

Electronic Supporting Information (ESI)

Carbon nanotubes-ferrite-manganese dioxide micromotors for advanced oxidation processes in water treatment

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Supporting videos

SI Video 1. Efficient propulsion of SW-Fe₂O₃/MnO₂, PEDOT/MnO₂ and SW/MnO₂ micromotors in wastewater containing 2% H₂O₂ concentration and 0.5 % Tween 20.

SI Video 2. Magnetic attraction and directional control of SW-Fe₂O₃/MnO₂ micromotors.

Supporting figures and tables

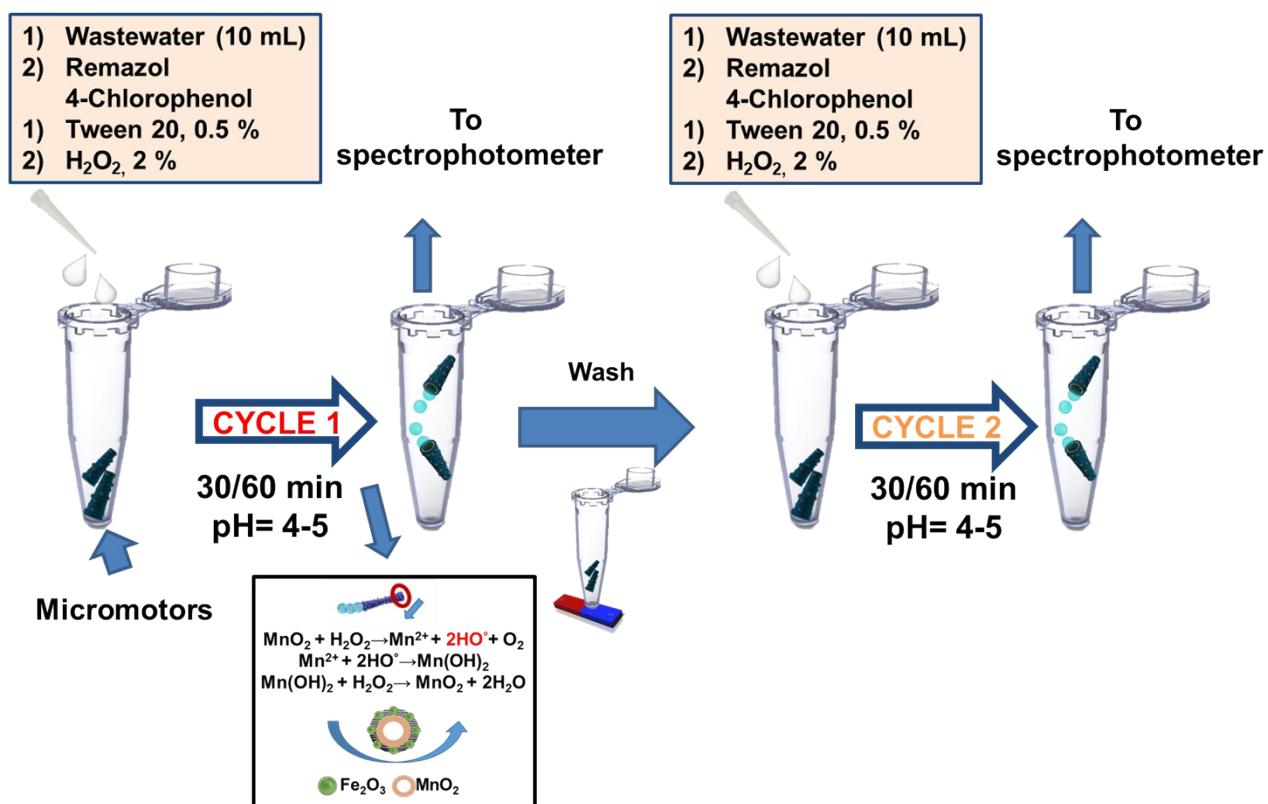


Figure S1. Schematic of the cycle experiment for Remazol and 4-Chlorophenol degradation using SW-Fe₂O₃/MnO₂ micromotors, 2% H₂O₂ and 0.5 % Tween 20.

