Supporting Information

High-efficiency microwave absorbing performance originating from sufficient magnetic exchange coupling interaction and impressive dielectric loss

Gang Fang[1], Chuyang Liu[1,2]*, Yun Yang[1], Kangsen Peng[1], Yufan Cao[1], Guoyue Xu[1], Yujing Zhang[2,3]

1. *School of Material Science and Technology, Nanjing University of Aeronautics and Astronautics, Nanjing, 211106, China*
2. *State Key Lab of Silicon Materials, Zhejiang University, Hangzhou, 310027, China*
3. *School of Materials Science and Engineering, Nanjing University of Science and Technology, Nanjing 210094, China*

Figures

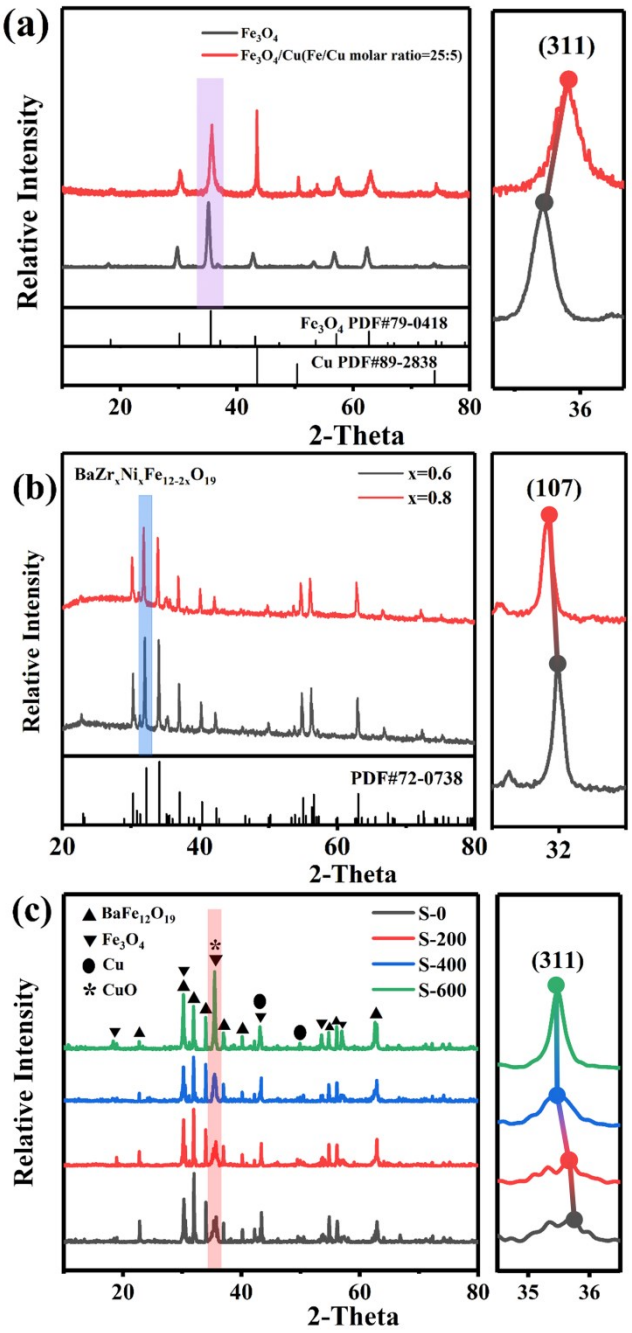

Fig. S1. XRD patterns of (a) pure Fe_3O_4 and Fe_3O_4/Cu sample along with the magnified XRD patterns of (311) lattice plane; (b) $BaZr_xNi_xFe_{12-2x}O_{19}$ samples with x=0.6,and 0.8 as well as the magnified XRD patterns of (107) lattice plane; (c) S-0, S-200, S-400 and S-600 along with the magnified XRD patterns of the (311) lattice plane.

