Achieving wideband microwave absorption properties in PVDF nanocomposite foams with an ultra-low MWCNT content by introducing a microcellular structure

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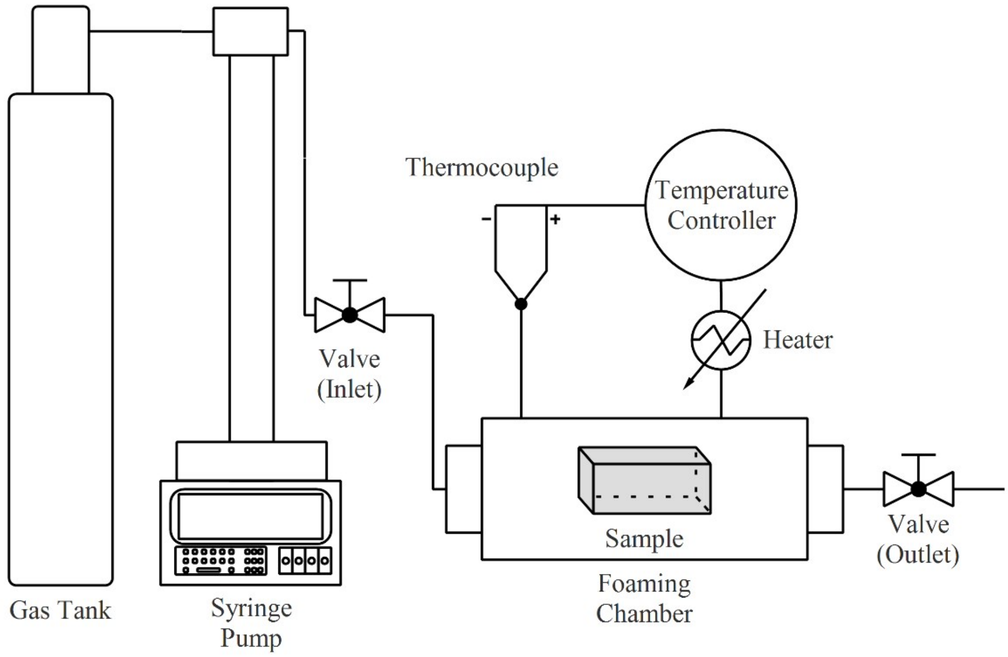

