Supplementary Information

Iron Cobalt / Polypyrrole Nanoplates with Tunable Broadband Electromagnetic Wave Absorption

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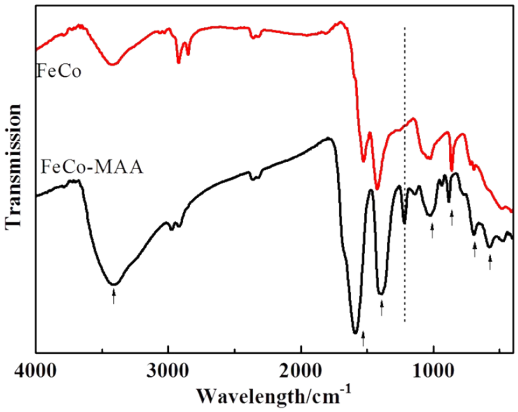

Figure S1 FT-IR spectra of FeCo nanoparticles before- and after- modified by mercaptoacetic acid (MAA). The absorption from 3500 to 3000 cm^{-1} corresponds to the vibration of –COOH, and the peaks from 1610 to 1108 cm^{-1} corresponds to the vibration of C-O and C-H. This that MAA has been modified on the surface of FeCo nanoparticles successfully.

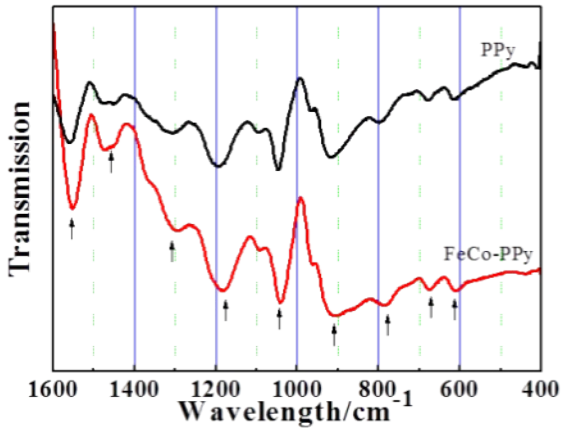

Figure S2 FT-IR spectra of pure PPy and FeCo/PPy nanoplates. Most absorption peaks of pure PPy are shown on the spectrum of FeCo/PPy composites, proving the existence of a strong interaction between the FeCo nanoparticles and pyrolle moieties in PPy polymers.

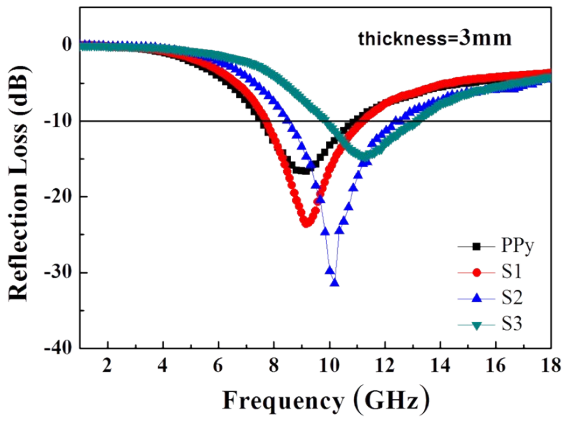

Figure S3 Dependence of content of FeCo NPs on RL of pure PPy, Sample S1, S2 and S3, at a given thickness 3 mm.