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## **ELECTRONIC SUPPLEMENTARY INFORMATION**

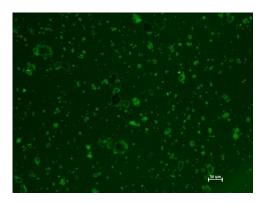
## New synthetic strategy toward natural enzymes-nanozymes hybrid dual-function nanomotor and its application in environmental remediation

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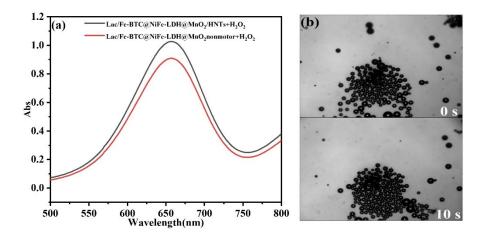
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 $\label{eq:Fig.S1} \textbf{Fig. S1} \ \text{CLSM images of Lac/Fe-BTC@NiFe-LDH@MnO}_2/\text{HNTs micromotors after labeling}$  with FITC



**Fig. S2** UV-visible absorption spectrum of different states of motion (a), time-lapse motion images of Lac/Fe-BTC@NiFe-LDH@MnO<sub>2</sub> non-motor in 3% H<sub>2</sub>O<sub>2</sub> at 0 s and 10 s (b)



Fig. S3 Photographs of nanomotors during degradation

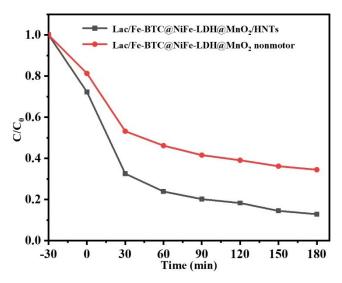


Fig. S4 Degradation rate of different states of motion.