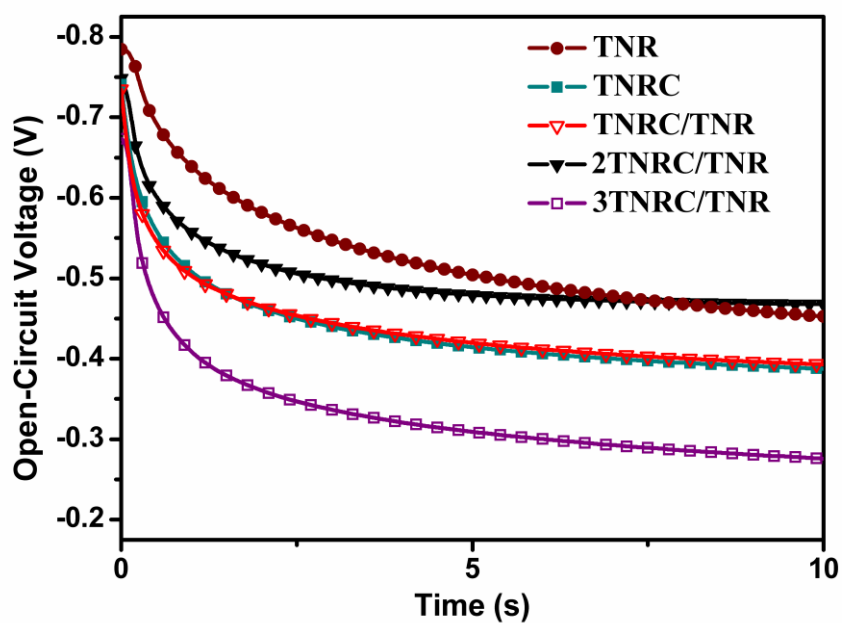


## Electronic Supplementary Information

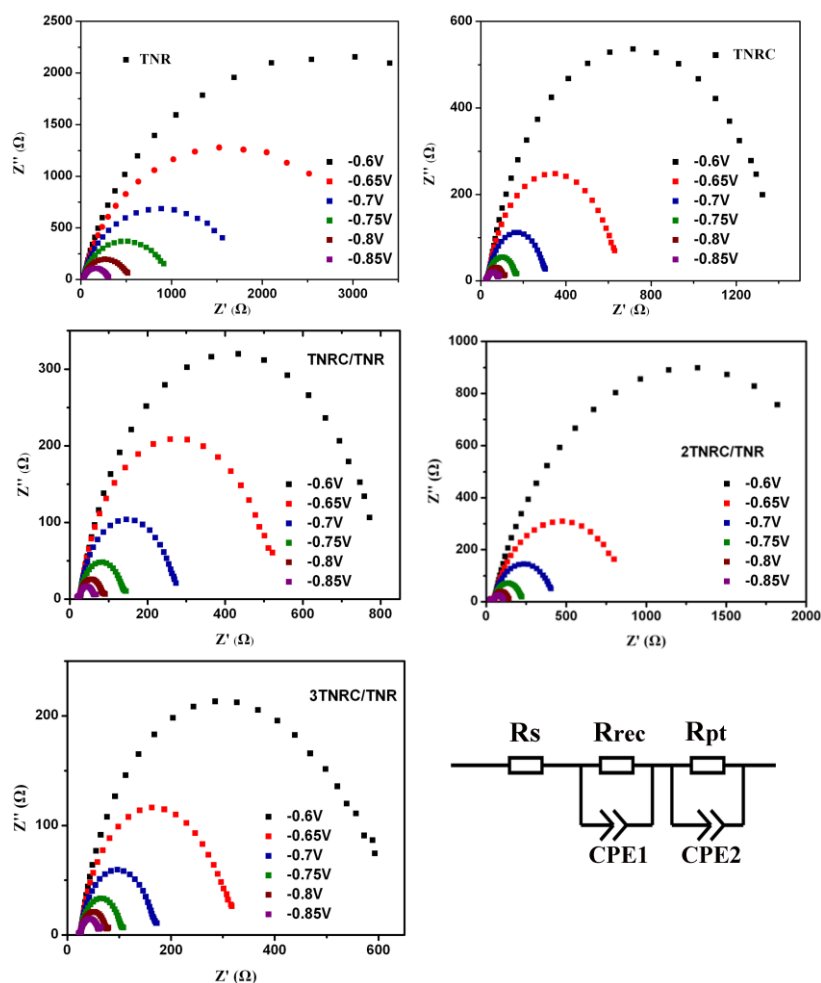
### Multilayer TiO<sub>2</sub> Nanorod Cloth/Nanorod Arrays Electrode for Dye-Sensitized Solar Cells and Self-Powered UV Detectors

