Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Enhanced dielectric performance in flexible MWCNTs/poly(vinylidene fluoride-*co*-hexafluoropropene)-based nanocomposites by the design of tri-layered structure

Jie Chen[a], Yifei Wang[b], Jiufeng Dong[c], Yujuan Niu[c,d], Weixing Chen[a], and Hong Wang[c,*]

[a] School of Materials and Chemical Engineering, Xi'an Technological University, Xi'an 710021, China

[b] Electrical Insulation Research Center, Institute of Materials Science, University of Connecticut, Storrs, Connecticut 06269, USA

[c] Department of Materials Science and Engineering & Shenzhen Engineering Research Center for Novel Electronic Information Materials and Devices, Southern University of Science and Technology, Shenzhen 518055, China

[d] SUSTech Academy for Advanced Interdisciplinary Studies, Southern University of Science and Technology, Shenzhen 518055, China

*** Corresponding authors**. E-mail address: wangh6@sustech.edu.cn (H. Wang).

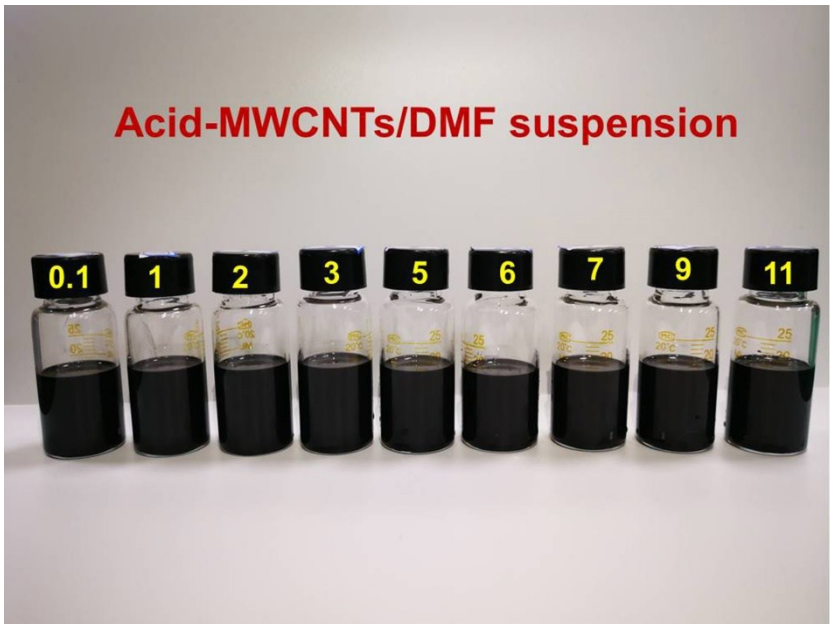

Figure S1. Photographs of solution stability of the suspension with acid-treated MWCNTs in DMF solution.

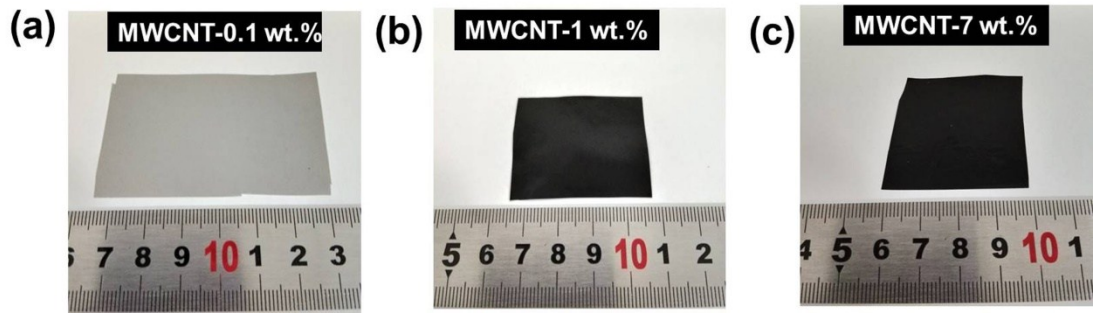

Figure S2. Photos of the single layer composite film with (a) 0.1 wt.% MWCNT (b) 1 wt.% MWCNT (c) 7 wt.% MWCNT.

