

Electronic Supplementary Information

A Novel Co /TiO₂ Nanocomposite Derived from Metal-Organic Framework: Synthesis and Efficient Microwave Absorption

Xingmiao Zhang,^a Guangbin Ji,^{a,} Wei Liu,^a Xingxin zhang,^b Qingwen Gao,^a*

Yuchun Li,^a and Youwei Du^c

^a College of Materials Science and Technology, Nanjing University of Aeronautics and Astronautics, Nanjing, 210016, P. R. China

^bChina Huanqiu Contracting & Engineering Corp., Huabei Planning & Design Institute, Zhuozhou, 072754, P. R. China

^cLaboratory of Solid State Microstructures, Nanjing University, Nanjing 210093, P. R. China

* Corresponding authors: E-mail: gbji@nuaa.edu.cn (G.B. Ji)

Table S1. Summary of compositions of the as-obtained Co@NPC@TiO₂-x (x= 1.2, and 2) and C-ZIF-67@TiO₂-x (x= 1, 2, and 3).

EDS	C		Co		Ti		O	
	wt. %	at. %	wt. %	at. %	wt. %	at. %	wt. %	at. %
Co@NPC@TiO ₂ -1.2	53.83	70.74	16.35	4.38	6.91	2.28	22.91	22.60
Co@NPC@TiO ₂ -2.0	38.16	56.43	16.83	5.07	15.51	5.75	29.50	32.75
C-ZIF-67@TiO ₂ -1	34.61	55.25	22.78	7.41	17.19	6.88	25.41	30.45
C-ZIF-67@TiO ₂ -2	12.94	23.78	12.61	4.72	44.86	20.66	29.60	40.84
C-ZIF-67@TiO ₂ -3	10.79	24.31	18.73	8.61	46.33	26.20	24.16	40.88



Figure S1. Photographs of the ZIF-67, ZIF-67@TiO₂-1, ZIF-67@TiO₂-2 and ZIF-67@TiO₂-3.

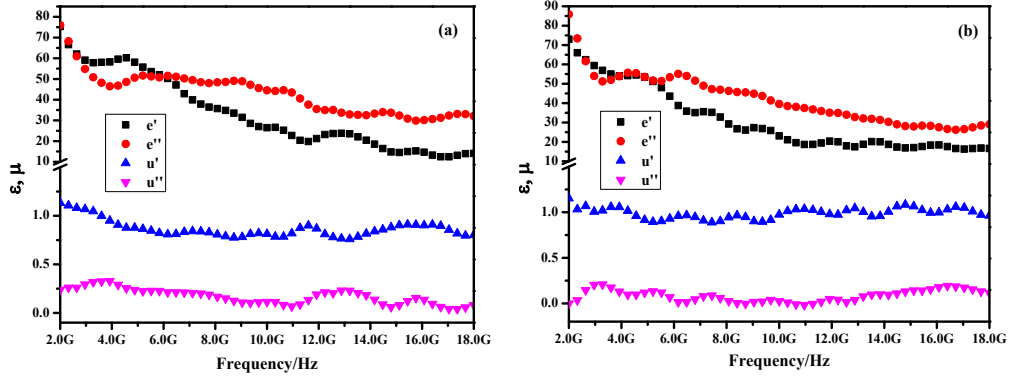


Figure S2. Measured frequency dependence of samples-paraffin (50 wt %) composites permittivity and permeability (a) Co@NPC; (b)Co@NPC-S.

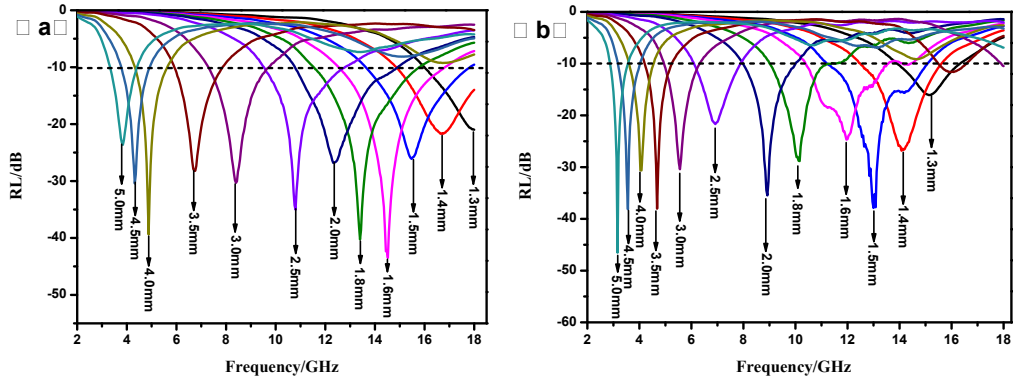


Figure S3. Frequency dependence of the microwave reflection loss of the C-ZIF-67@TiO₂-2, Co@NPC@TiO₂-1.2 and paraffin (50 wt%) composites under a given frequency and layer thickness.

