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

Supporting Information

Small magnetic nanoparticles decorating reduced graphene oxides to tune electromagnetic attenuation capacity

Jun-Zhe He,[a] Xi-Xi Wang,[a] Yan-Lan Zhang,[a] and Mao-Sheng Cao*[a]

[a]School of Material Science and Engineering, Beijing Institute of Technology, Beijing 100081, China. *E-mail: caomaosheng@bit.edu.cn;

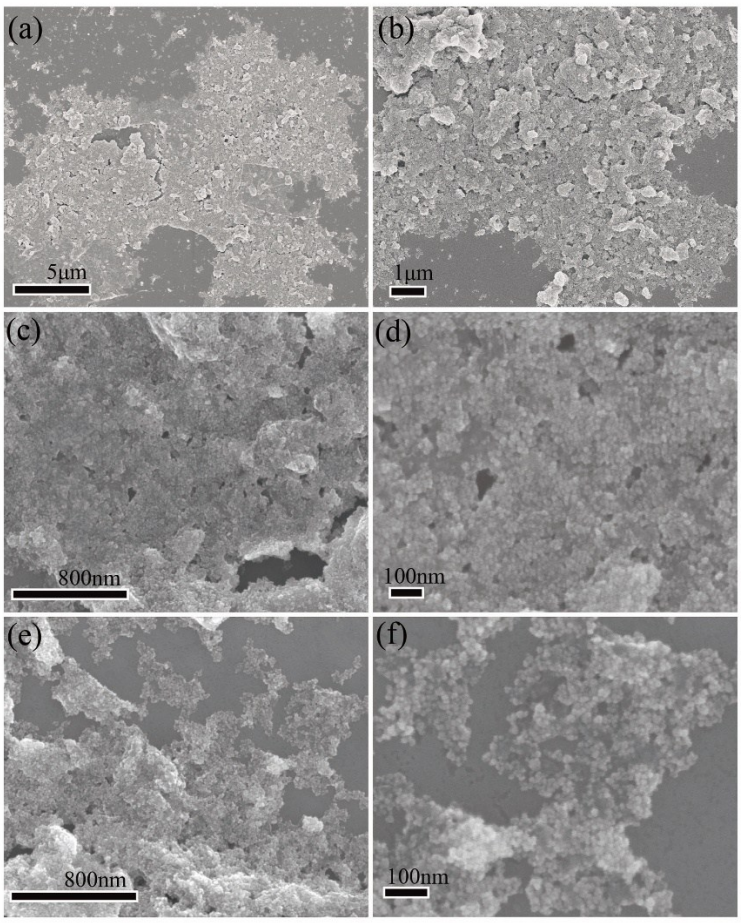

Fig.S1 The SEM images of $NiFe_2O_4$/r-GO.

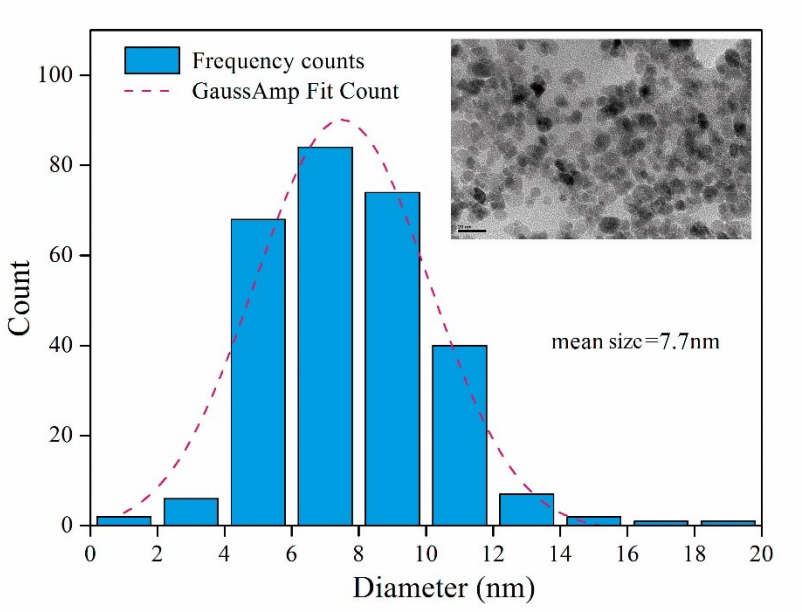

Fig.S2 Particle size distribution histogram of $NiFe_2O_4$ nanoparticles from the inset.

