

Supporting Information

Graphene-wrapped pine needle-like cobalt nanocrystals constructed by cobalt nanorods for efficient microwave absorption performance

Shu-Qing Lv^{a#}, Peng-Zhao Han^{b#}, Xiao-Juan Zhang^{c*} and Guang-Sheng Wang^{b*}

^a*School of Civil Engineering and Architecture, Northeast Electric Power University, Jilin 132012*

^b*School of Chemistry, Beihang University, Beijing 1000191, PR China, E-mail addresses: wanggsh@buaa.edu.cn*

^c*College of Chemistry and Materials Engineering, Beijing Technology and Business University, Beijing 100048, PR China E-mail addresses: zhxiaojuan@btbu.edu.cn*

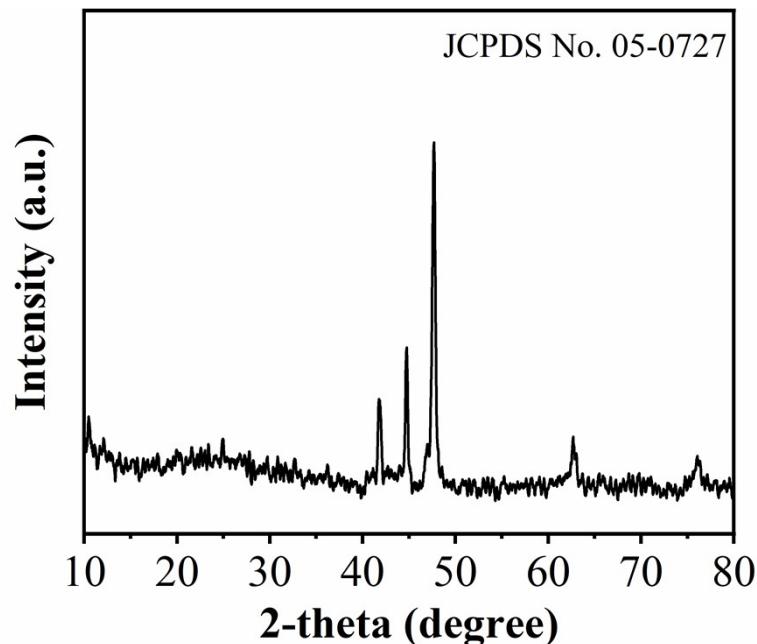


Fig. S1. The XRD pattern of Co nanocrystals.

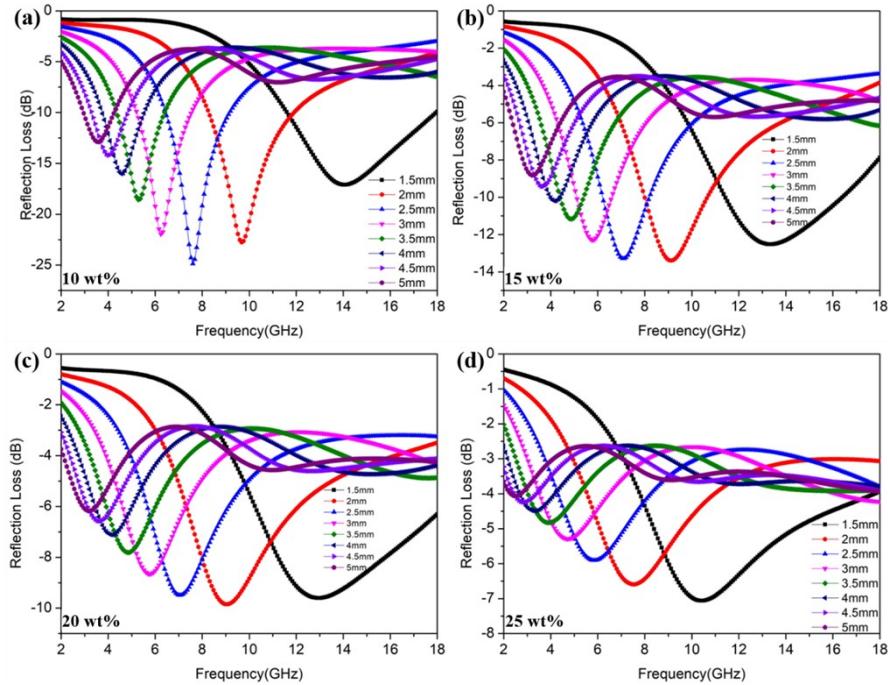


Fig. S2. The RL values for rGO/Co/PVDF composites (rGO/Co = 1:1) under different filler loadings: (a) 10 wt%; (b) 15 wt%; (c) 20 wt% and (d) 30 wt% within different thicknesses.