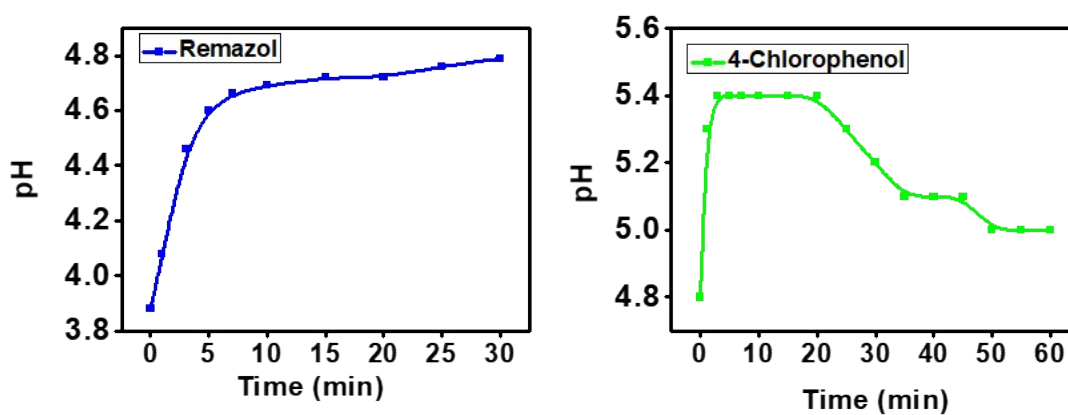


Figure S2. Graph showing the pH variation of Remazol and 4-Chlorophenol contaminated wastewater in a typical decontamination experiment using SW-Fe₂O₃/MnO₂ micromotors, 2% H₂O₂ and 0.5 % Tween 20.

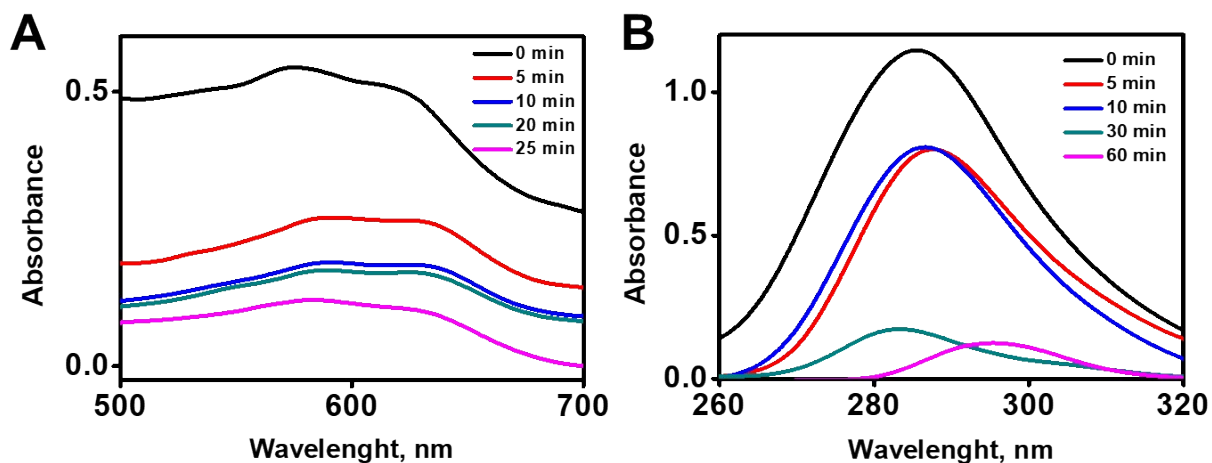


Figure S3. UV-VIS spectra of Remazol (A) and 4-Chlorophenol (B) contaminated wastewater in a typical decontamination experiment using SW-Fe₂O₃/MnO₂ micromotors. Conditions: 1% H₂O₂ and 0.5 % Tween 20.

Table S1. Change of total organic carbon (TOC) concentration in Remazol and 4-Chlorophenol contaminated water before and after treatment with the SW-Fe₂O₃/MnO₂ micromotors.

	Initial TOC (mg/L)	Final TOC (mg/L)	TOC removal (%)
RBB solutions	5170	2053	60.3
4-CP solutions	3503	1378	60.7

TOC removal was calculated as (initial TOC-final TOC)/ initial TOC x 100 %