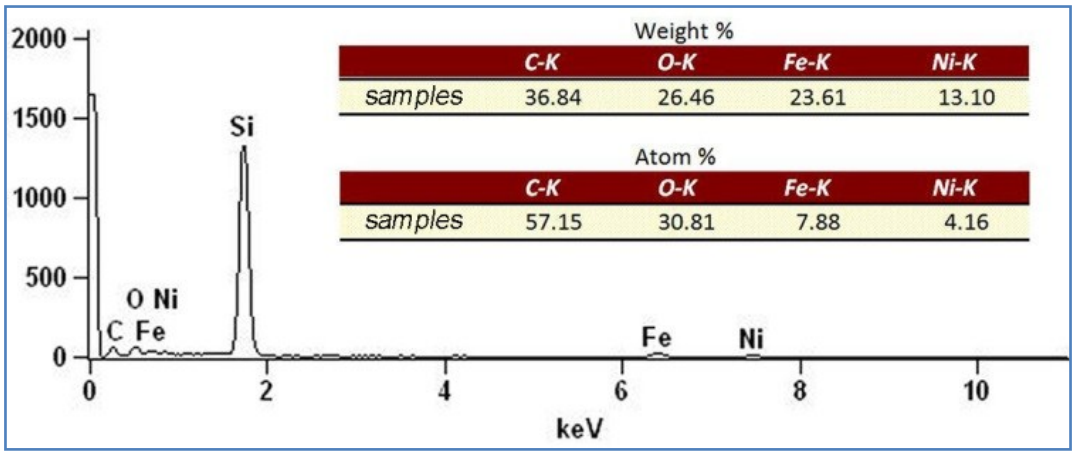

Fig.S3 The energy dispersive spectroscopy (EDS) analysis of $NiFe_2O_4$/r-GO samples; the mass percent and atom percent is in the inset

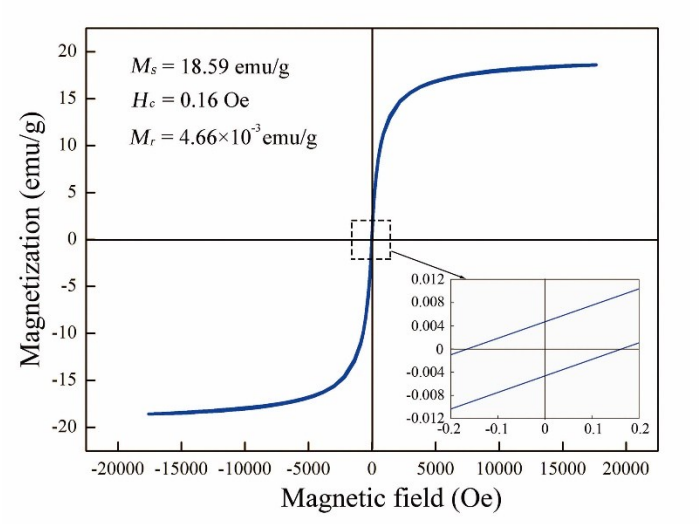

Fig.S4 Magnetic hysteresis loops for $NiFe_2O_4$/r-GO samples.

