Electronic Supplementary Material (ESI) for RSC Advances.

Electronic Supplementary Information

High Thermal Conductivity and High Impact Strength of Epoxy Nanodielectrics with Functionalized Halloysite Nanotubes

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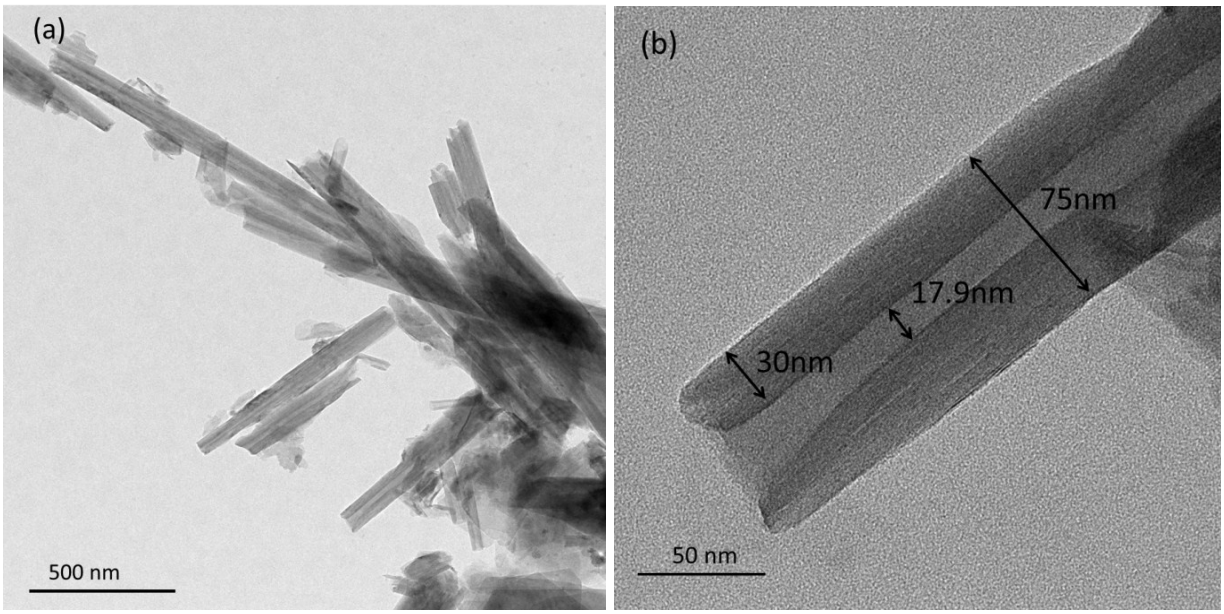


Fig. S1 TEM images of (a) HNTs; (b) hollow tubular appearance of individual HNTs.