Figure S1 Schematic view of a home-made batch foaming instrument

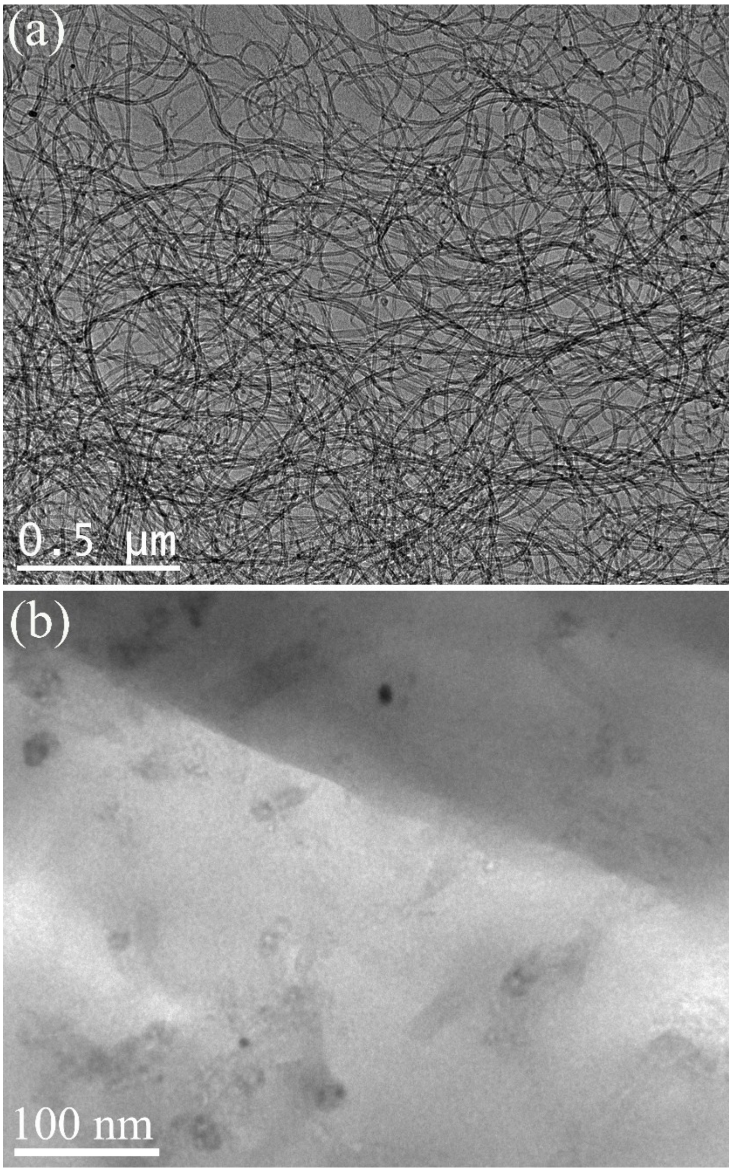

Figure S2 (a) TEM image of raw MWCNTs; (b) TEM image of PVDF/0.5wt% MWCNTs solid nanocomposite.

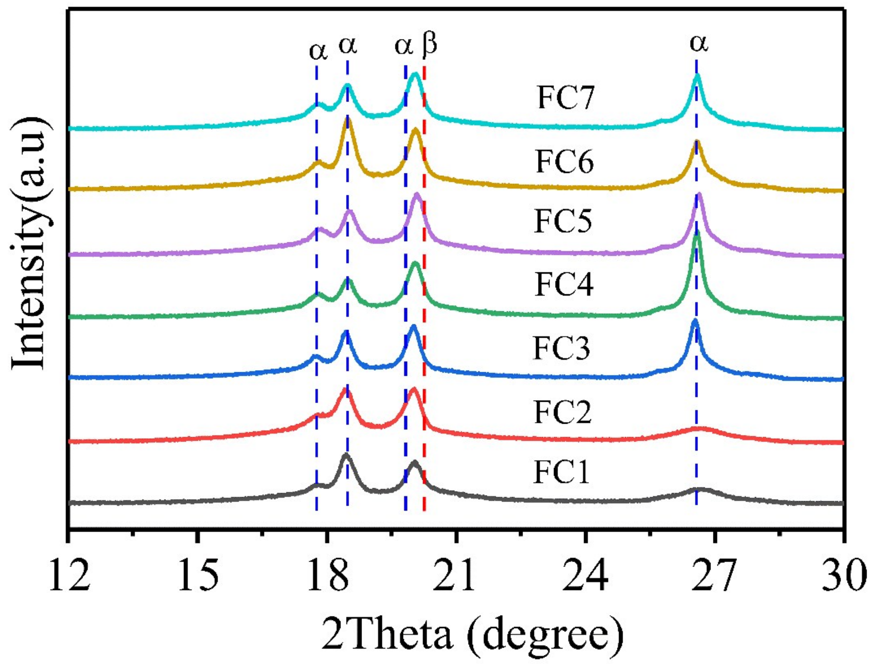

Figure S3 XRD patterns of various PVDF/0.5wt% MWCNTs nanocomposite foams prepared at different saturation temperatures.

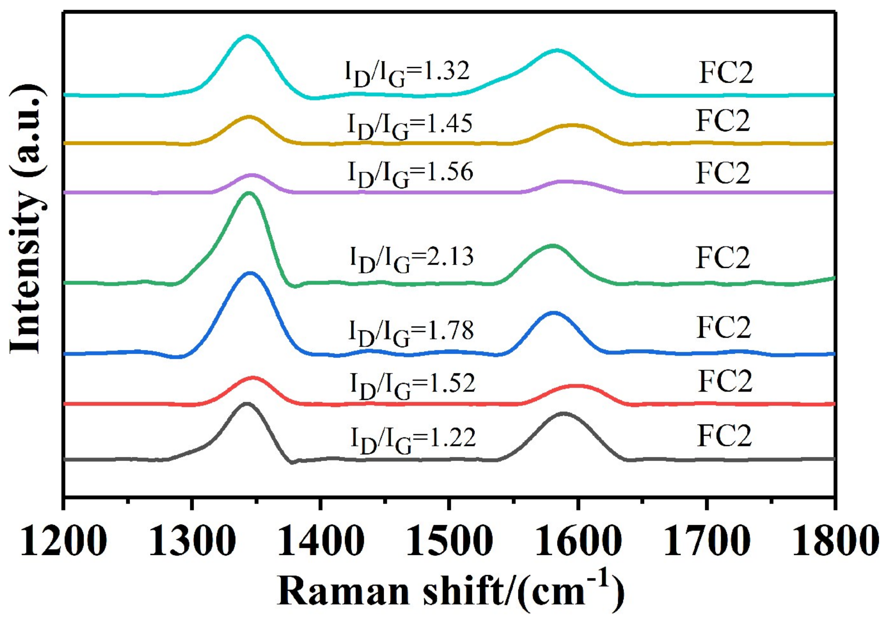

Figure S4 Raman spectra of various PVDF/0.5wt% MWCNTs nanocomposite foams prepared at different saturation temperatures.