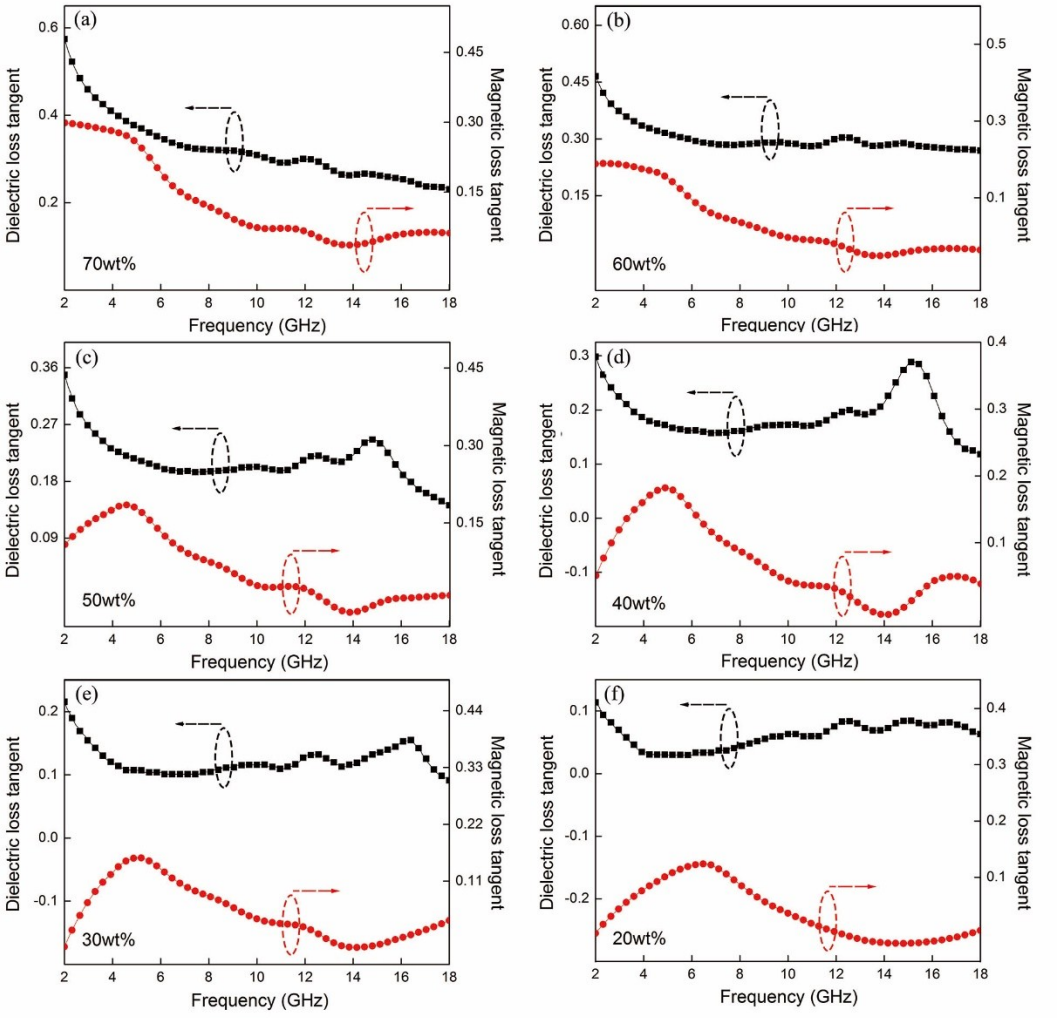

Fig.S5 Frequency dependence of the $\tan\delta_e$ and $\tan\delta_m$ of the samples with different $NiFe_2O_4$/r-GO loadings (a-f).

