

Novel strategy to immobilize bacteria on polymer particles for efficient adsorption and biodegradation of soluble organics

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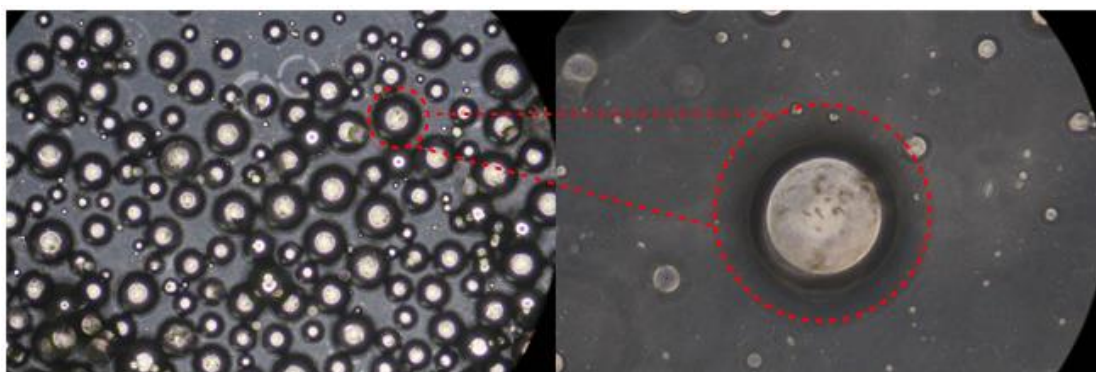


Figure S1. Optical microscopy images of the MPB indicated that the MPB had been successfully synthesized and formed into spherical particles.

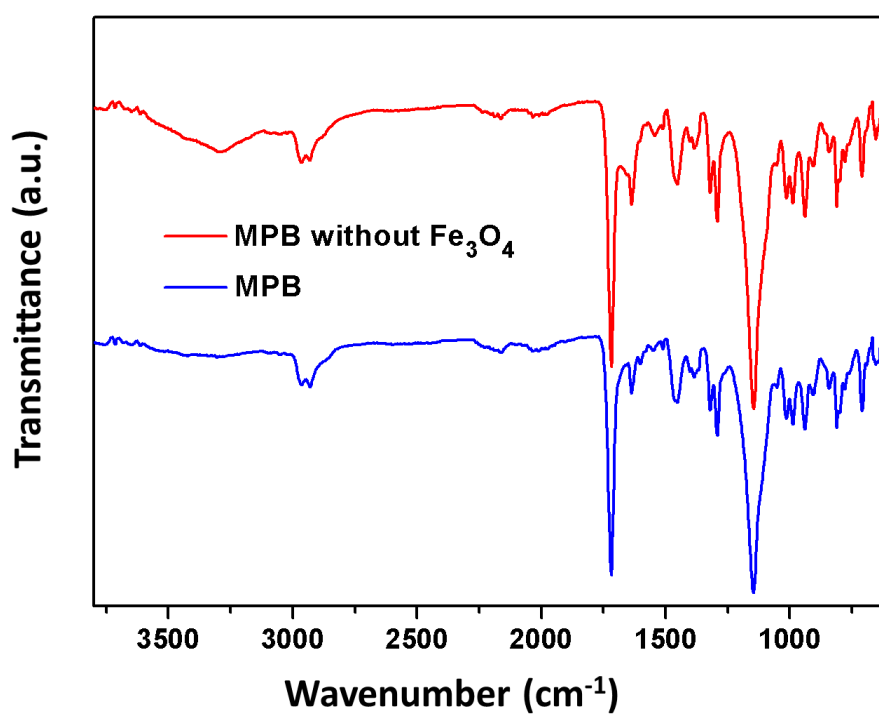


Figure S2. IR spectra of the MPB and the MPB without Fe₃O₄.

