

Supporting Information

Magnetically controlled delivery of probiotics for controlled residence and accumulation in intestine

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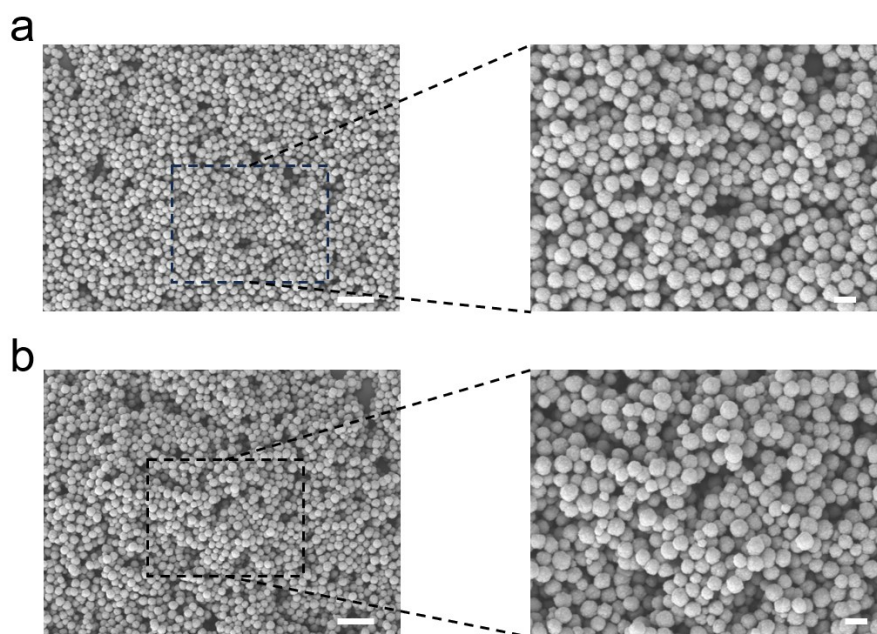


Fig. S1. SEM images a) Fe₃O₄ NPs and b) Fe₃O₄-NH₃⁺ NPs. Scale bars: 1 μ m. And the corresponding local magnification. Scale bars: 300 nm.

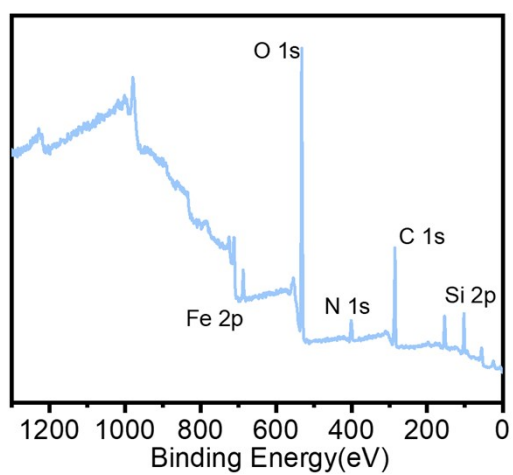


Fig. S2. The XPS survey spectra of Fe₃O₄-NH₃⁺ NPs with survey scan.

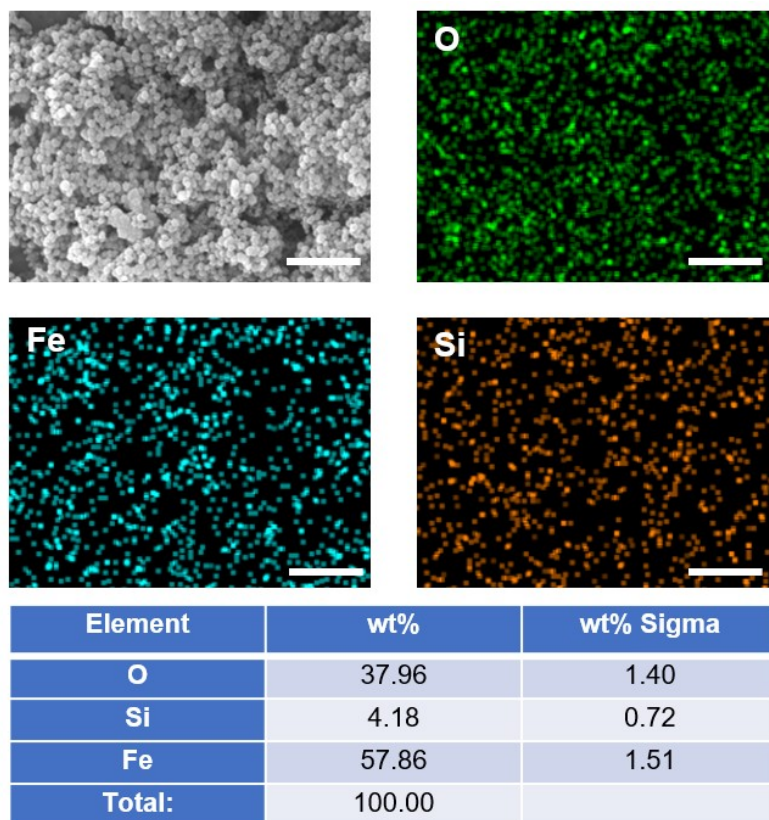


Fig. S3. The element distribution and the mass fraction of Fe₃O₄-NH₃⁺ NPs with elements of O, Fe, Si. Scale bars: 1 μm.

