Supporting information

Novel heparin-loaded mesoporous tubular micromotors
based on template-assisted electrochemical deposition

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Video S1. Movement behavior of PEDOT/MS/MnO_2 micromotor in 5% H_2O_2 and 0.1% H_2O_2.

Video S2. Movement behavior of PEDOT/MS/MnO_2 micromotor under plasma in 0.1% H_2O_2.

Video S3. Movement behavior of PEDOT/MS/MnO_2-Hep micromotor in 0.1% H_2O_2.
**Fig. S1.** TEM images of the PEDOT/MS/MnO$_2$ with calcination treatment.

**Table S1.** Characteristics of the Drug Release Kinetics.

<table>
<thead>
<tr>
<th>Release parameter</th>
<th>Korsmeyer-Peppas</th>
<th>First-order</th>
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<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>PEDOT/MS/MnO$_2$-Hep</td>
<td>5.156</td>
<td>0.1899</td>
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<tr>
<td>PEDOT/MS-Hep</td>
<td>5.193</td>
<td>0.2603</td>
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**Fig. S2.** Hep release profile of the PEDOT/MS/MnO$_2$-Hep micromotors in PBS (with 0.1% H$_2$O$_2$) at 37°C.
**Fig. S3.** (A) Force analysis and (B) propulsion force of the PEDOT/MS/MnO$_2$ micromotors calculated by equation, based on the speed value in Fig. 9A.