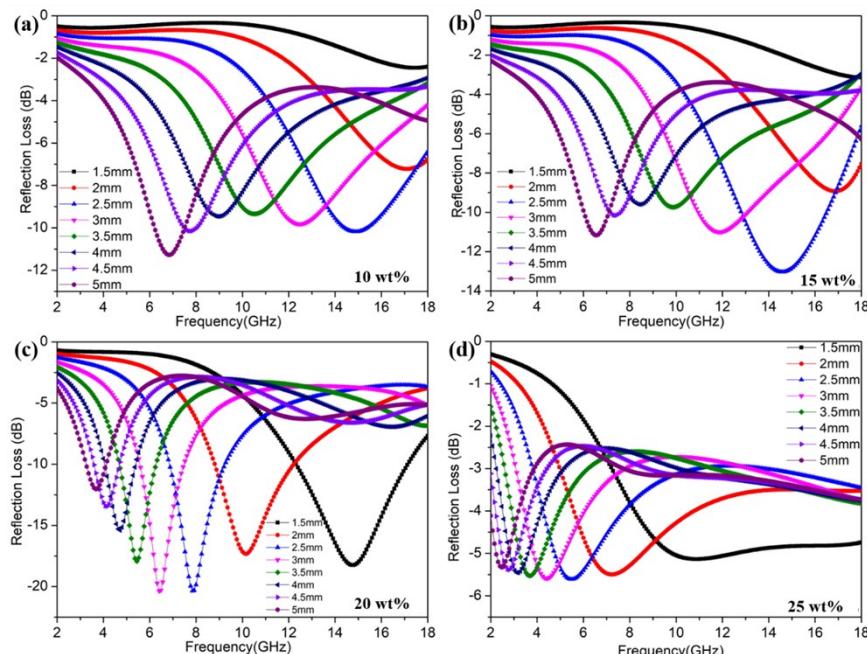


Fig. S3. The RL values for rGO/Co/PVDF composites (rGO/Co = 1:2) under different filler loadings: (a) 10 wt%; (b) 15 wt%; (c) 20 wt% and (d) 30 wt% within different thicknesses.