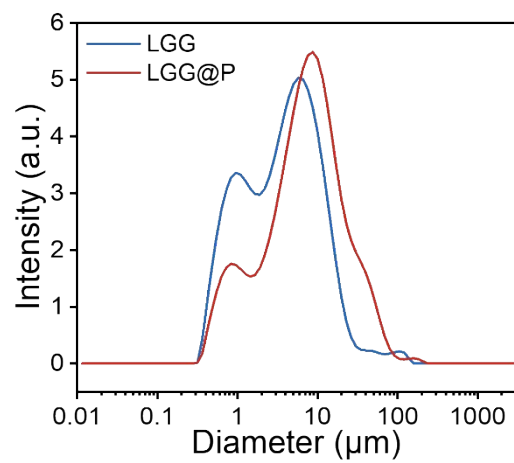


Fig. S4. The size changes of LGG before (blue line) and after PDA modification (red line).

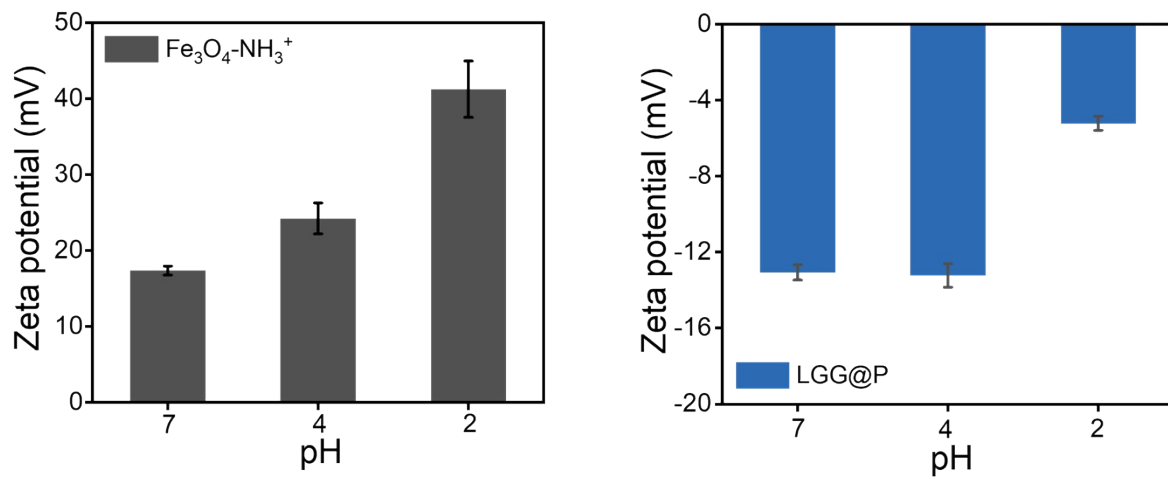


Fig. S5. The Zeta potential of (a) $\text{Fe}_3\text{O}_4\text{-NH}_3^+$ NPs and (b) LGG@P with various pH values treatments for 2 h.

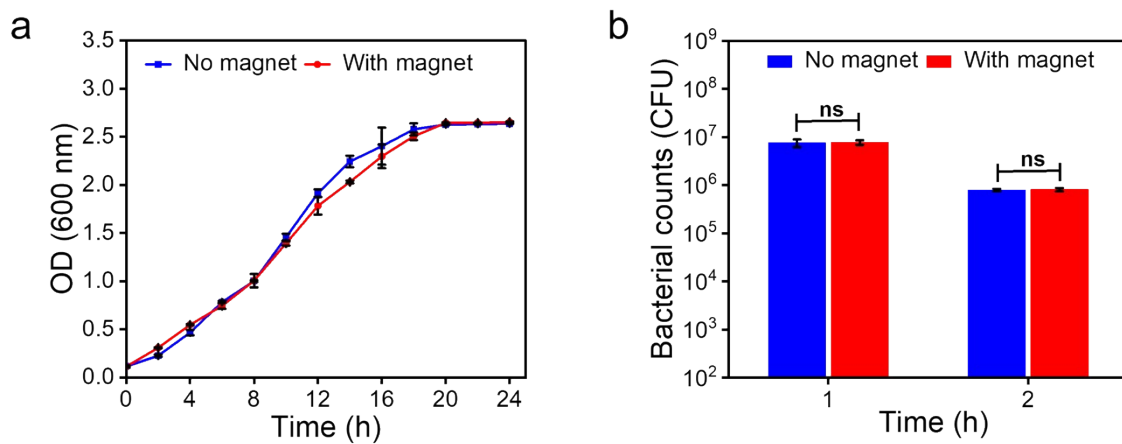


Fig. S6. (a) The growth curves of LGG with and without magnet. (b) The bacterial counts of LGG@P@Fe₃O₄ with and without magnet for different time.



Fig. S7. The magnetic field strength of magnet used in in vitro simulation experiment.

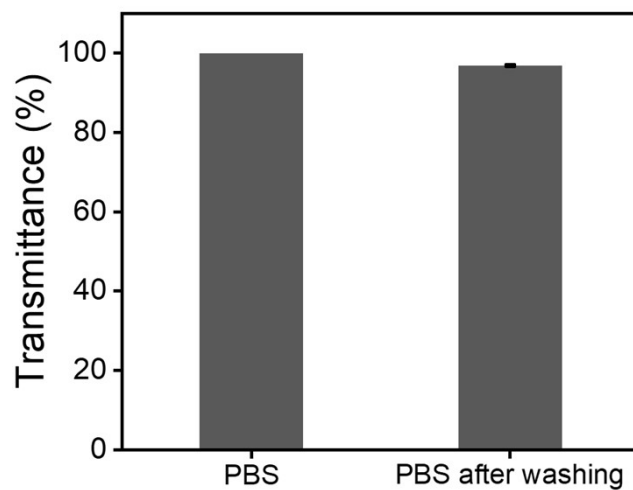


Fig. S8. The transmittance of PBS before and after washing demonstrated that LGG@P@Fe₃O₄ was steadily attracted by a magnet.