

Supplementary information

Impact of CoFe₂O₄ Magnetic Nanoparticles on the Physical and Mechanical Properties and Shape Memory Effect of Polylactide

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Supplementary information includes:

Table S1

Video S1

Figures S1–S7

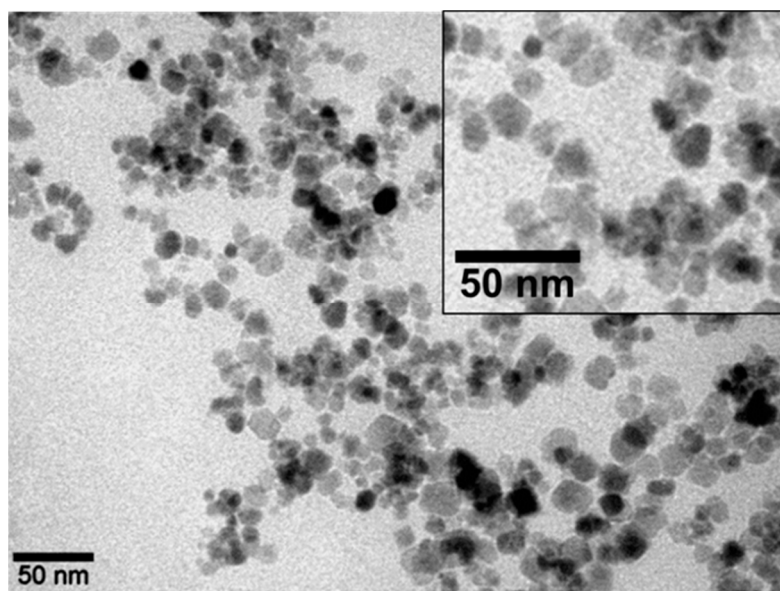


Figure S1. Bright-field TEM image of NPs.

Table S1. Main results of X-ray diffraction analysis of CoFe_2O_4 NPs.

Crystal lattice type	Space group	Coherent-scattering region, nm	Microstresses, %	Lattice period, a, nm
H1.1	Fd3m	9.3	0.001	0.8370

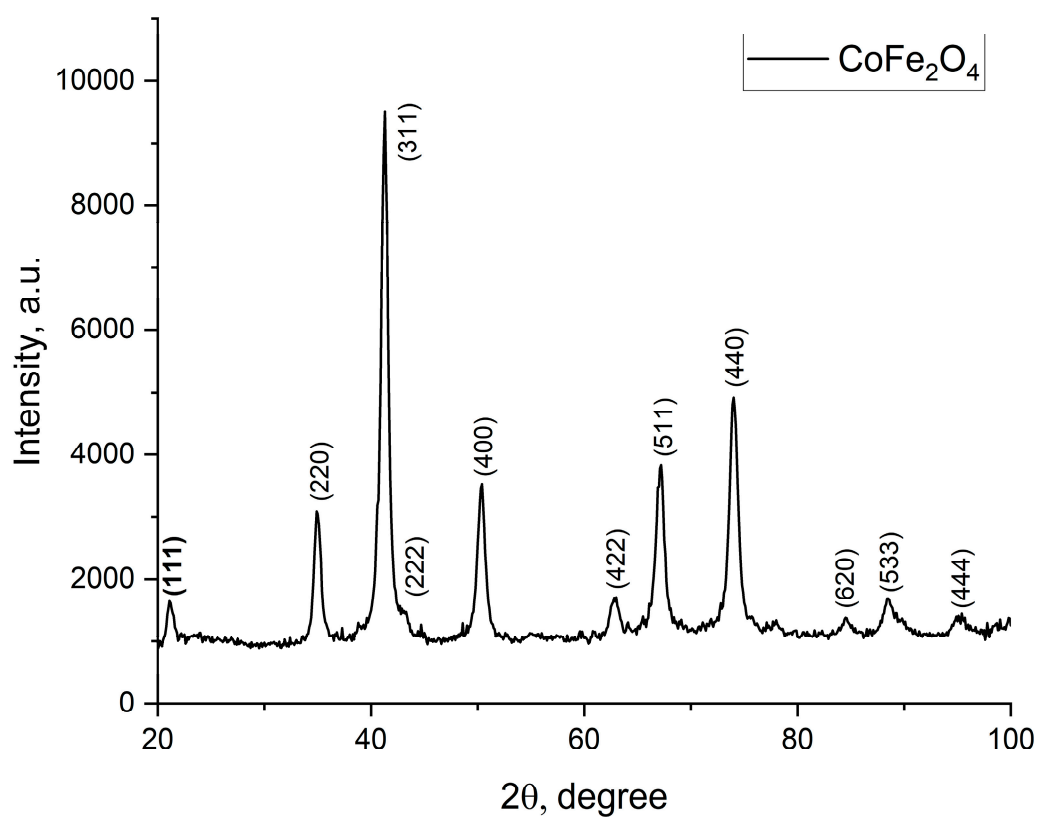


Figure S2. Diffractogram of cobalt ferrite MNPs powder.