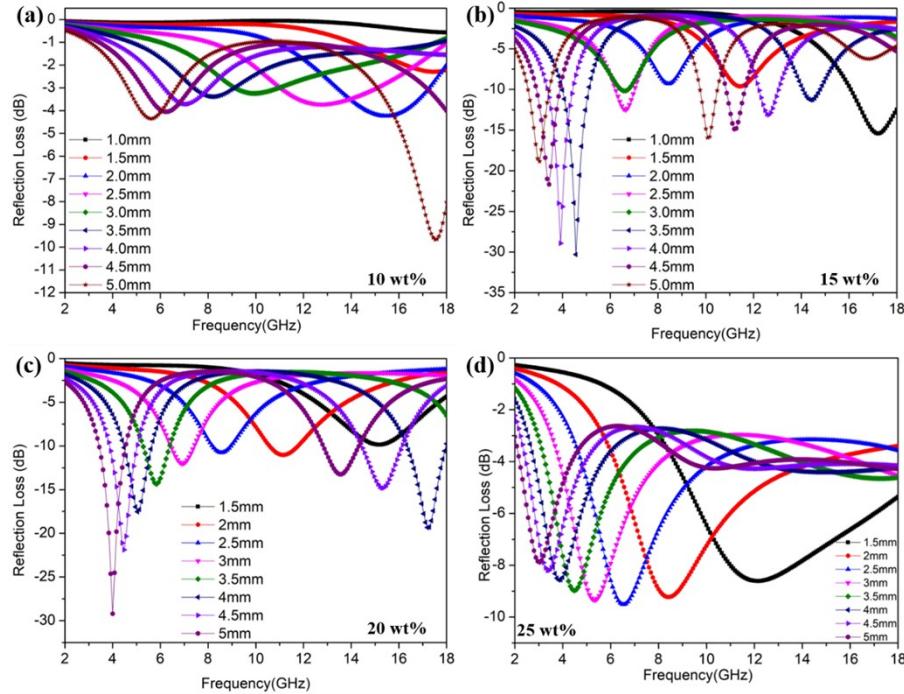


Fig. S4. The RL values for rGO/Co/PVDF composites (rGO/Co = 1:3) under different filler loadings: (a) 10 wt%; (b) 15 wt%; (c) 20 wt% and (d) 30 wt% within different thicknesses.

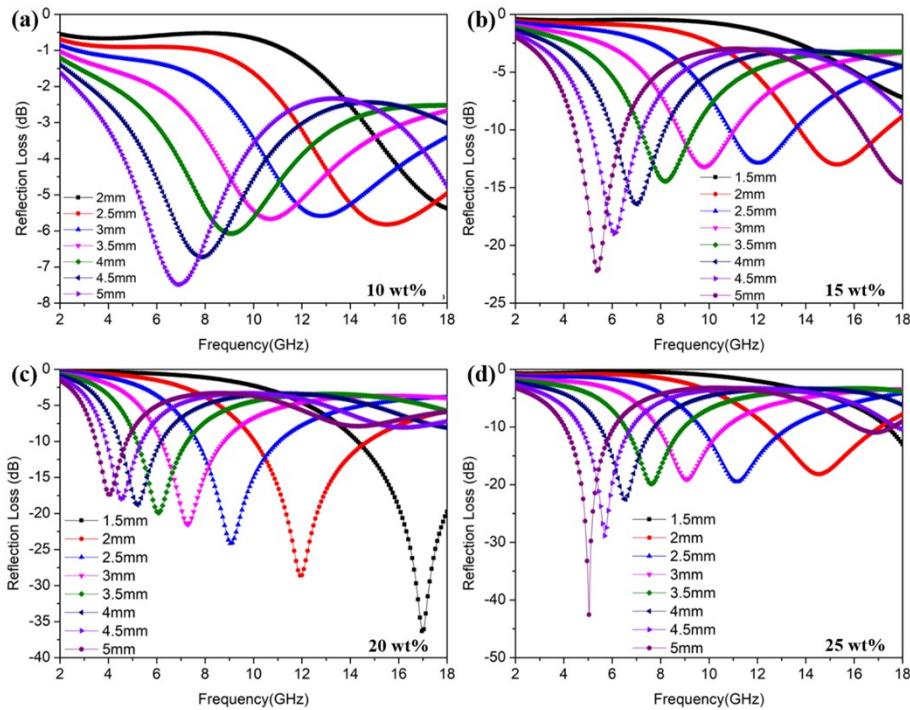


Fig. S5. The RL values for rGO/Co/PVDF composites (rGO/Co = 1:5) under different filler loadings: (a) 10 wt%; (b) 15 wt%; (c) 20 wt% and (d) 30 wt% within different thicknesses.