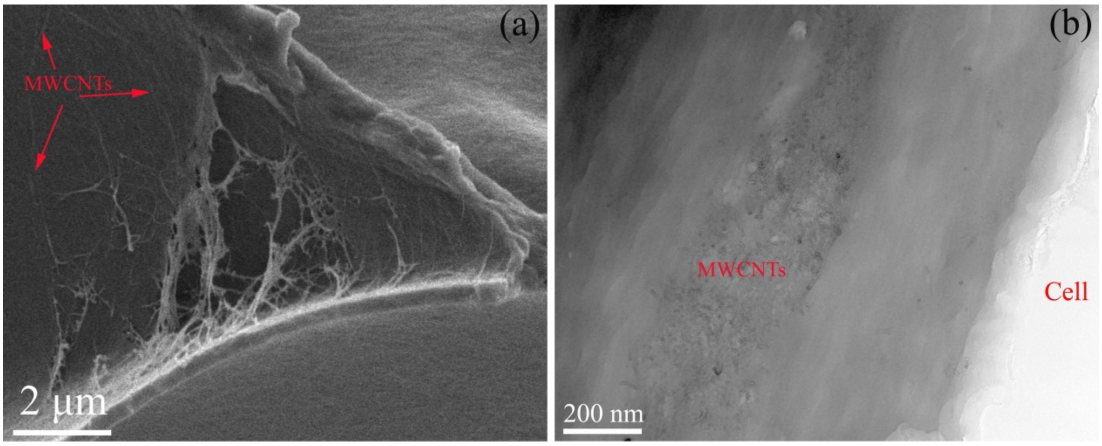

Figure S5 High magnification of (a) SEM and (b) TEM images of FC2 sample.

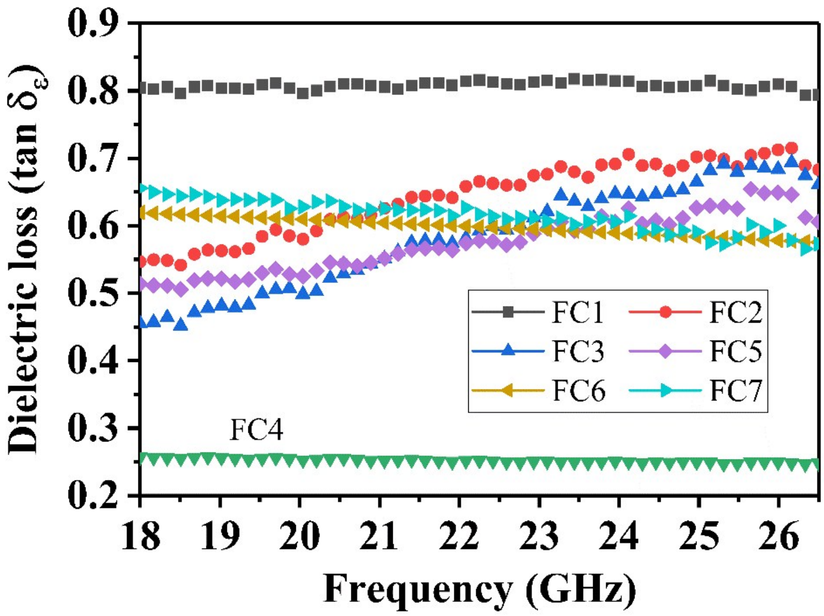

Figure S6 the dielectric loss (tan δε) of various PVDF/0.5wt% MWCNTs nanocomposite foams prepared at different saturation temperatures