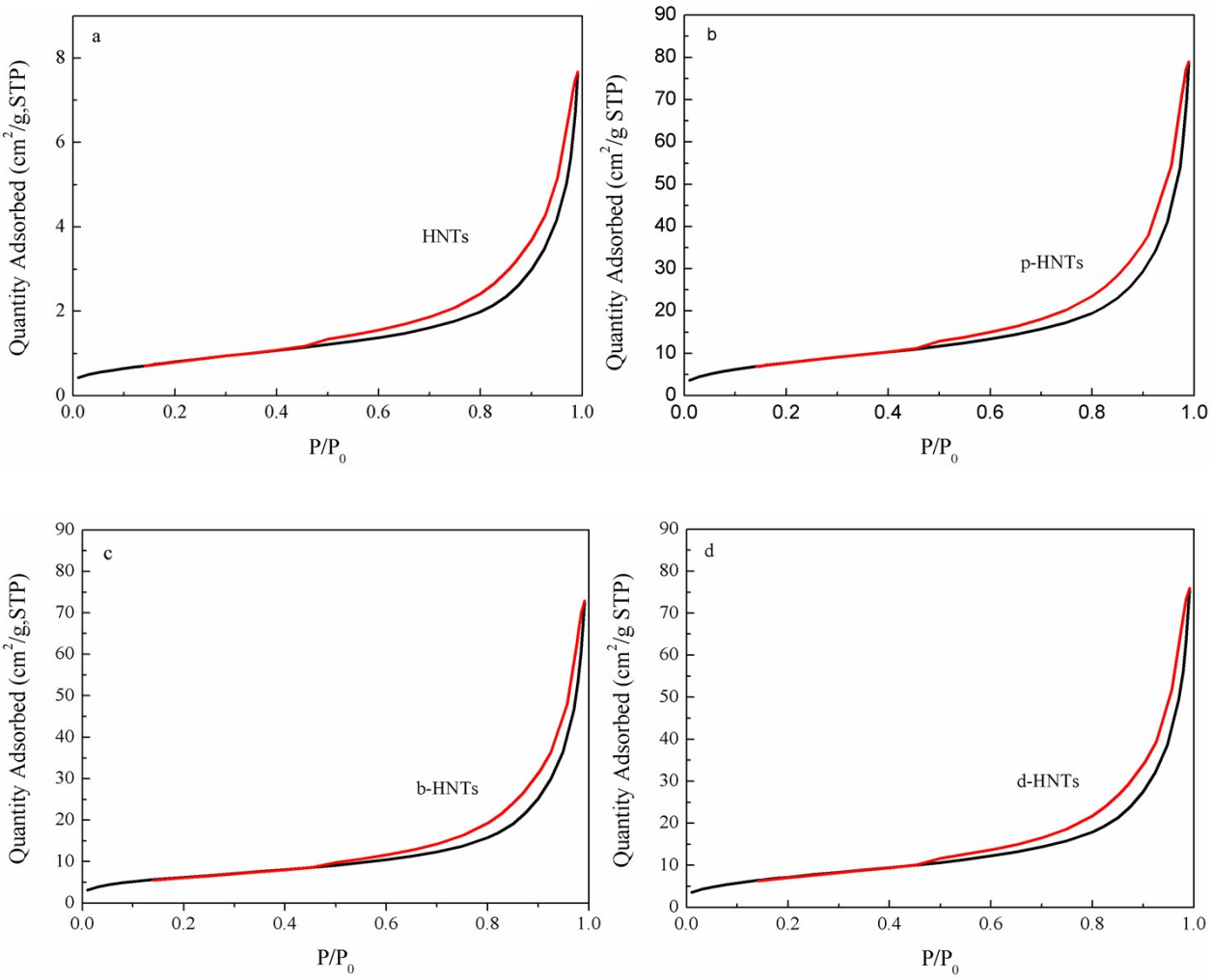


Fig. S2 Nitrogen adsorption-desorption isotherms of HNTs and in-situ grafted HNTs.

The curves of the HNTs and in-situ grafted HNTs were in agreement with the type IV isotherms with hysteresis loops, it was the characteristic of the mesoporousmaterials.[1] The t-plot curves became convex to the abscissa over a short range of t-values, in which capillary condensation occurredduring the adsorption process.

