

## Supporting Information for

### Temperature and Magnetic Dual Responsive Restricted Access Material for Extraction of Malachite Green from Crucian and Shrimp Samples

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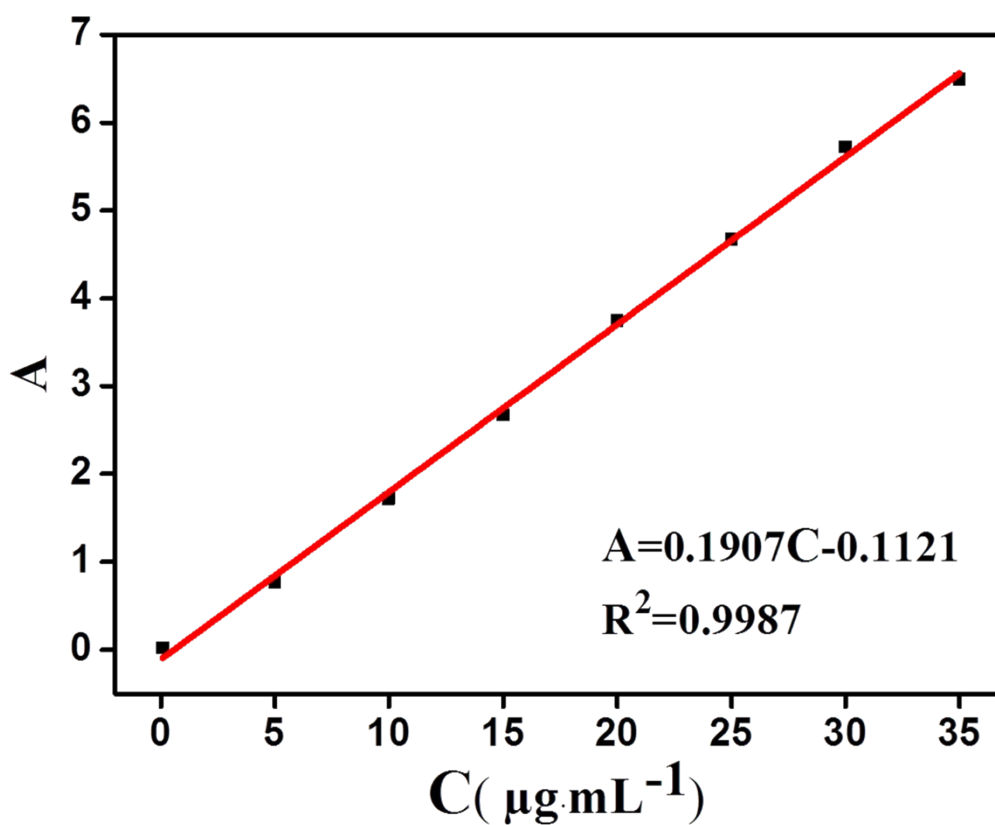
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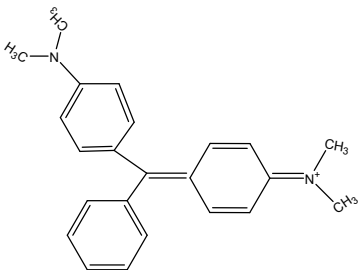
**Table S1: The Absorbance of standards malachite green at the concentration of 0.1-35  $\mu\text{g}\cdot\text{mL}^{-1}$**

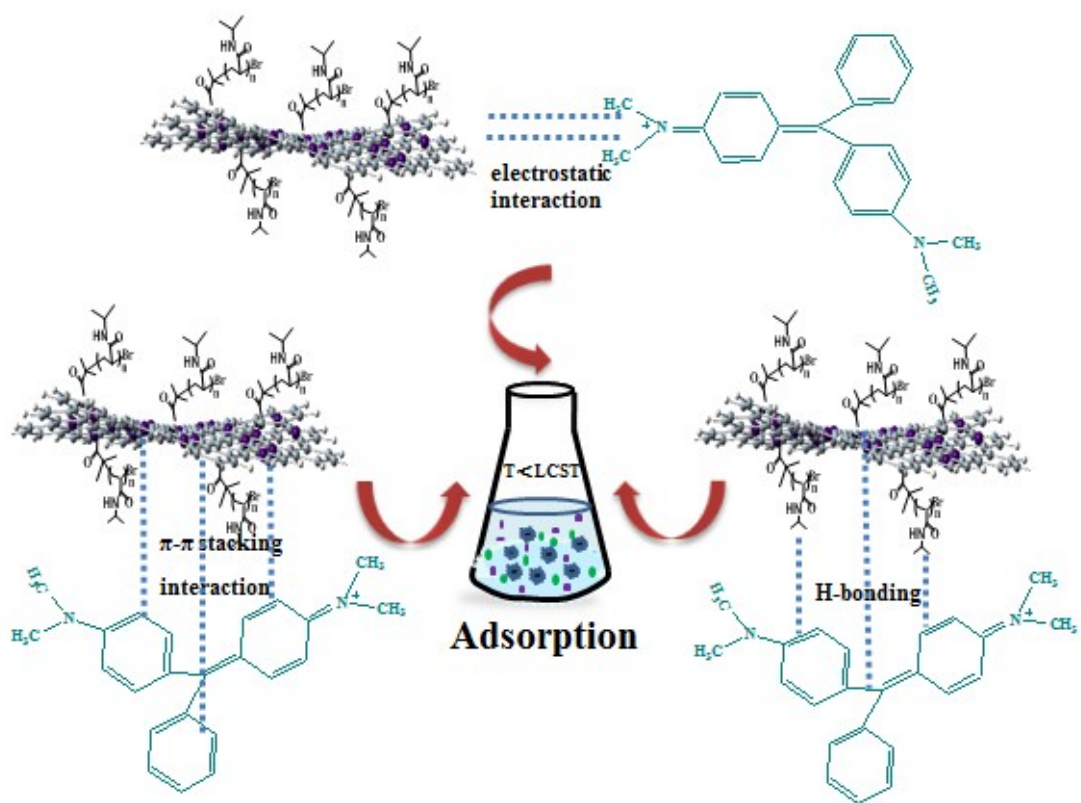
Concentration ( $\mu\text{g}/\text{mL}$ )	0.1	5	10	15	20	25	30	35
Absorbance (A)	0.026	0.769	1.722	2.675	3.745	4.669	5.722	6.496



**Fig. S1 : Standard working curve of Malachite green**

**Table S2: Specification of Malachite green**

<b>Contaminants</b>	<b>Malachite green</b>
<b>Structure</b>	 <p>The chemical structure of Malachite green is shown. It consists of a central carbon atom double-bonded to a nitrogen atom. The nitrogen atom is bonded to two methyl groups (CH<sub>3</sub>) and has a positive charge. The central carbon atom is also bonded to a phenyl ring and a para-substituted phenyl ring. The para-substituted phenyl ring has a methylamino group (-NHCH<sub>3</sub>) at the para position.</p>
<b>Molecular weight (g/mol)</b>	<b>364.911</b>
<b>Molecular formula</b>	<b>C<sub>23</sub>H<sub>25</sub>ClN<sub>2</sub></b>
<b>Melting point (°C)</b>	<b>112-114</b>
<b>Boiling point (°C)</b>	<b>526.2 at 760mmHg</b>
<b>Density (g/cm<sup>3</sup>)</b>	<b>1.131</b>
<b>λ max (nm)</b>	<b>617</b>
<b>Size (nm)</b>	<b>1.4*1.1*0.5</b>



Scheme S1. The possible adsorption mechanisms for MG on MGO@PDA@PNIPAAM