Electronic Supplementary Information

Fluorescent switching technology based on fluorescence resonance energy transfer for detecting dimethoate pesticide in environmental water

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Fig. S1 The fluorescence resonance energy transfer mechanism

Fig. S2 Fluorescence spectra of the red QDs with the addition of different DZ concentration
Fig. S3 The influence of the pH on the intensity of fluorescence quantum dots and the fluorescence probe

Fig. S4 Fluorescence spectra of the CdTe QDs after addition of different concentrations of DMT

Fig. S5 The structural formula about PF, EP and DMT
Scheme S1 The hydrolysis of the DMT compounds

Table S1 Recoveries of dimethoate from water (n=5)

<table>
<thead>
<tr>
<th>Sample</th>
<th>Concentration sample (this study) (μg mL⁻¹)</th>
<th>Concentration sample (GC-MS) (μg mL⁻¹)</th>
<th>Concentration added (this study) (μg mL⁻¹)</th>
<th>Recovery (this study) (%)</th>
<th>RSD (this study) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tap water</td>
<td>0.00</td>
<td>0.00</td>
<td>0.30</td>
<td>88.6</td>
<td>5.5</td>
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<td></td>
<td></td>
<td></td>
<td>3.00</td>
<td>90.7</td>
<td>3.2</td>
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<td></td>
<td></td>
<td></td>
<td>30.00</td>
<td>95.3</td>
<td>3.8</td>
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<td>River water</td>
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<td>0.57</td>
<td>0.50</td>
<td>91.3</td>
<td>3.7</td>
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