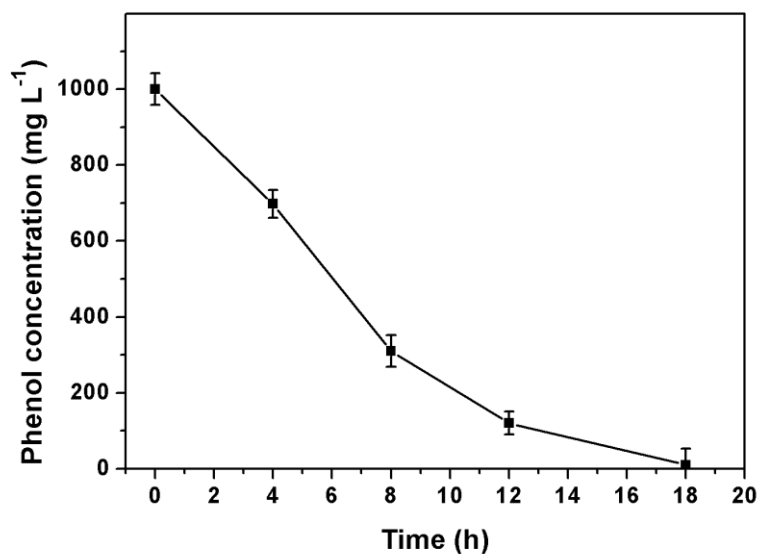


Figure S3. Biodegradation capacity of phenol by MPB. It can be seen that the concentration of phenol decreased to zero after 18 h, indicating a rapid biodegradation rate.

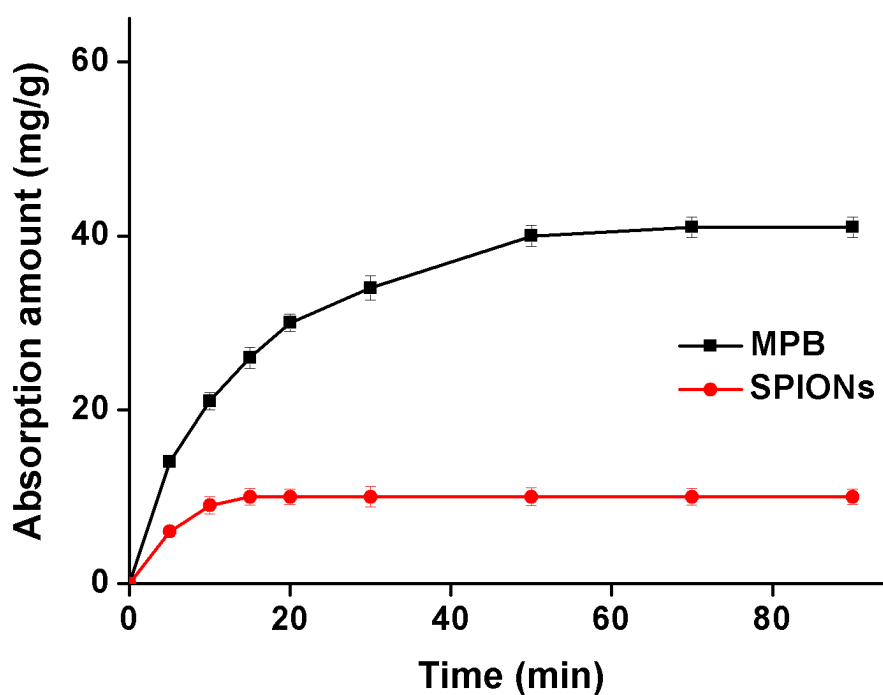


Figure S4. Phenol adsorption capacity of SPIONs and MPB (30 °C). (Error bars, mean \pm SD, n=3.)

