Supplementary Information

Enhanced Mechanical Strength and Electrical Conductivity of Carbon-Nanotube/TiC Hybrid Fibers

Qinghua Yi, [§a] **Xiao Dai,** [§a] **Jie Zhao,**[a] **Yinghui Sun,**[a] **Yanhui Lou,**[a] **Xiaodong Su,**[*a] **Qingwen Li,**[b] **Baoquan Sun,**[a] **Honghe Zheng,**[a] **Mingrong Shen,**[a] **Qinghua Wang**[a] **and Guifu Zou***[a]

[a] *Soochow University, Suzhou215006,P.R.China. Fax: +86-512-65228130; Tel: +86-512-65228130; E-mail: xdsu@suda.edu.cn; zouguifu@suda.edu.cn*
[b] *Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, Suzhou215123,P.R.China*
*Corresponding author
§Equal contribution

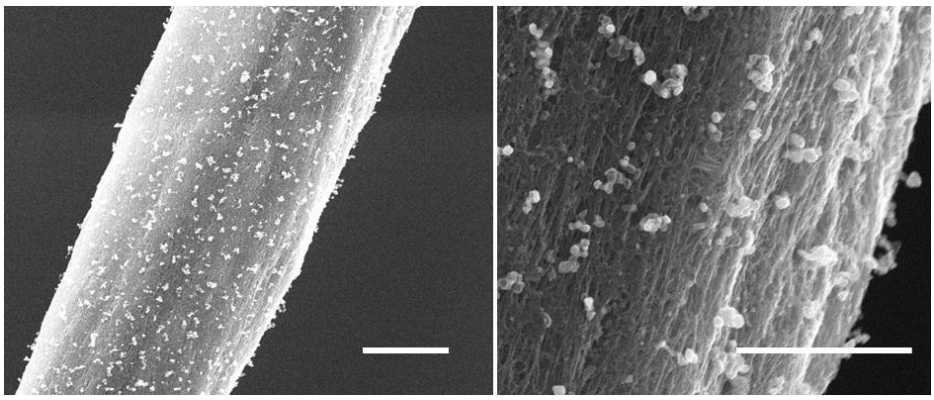

Fig. S1 High resolution SEM images of CNT/TiC fiber (Scale bar: 2 μm).

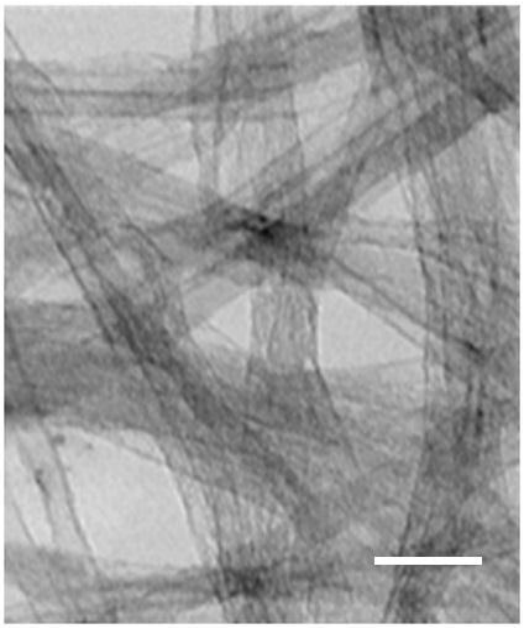

Fig. S2 TEM images of pure CNT (Scale bar: 40 nm).