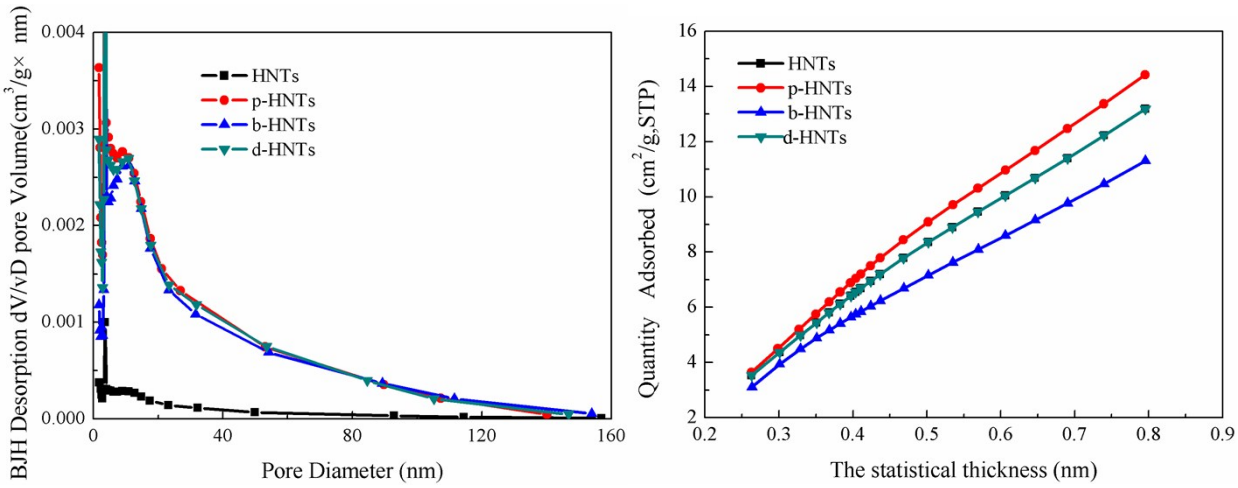
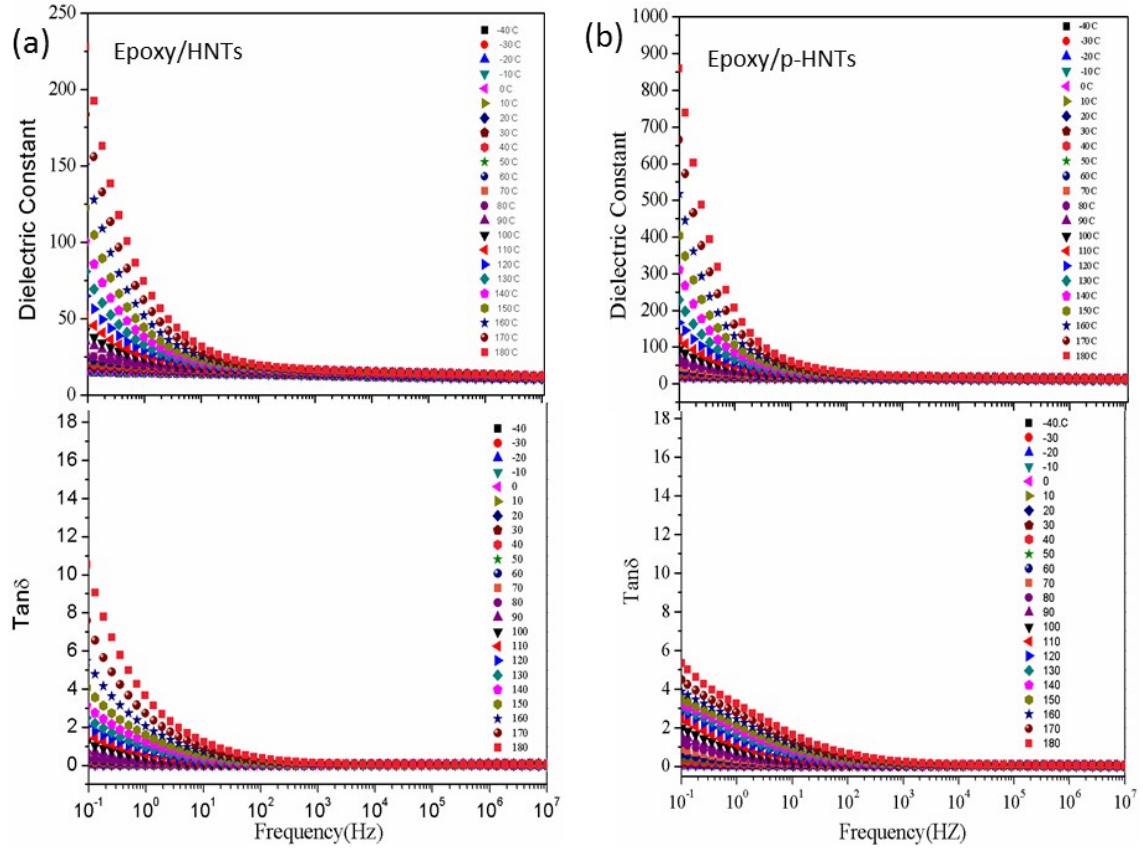


Fig. S3 Pore-size distribution and t-plot curves of HNTs and in-situ grafted HNTs.



