Enhanced Dielectric Properties of Amino-Modified-CNT/Polyimide Composite Films with Sandwich Structure

Yaqin Chen,[a] Baoping Lin,[a*] Xueqin Zhang,[a] Junchuan Wang,[a] Changwei Lai,[a] Ying Sun,[a] Yurong Liu[a,b] and Hong Yang[a]

[a] School of Chemistry and Chemical Engineering, Southeast University, Nanjing 211189, China.

[b] Chongqing Key Laboratory of Micro/Nano Materials Engineering and Technology, Research Center for Material Interdisciplinary Science, Chongqing University of Arts and Science, Chongqing 402168, China.

E-mail: lbp@seu.edu.cn; Fax: +86 52090616; Tel: +86 136 01401581; +86 138 51439064

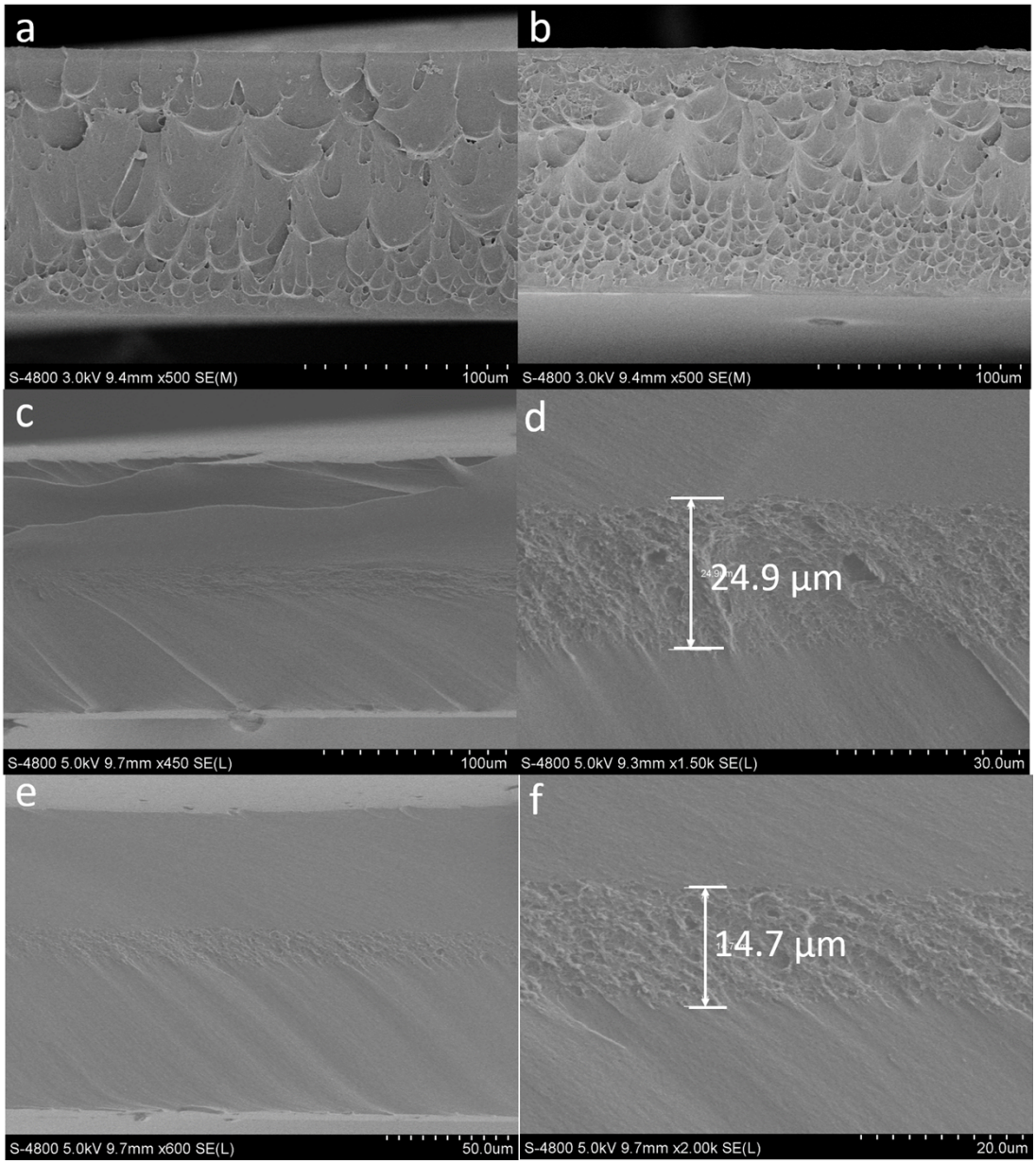

Figure S1. Cross-section SEM images of a) P-10-P, b) P-10-P_5, c) P-10-P_1 and e) P-10-P_{100}, d) is enlarged view of c), f) is enlarged view of e).

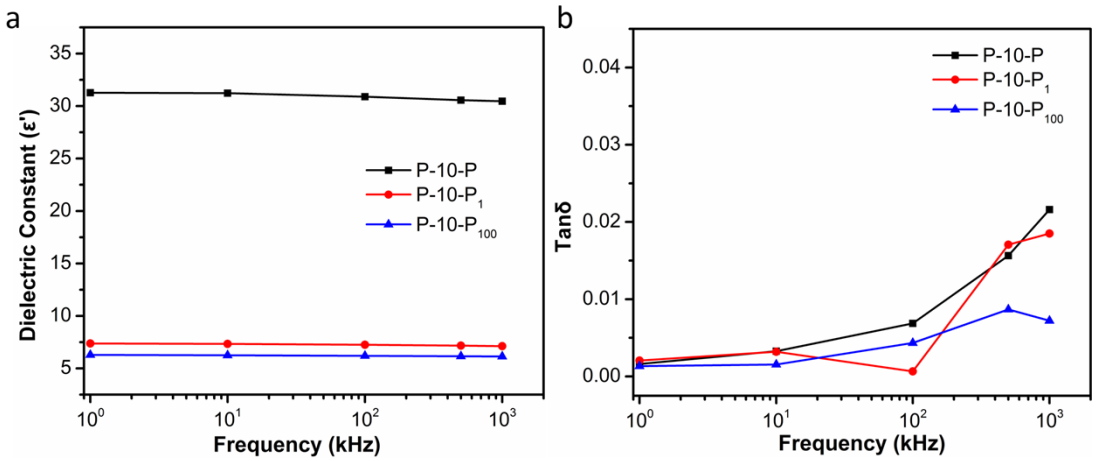

Figure S2. Frequency-dependent a) dielectric constant and b) dielectric loss of the multi-layer structure NH_2-MWNT/PI composite films as a function of the thickness of the mid-layer.