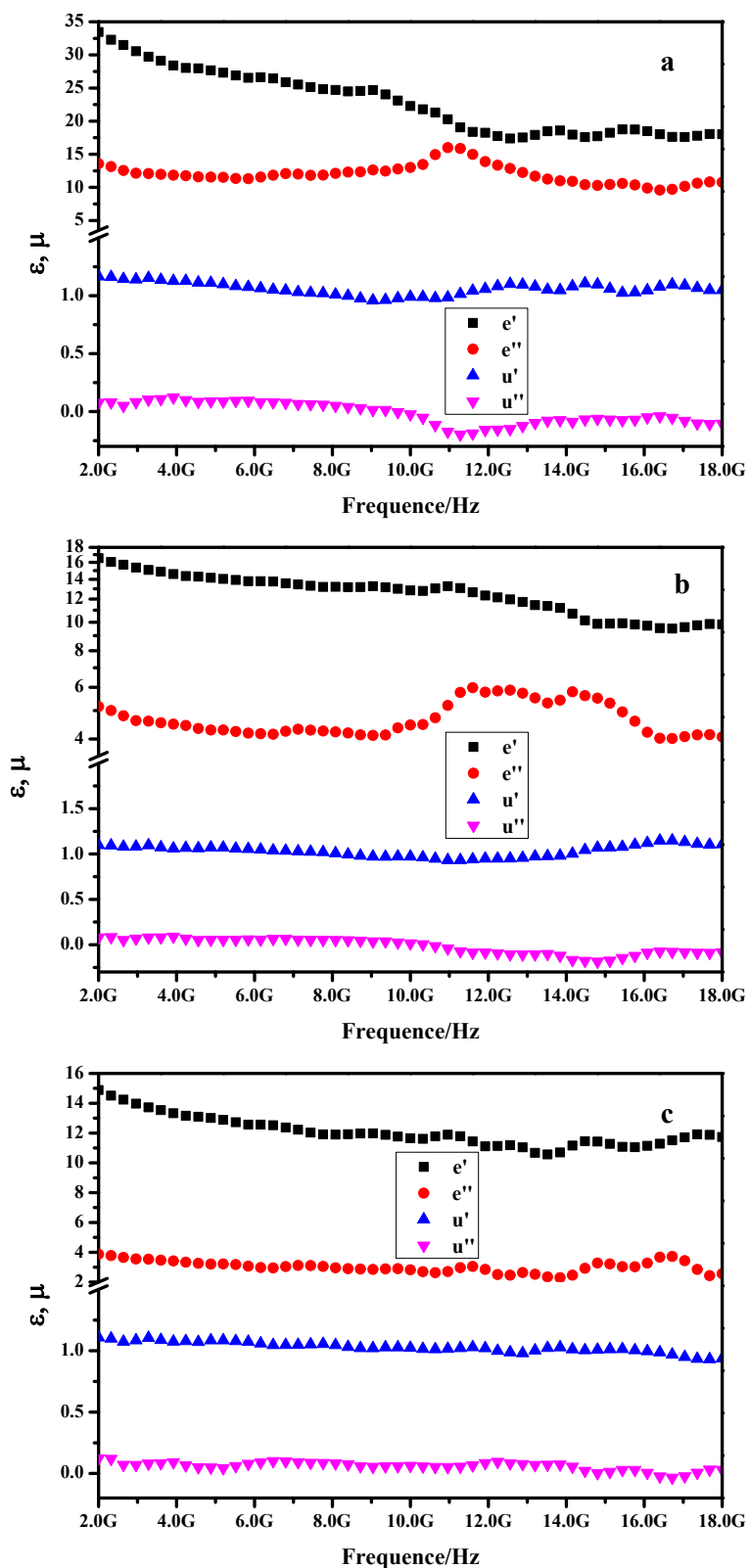


Figure S4. Measured frequency dependence of samples-paraffin (50 wt %) composites permittivity and permeability (a) C-ZIF-67@TiO₂-1.0; (b) C-ZIF-67@TiO₂-2.0; (c)C-ZIF-67@TiO₂-3.0.