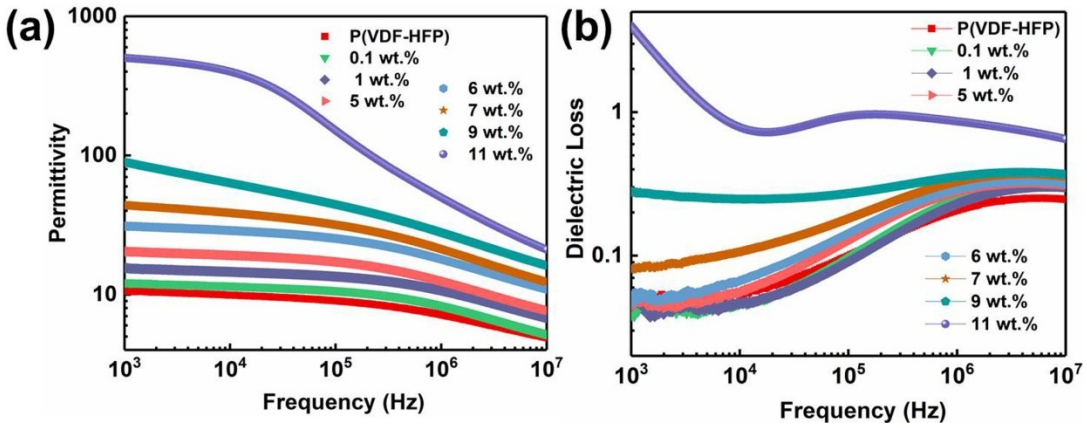

Figure S3. (a) Dependence of the permittivity and (b) dielectric loss of the acid-treated MWCNT/PVDF composites on the MWCNT mass fraction.

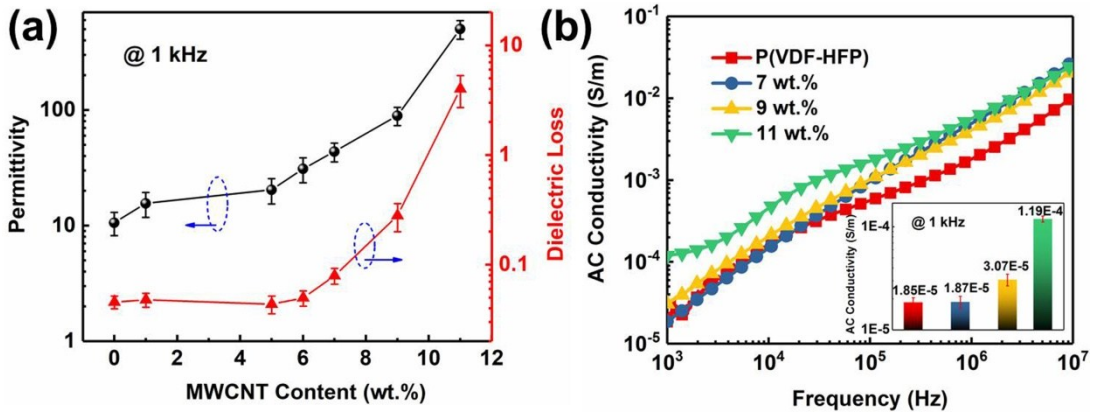

Figure S4. (a) Permittivity and dielectric loss of the MWCNT/P(VDF-HFP) composites at 1 kHz as function of MWCNT content. (b) Dependence of the AC conductivity of the MWCNT/PVDF composites on the MWNT mass fraction. And the inset in (b) shows the AC conductivity measured at 1 kHz.