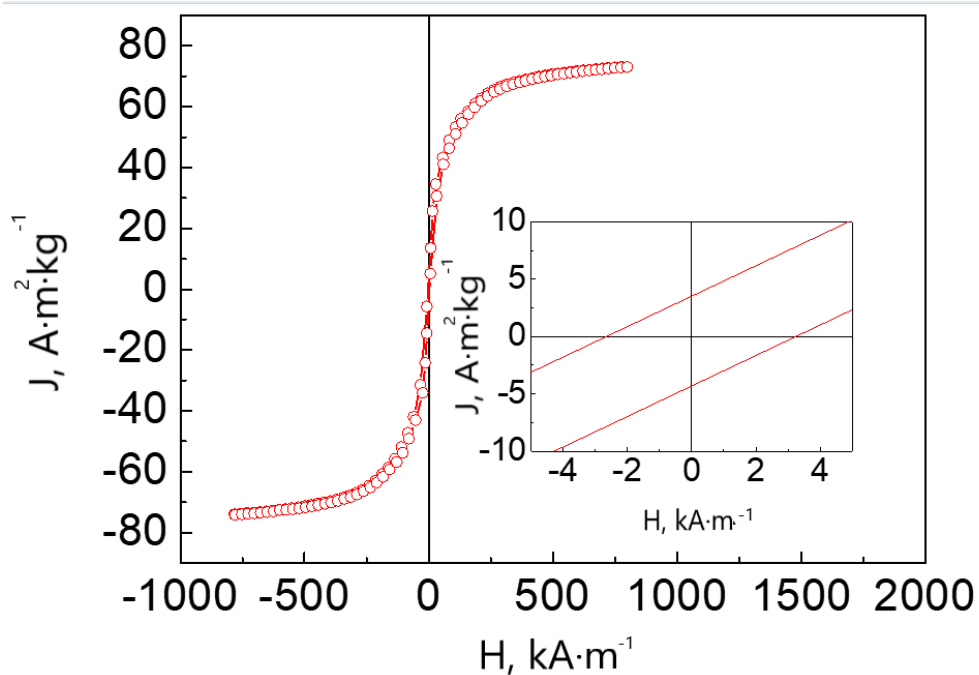


Figure S3. Magnetization curves of cobalt ferrite

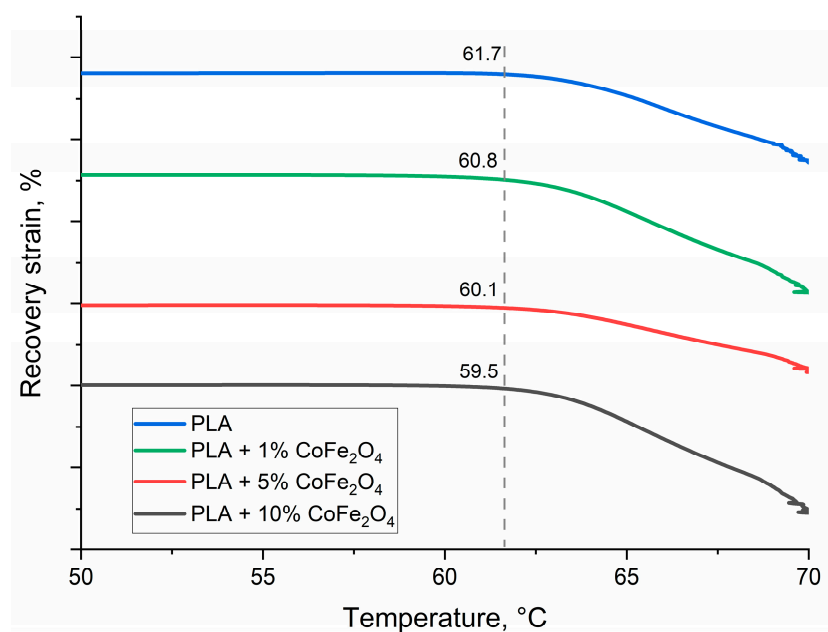


Figure S4. Recovery strain curves for PLA and PLA/CoFe₂O₄ (1, 5, 10 wt. %) samples.



