

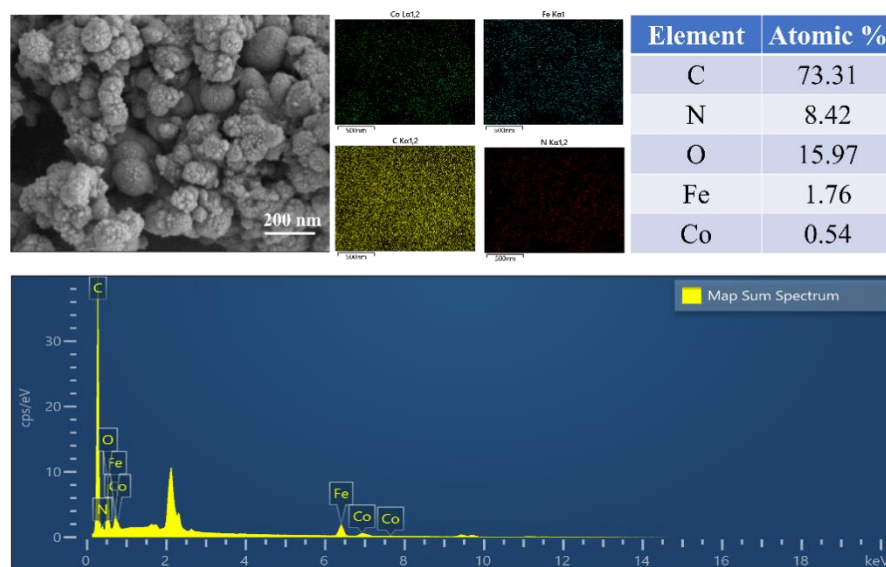
## Supplementary Materials

### Wearable PANI@CoFe<sub>2</sub>O<sub>4</sub> organohydrogels for strain sensing, EMI shielding and thermal insulation

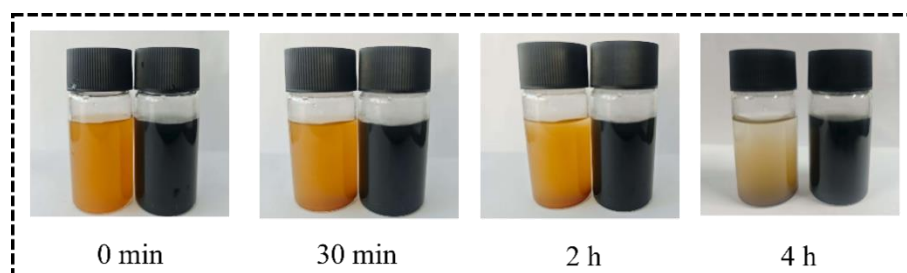
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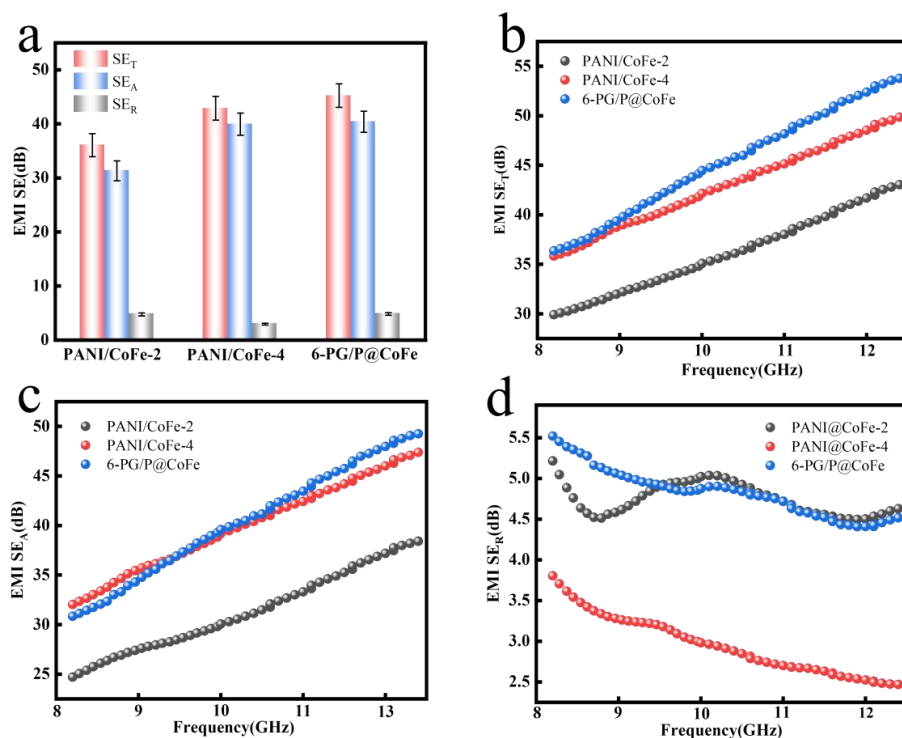
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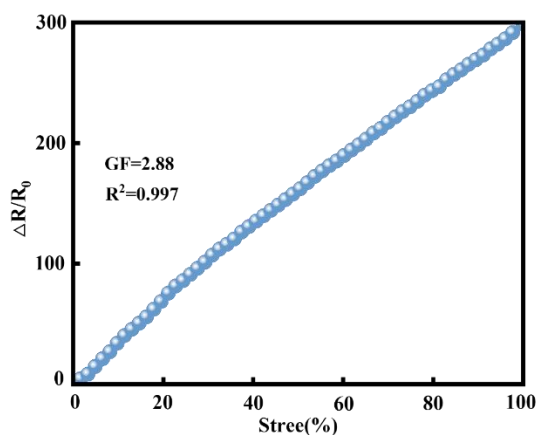
**Figure S1.** SEM/EDS elemental mapping and energy spectrum analysis of PANI@CoFe<sub>2</sub>O<sub>4</sub>.



**Figure S2.** Optical images of  $\text{CoFe}_2\text{O}_4$  and  $\text{PANI@CoFe}_2\text{O}_4$  solutions.



**Figure S3.** (a) Average EMS SE values of the hydrogels. (b)–(d) Clearly illustrate the influence of frequency on the  $\text{SE}_T$ ,  $\text{SE}_R$ , and  $\text{SE}_A$  of the hydrogels. PANI/CoFe-X indicates that the fillers (with a mass ratio of 1:1) are added to the hydrogel by physical blending, X represents the content of the filler PANI/CoFe $_2$ O $_4$  in the hydrogel equivalent to AM (%).



**Figure S4.** Gauge factor (GF) of 4-PG/P@CoFe $_2$ O $_4$ .