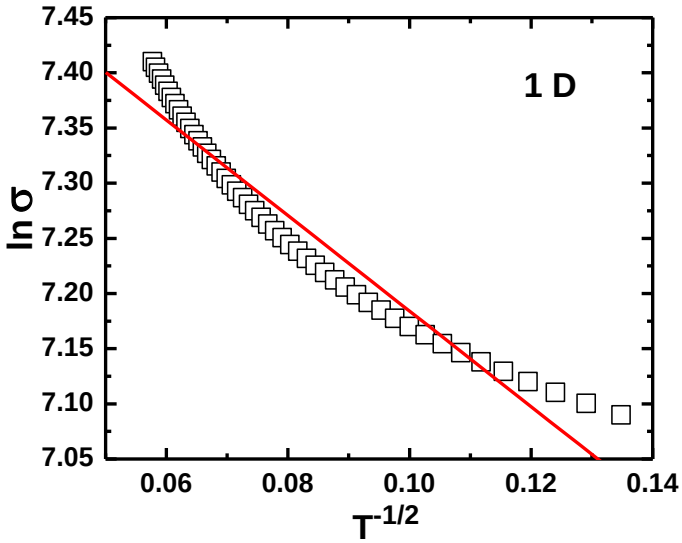

Fig. S3 The fitting of ln σ *vs.* $T^{-1/2}$ based on the Mott's variable range hopping model: $\sigma \infty \exp(-A/T^{1/(d+1)})$, where σ is electrical conductivity, A is constant, T is the temperature, and d is the dimensionality. As this plot, d = 1, that is one dimensional hopping mechanism.

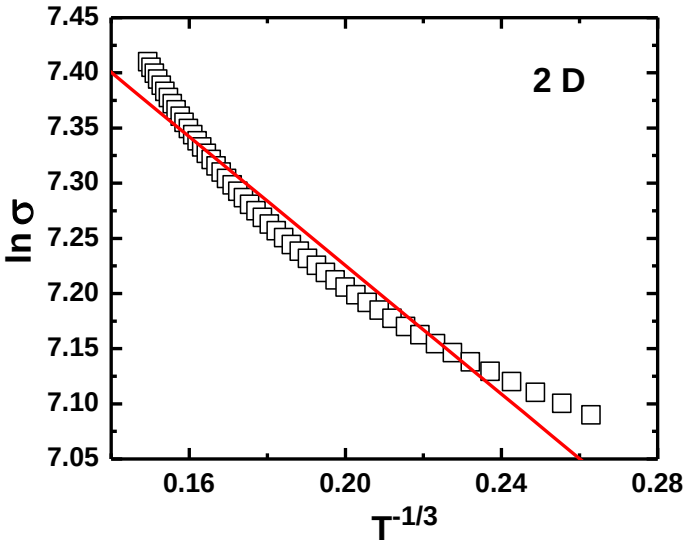

Fig. S4 The fitting of ln σ *vs.* $T^{-1/3}$ based on the Mott's variable range hopping model: $\sigma \infty \exp(-A/T^{1/(d+1)})$, where σ is electrical conductivity, A is constant, T is the temperature, and d is the dimensionality. As this plot, d = 2, that is one dimensional hopping mechanism.

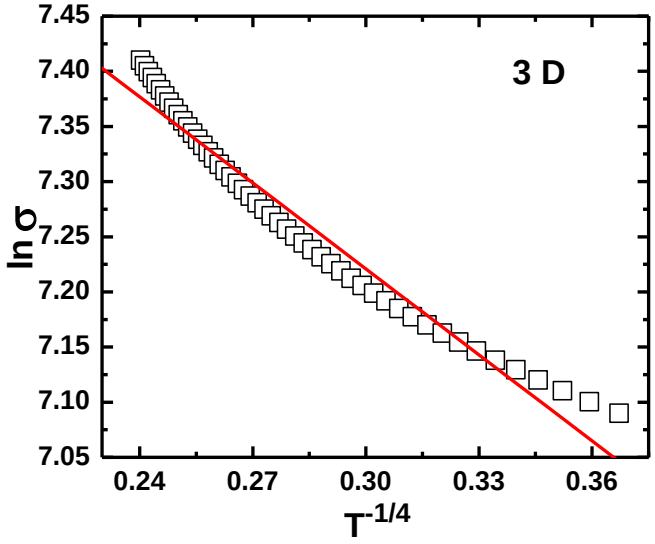

Fig. S5 The fitting of lnσ *vs.* $T^{-1/4}$ based on the Mott's variable range hopping model: $\sigma \infty \exp(-A/T^{1/(d+1)})$, where σ is electrical conductivity, A is constant, T is the temperature, and d is the dimensionality. As this plot, d = 3, that is one dimensional hopping mechanism.