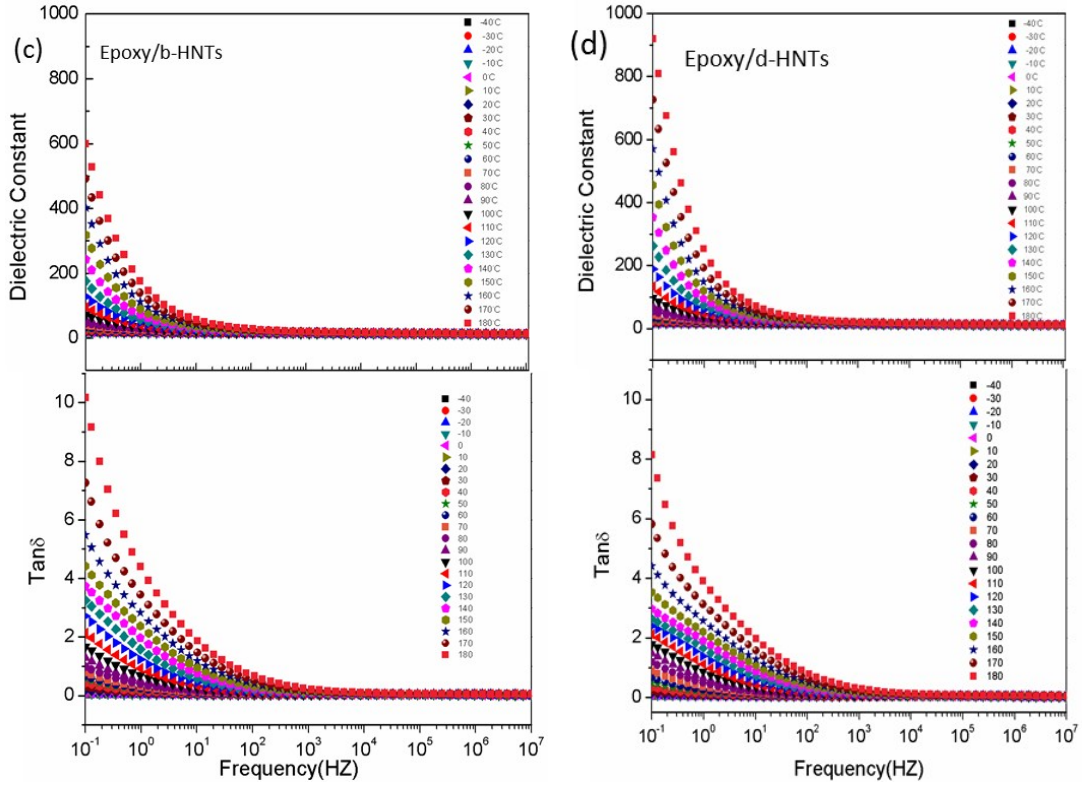


Fig.S4 Dielectric properties of epoxy nanodielectrics: (a) HNTs; (b) p-HNTs; (c) b-HNTs and (d) d-HNTs, under the temperature from -40 ℃ to 180 ℃.

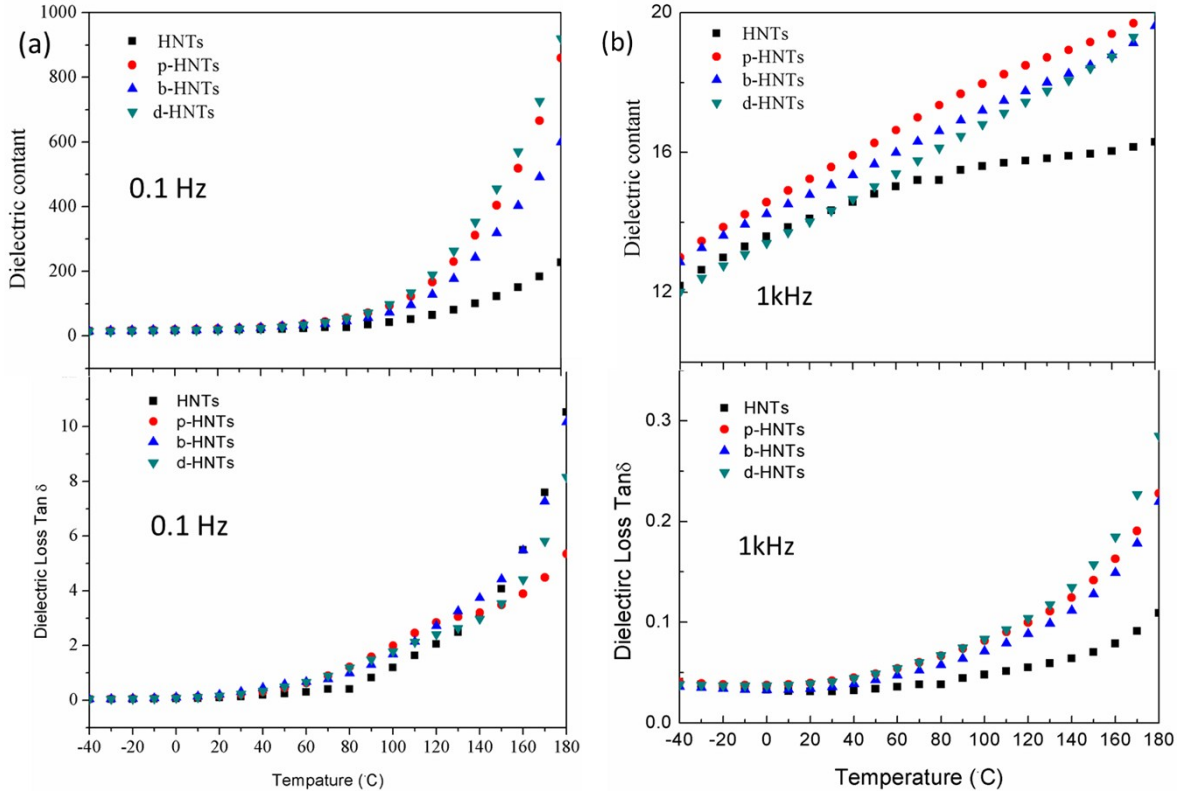


Fig. S5 Temperature dependent of dielectric properties of epoxy nanodielectrics: (a) 0.1 Hz and (b)

1 kHz.

Reference

1. K. P. Menard, *Dynamic Mechanical Analysis: A Practical Introduction*, CRC, Boca Raton, 1999.