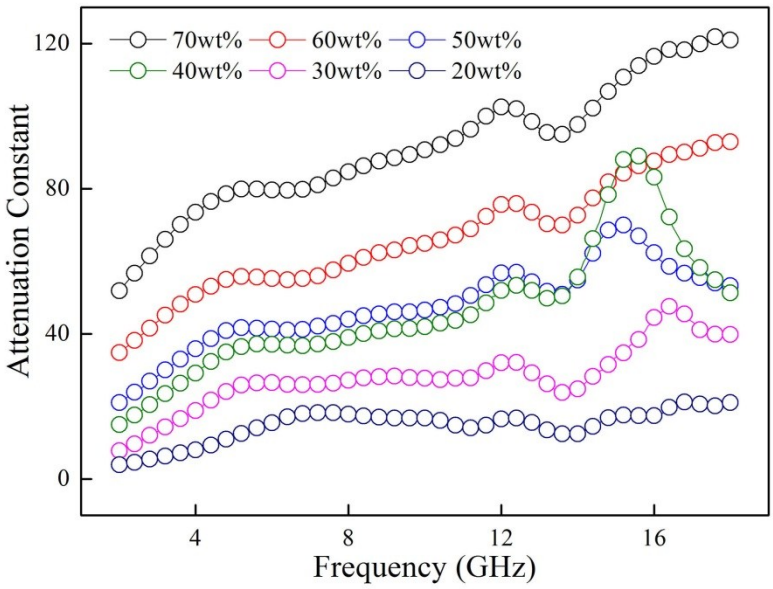

Fig.S6 Microwave attenuation constants (α) of the samples with different loadings

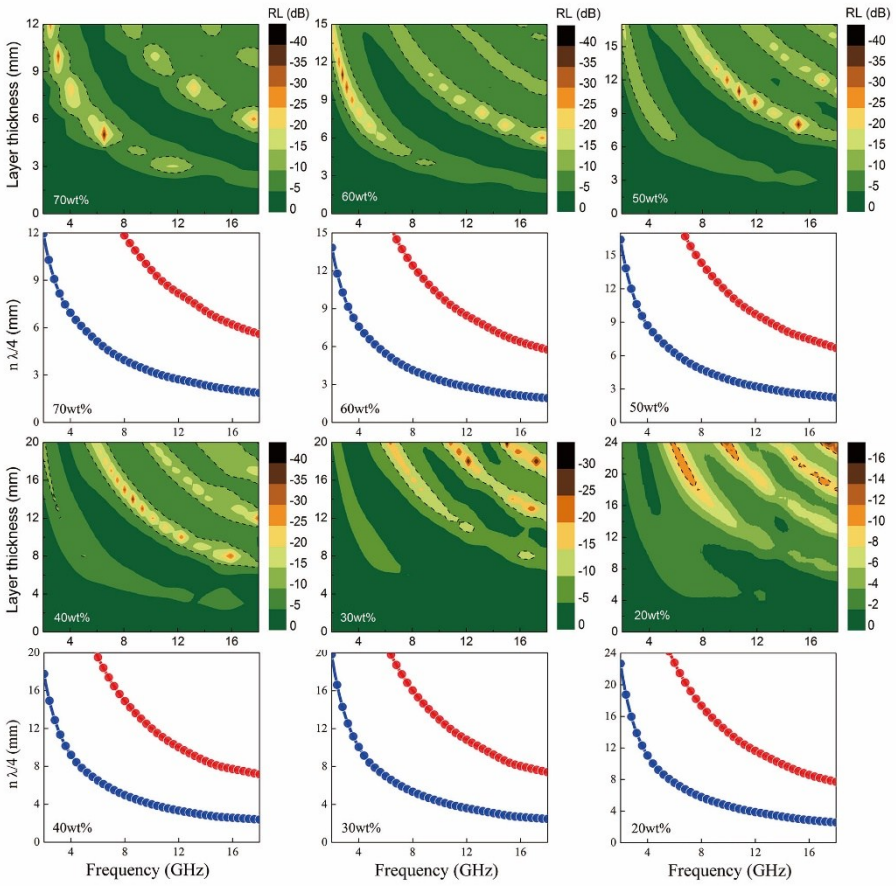

Fig.S7 Dependence of color maps of the reflection loss on frequency at various thickness and dependence of $\lambda/4$ and $3\lambda/4$ thickness on frequency for the samples with different $NiFe_2O_4$/r-GO loadings.

.