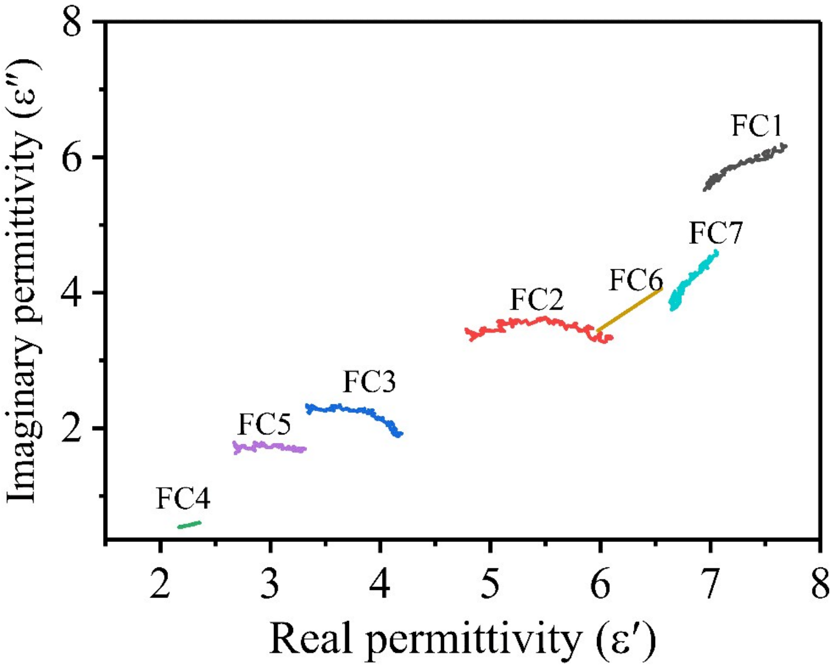

Figure S7 The ε′−ε″ (Cole–Cole Plot) curves of various PVDF/0.5wt% MWCNTs nanocomposite foams prepared at different saturation temperatures

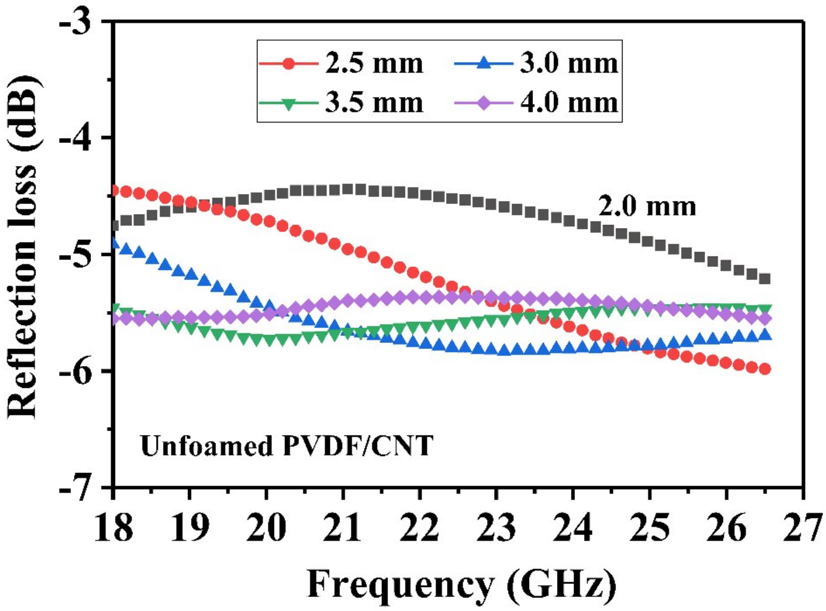

Figure S8 The reflection loss values of unfoamed PVDF/0.5wt% MWCNTs nanocomposite with the different thicknesses.