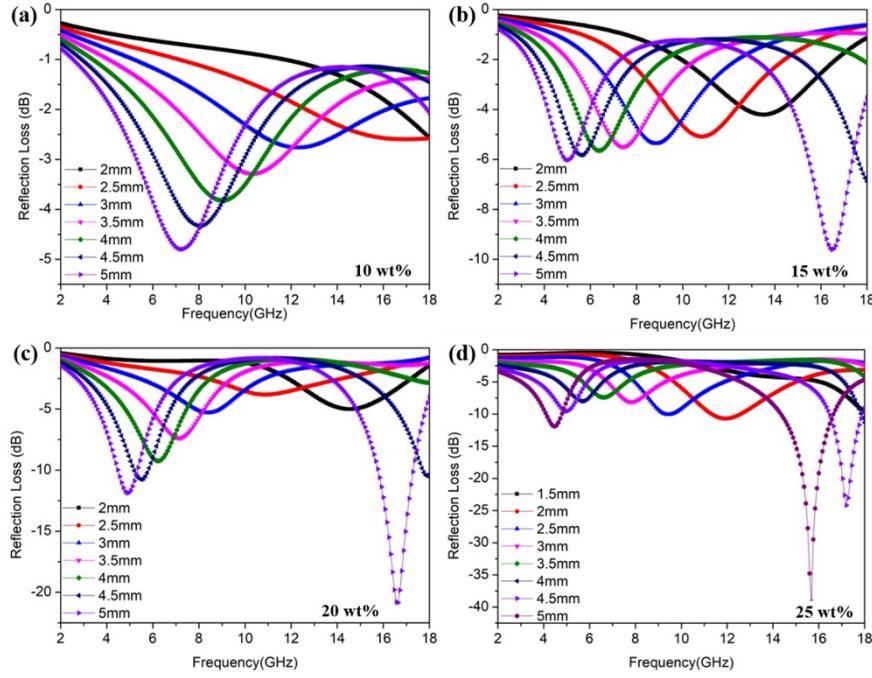


Fig. S6. The RL values for rGO/Co/PVDF composites (rGO/Co = 1:6) under different filler loadings: (a) 10 wt%; (b) 15 wt%; (c) 20 wt% and (d) 30 wt% within different thicknesses.

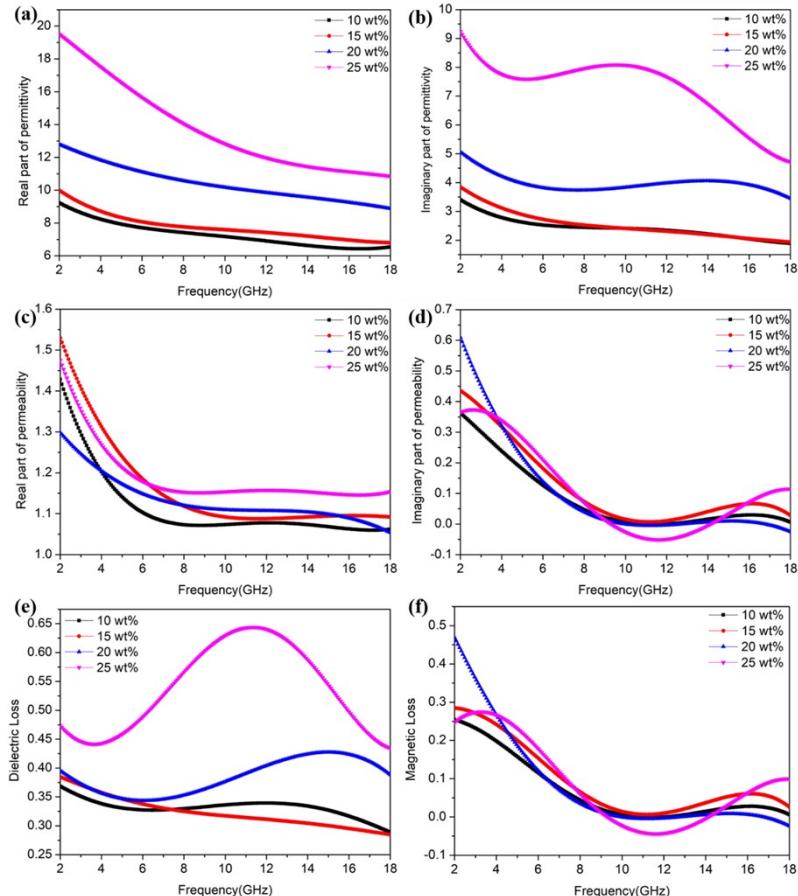


Fig. S7. (a) Real part and (b) imaginary part of permittivity, (c) real part and (d) imaginary part of permeability, (e) dielectric loss and (f) magnetic loss of

rGO/Co/PVDF composites (rGO/Co = 1:4) under different filler loadings.