Video S1 Shape
recovery in HFAMF in

Video S1. Shape recovery in HFAMF in the presence of mouse s small intestine.

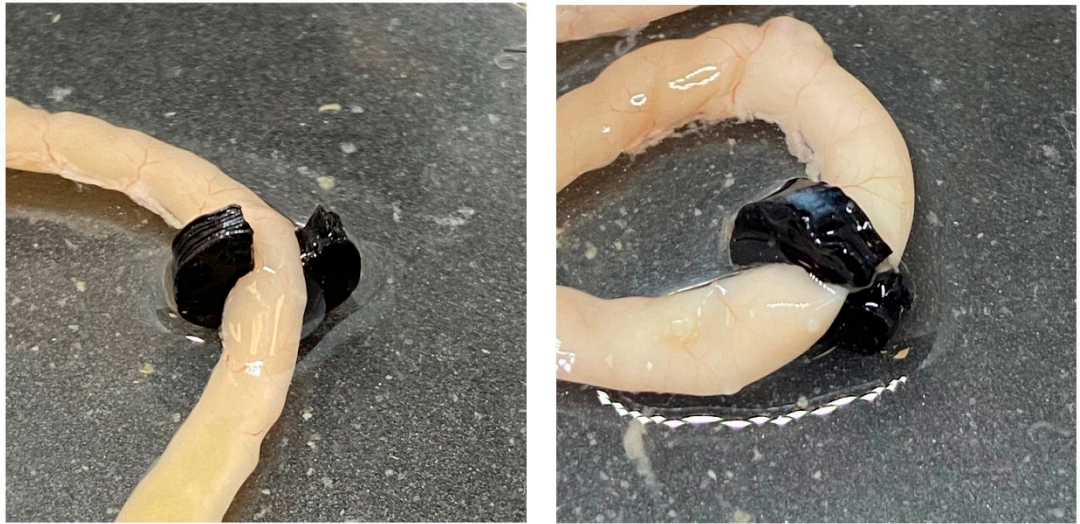


Figure S5. Demonstration of SME in small intestine.