Zhuoran Wang, Sihan Ran, Bin Liu, Guozhen Shen\* and Di Chen\*

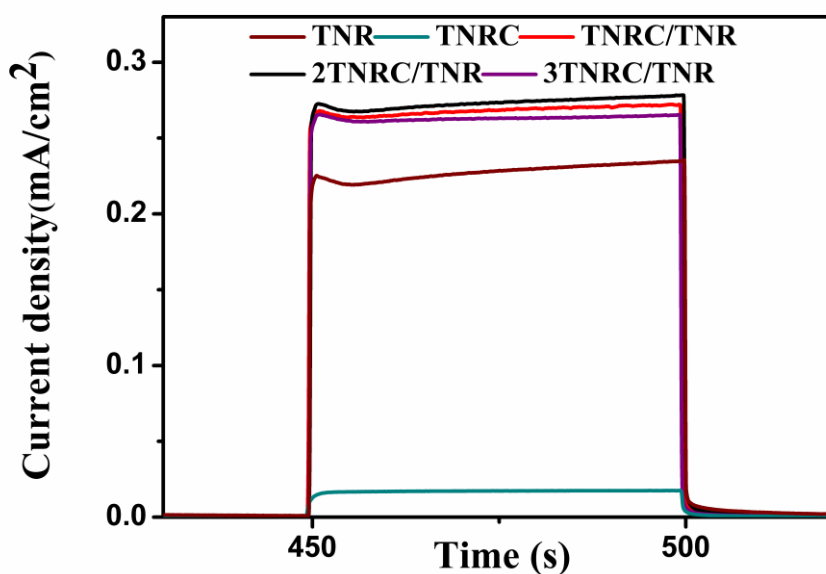
Wuhan National Laboratory for Optoelectronics and College of Optoelectronic Science and Engineering, Huazhong University of Science and Technology, Wuhan, China.



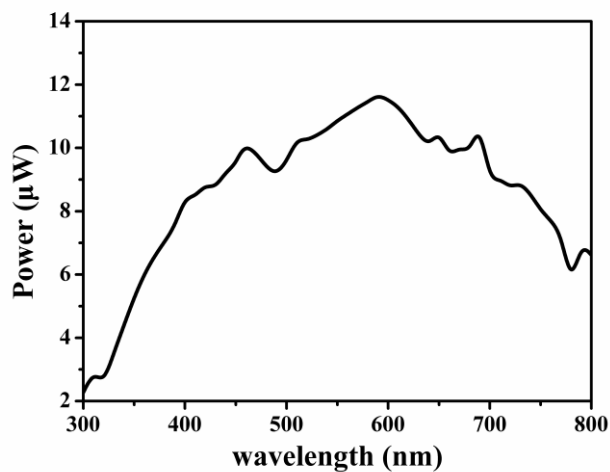
**Fig. S1** Open circuit decay measurement by changing the environment from light to dark.



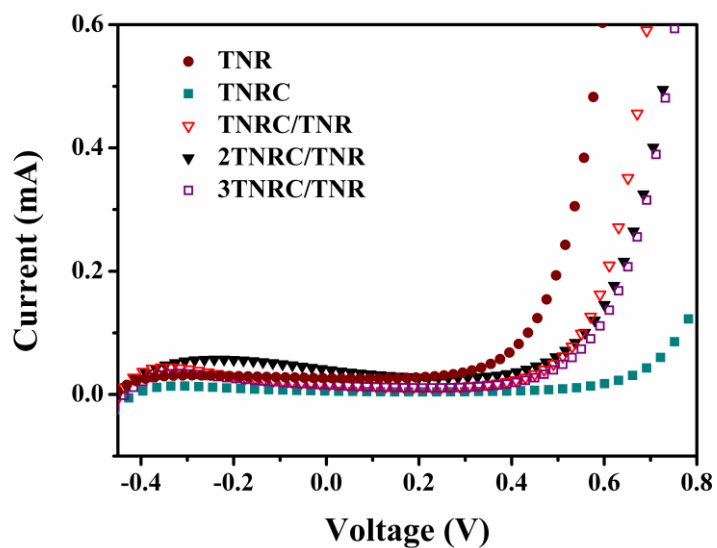
**Fig. S2** Nyquist plots for different samples under bias ranging from -0.6V to -0.85V and the equivalent circuit used in EIS fitting.



**Fig. S3** Time-resolved photocurrent of the TNRC photodetector under 365 nm light illumination using  $1.55\text{mW}/\text{cm}^2$  UV hand lamp at 0V bias.



**Fig. S4** Radiation power spectrum of the Oriel 500W xenon lamp source equipped with monochromator.



**Fig. S5** *J-V* characteristic for all the PEC detector samples measured in dark.