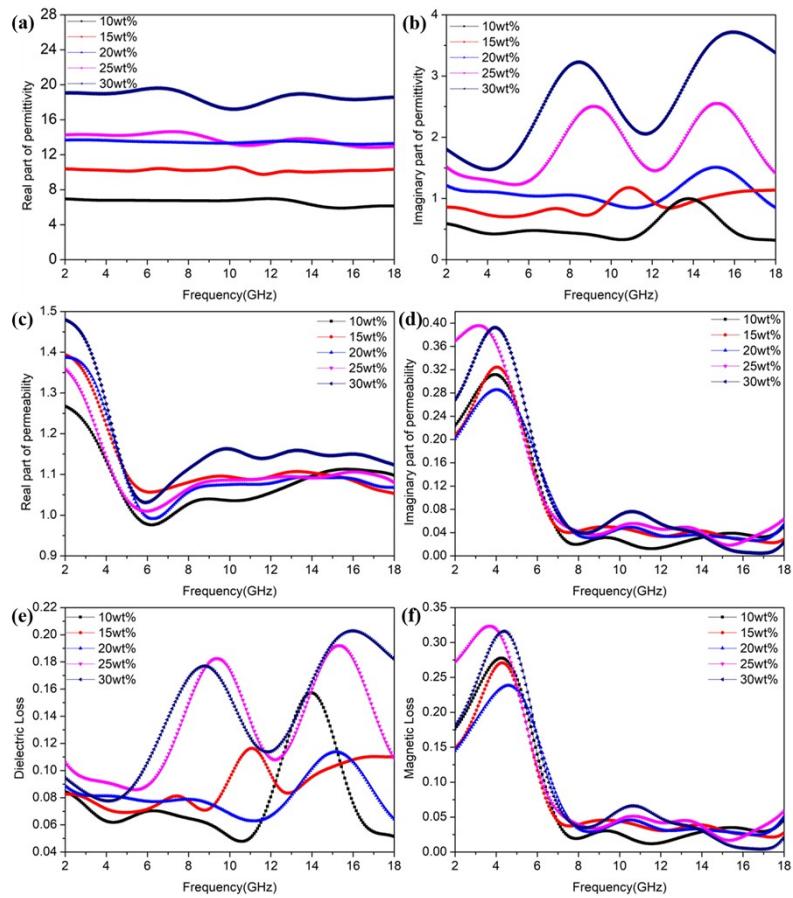


Fig. S8. (a) Real part and (b) imaginary part of permittivity, (c) real part and (d) imaginary part of permeability, (e) dielectric loss and (f) magnetic loss of Co/PVDF composites under different filler loadings.

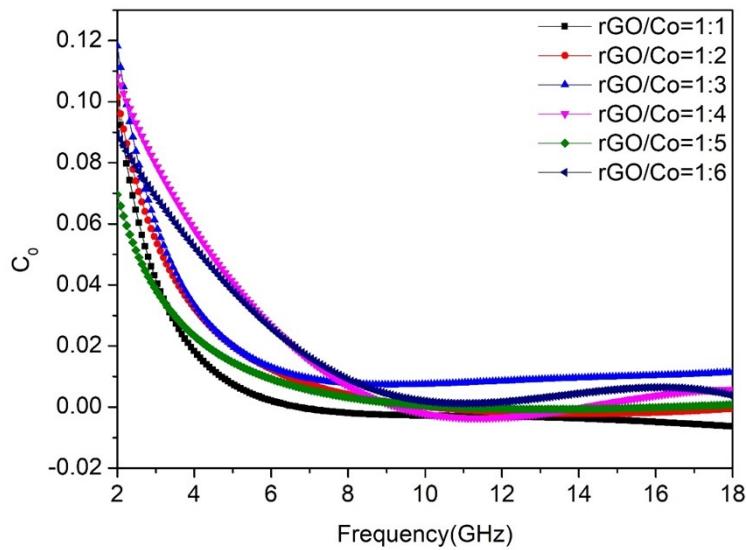


Fig. S9. The C_0-f curves of rGO/Co/PVDF composites with different mass ratios of rGO/Co.