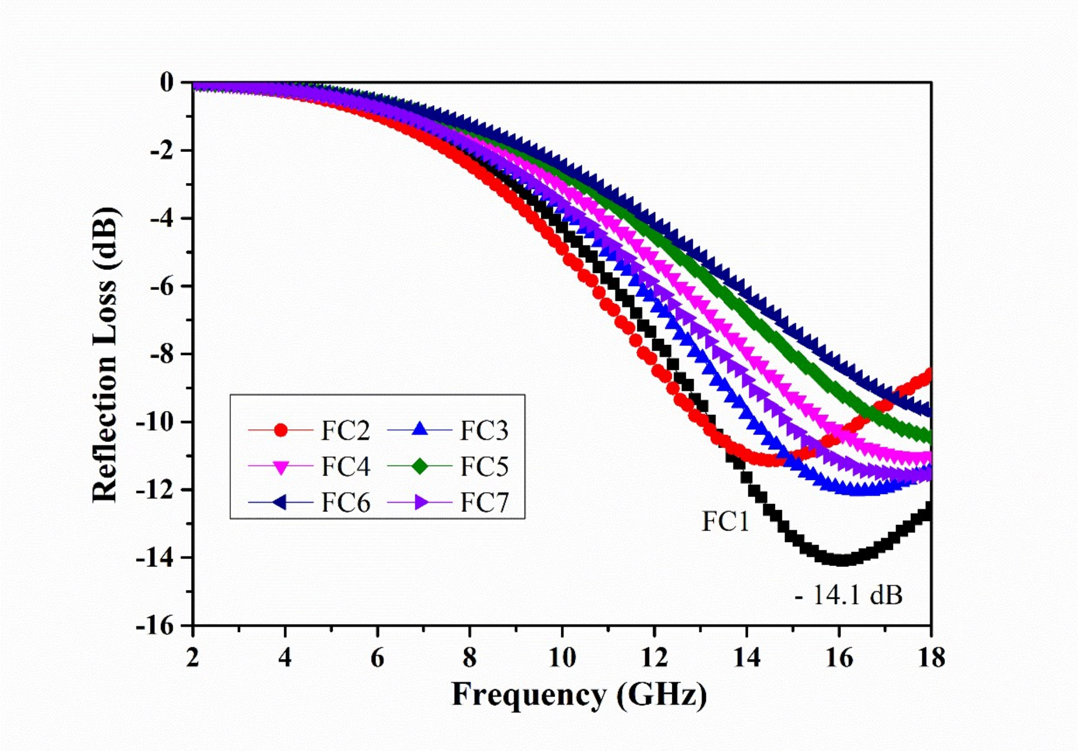

Figure S9 Reflection loss of PVDF/MWCNT nanocomposite foams in the frequency range of 2 – 18 GHz.

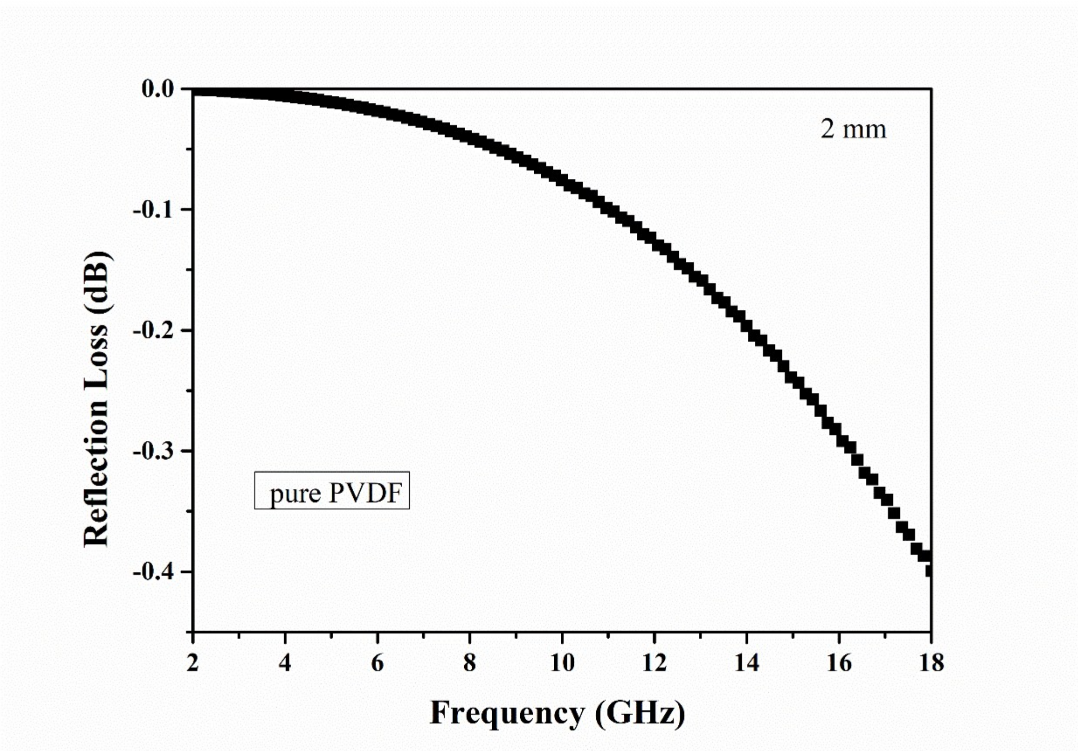

Figure S10 Reflection loss of pure PVDF foam in the frequency range of 2 – 18 GHz.