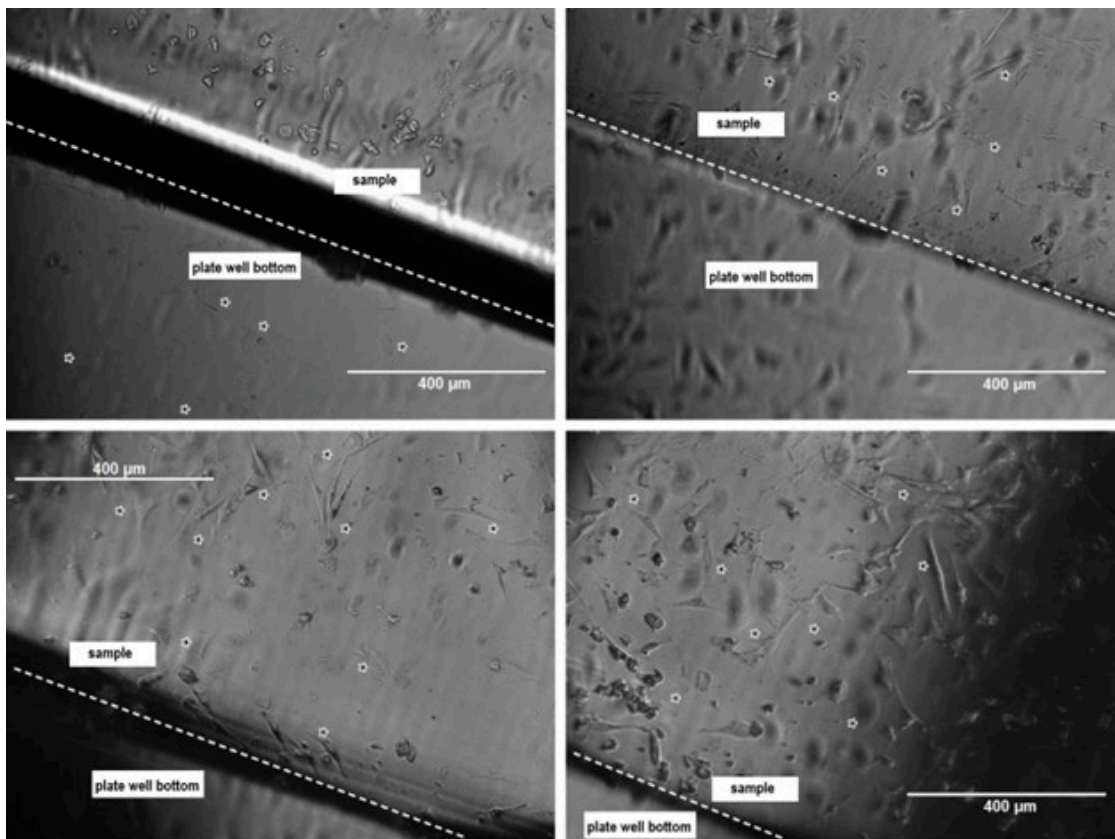


Figure S6. Mesenchymal stem cells (*) at the bottom of the plate well and on the surface of the PLA sample.

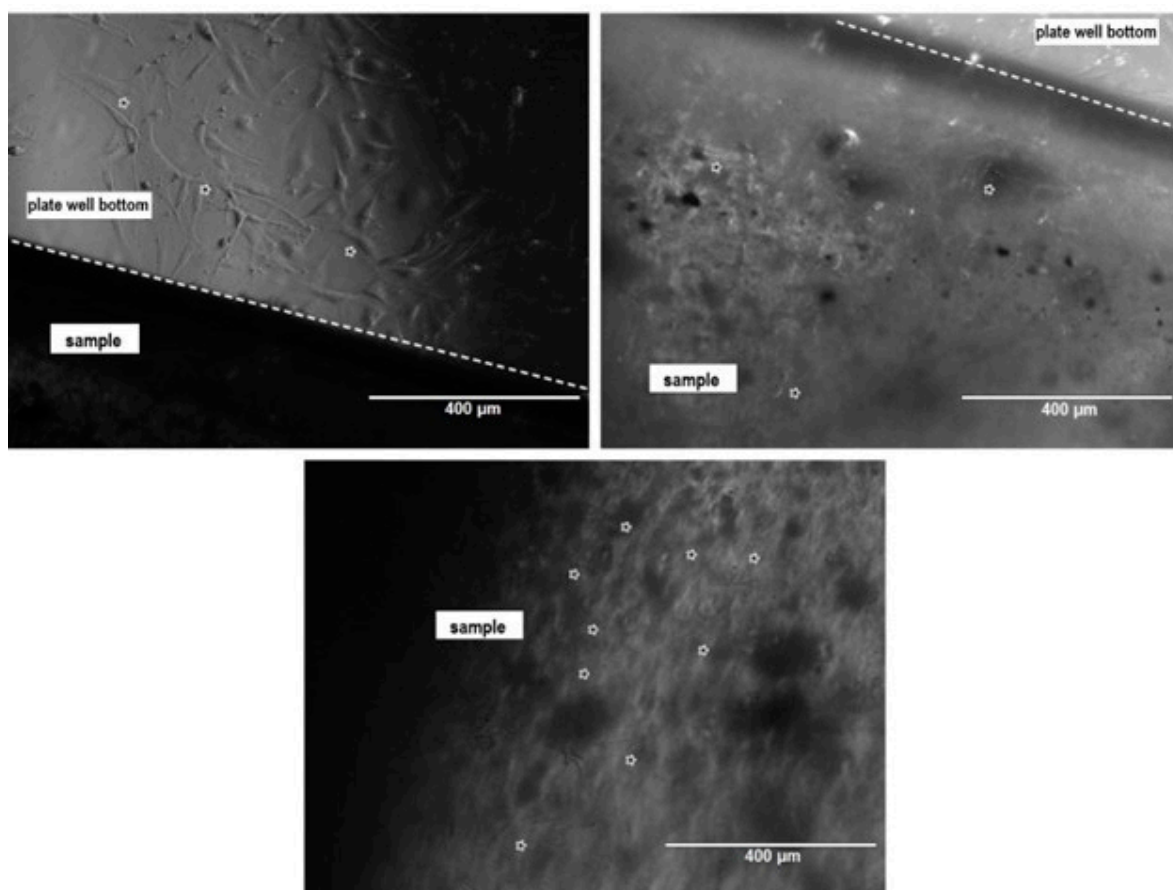


Figure S7. Mesenchymal stem cells (*) at the bottom of the plate well and on the surface of the PLA/CoFe₂O₄ (1 wt. %).