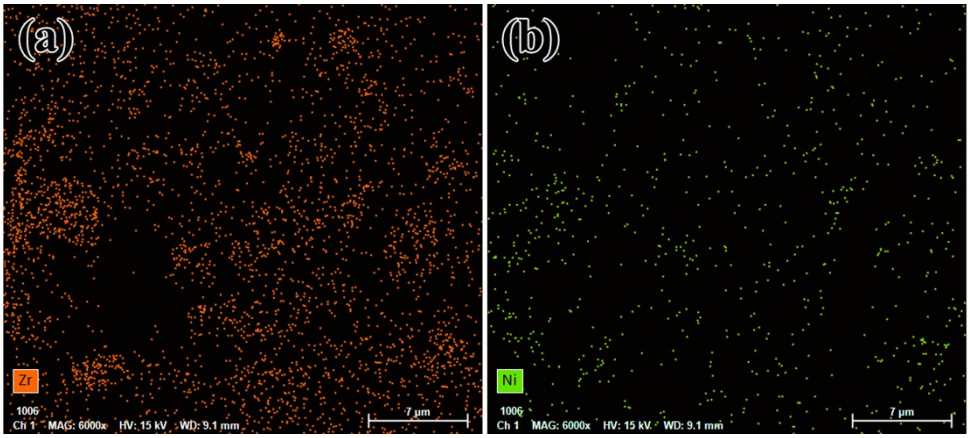

Fig. S2. The EDS element mapping of (a) Zr and (b) Ni for S-0.

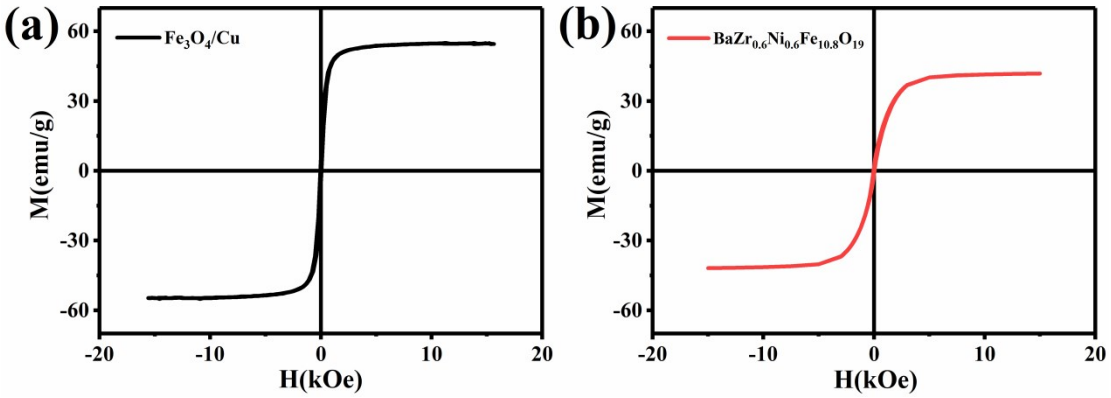

Fig. S3. Hysteresis loop of (a) Fe_3O_4/Cu, (b) $BaZr_{0.6}Ni_{0.6}Fe_{10.8}O_{19}$.

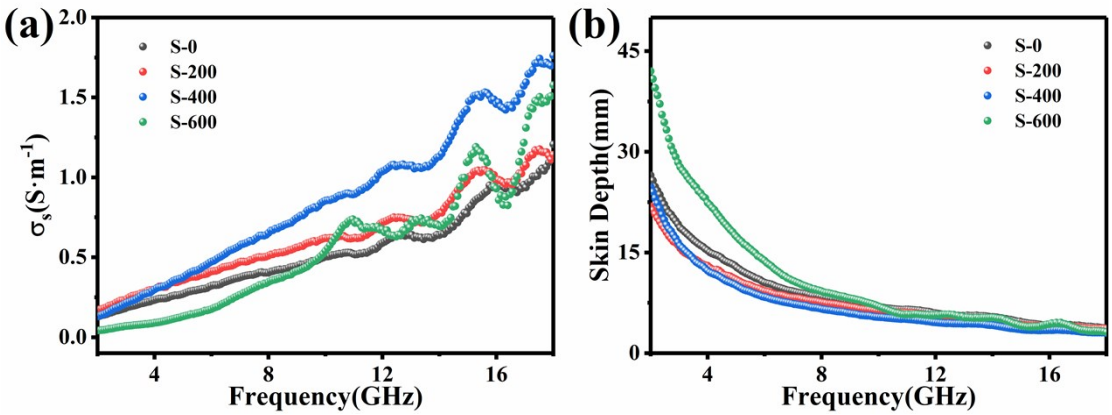

Fig. S4. (a) The AC conductivities and (b) skin depths of all samples over 2~18 GHz.