### **Electronic Supplementary Information**

## **3D** hierarchically tubular micromotors with highly selective recognition and

# capture for antibiotics

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## **Table of Content**

#### **Section 1: Supporting Videos**

**Video S1**: The videos of the moving MMIPs-LDH/Mn<sub>3</sub>O<sub>4</sub> micromotor in 1%, 2%, 3%, 5% and 10% of  $H_2O_2$  solution, respectively. (0.5 % of sodium dodecyl sulfonate was added to 1%, 2% and 3%  $H_2O_2$  solution, respectively, while no dodecyl sulfonate addition was added to 5% and 10%  $H_2O_2$  solution)

**Video S2**: The video of the moving MMIPs-LDH/ $Mn_3O_4$  micromotor in 2% of  $H_2O_2$  without sodium dodecyl sulfonate under an external magnetic field.