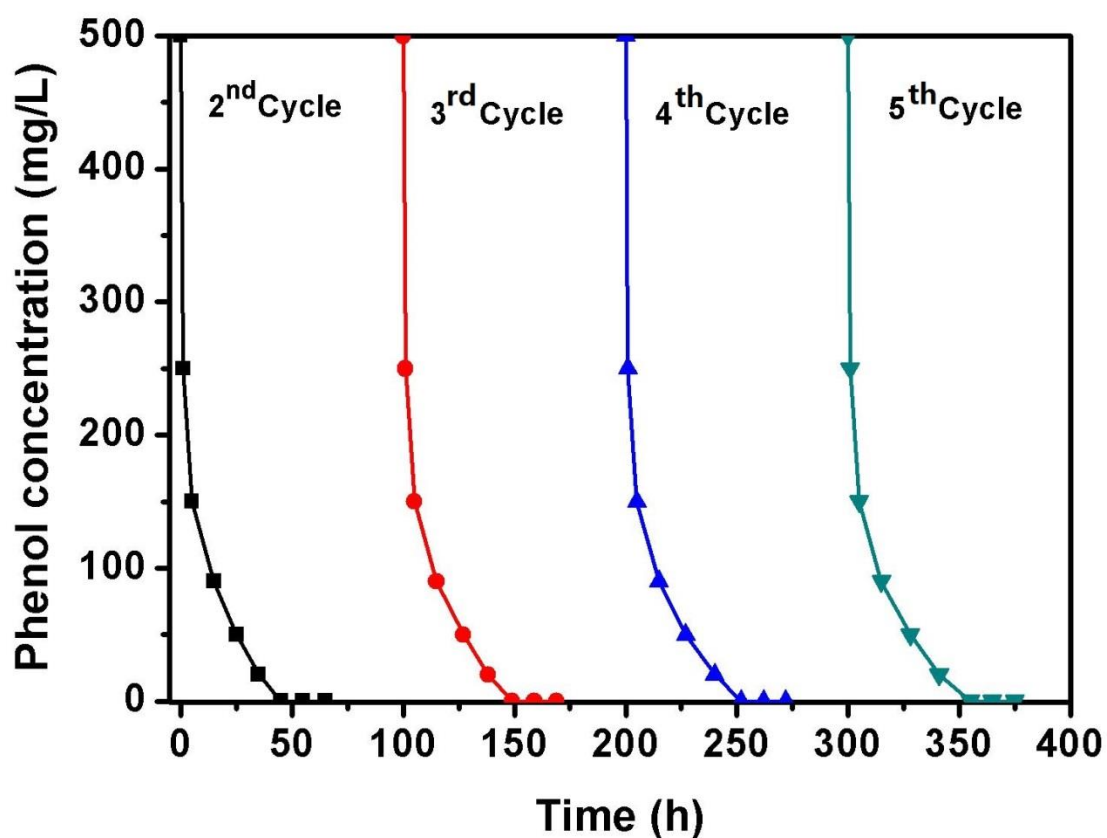


Figure S5. Recyclability of MPB at 30 °C (for initial phenol concentrations of 500 mg L⁻¹). (Error bars, mean ± SD, n = 3.)

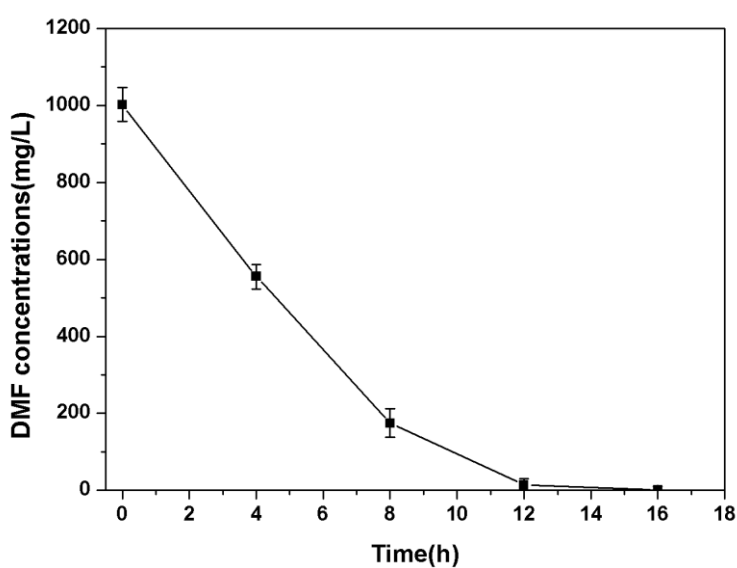


Figure S6. The biodegradation process of DMF by MPB. The amount of DMF was

reduced from 1000 mg L⁻¹ to zero at about 12 h, demonstrating the successful acclimatization of *P. denitrificans*.

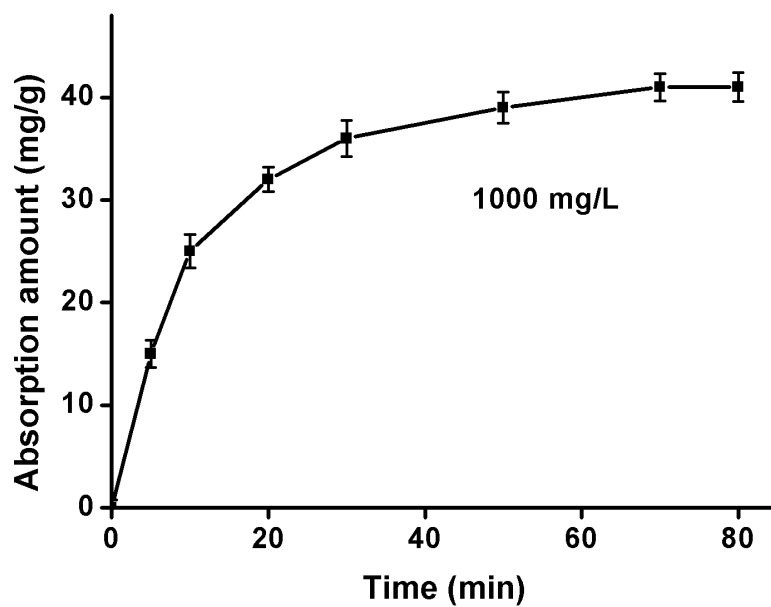


Figure S7. Adsorption amount of DMF by MPB (30 °C). (Error bars, mean \pm SD, n=3.)