

## Supplementary Information

### Oil extraction by aminoparticles-based H<sub>2</sub>O<sub>2</sub> activation via wet microalgae harvesting

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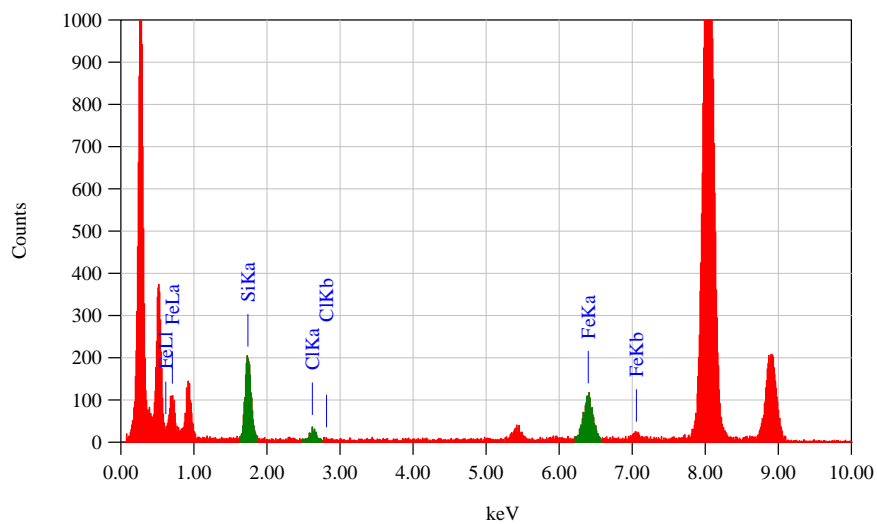
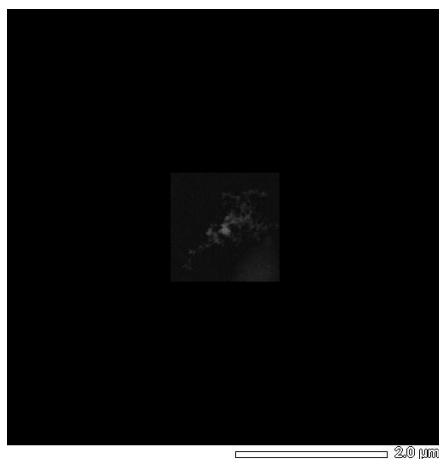
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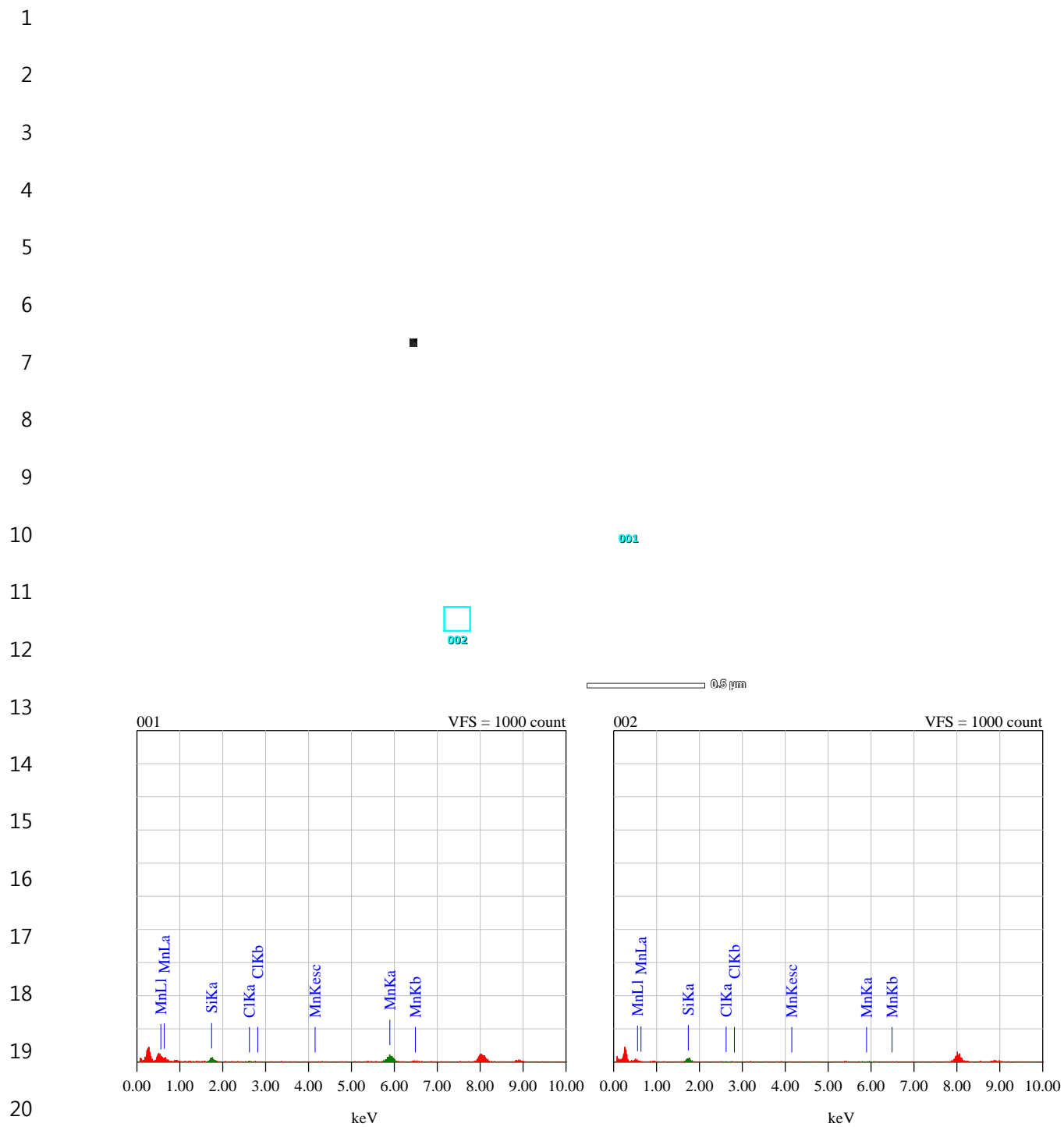
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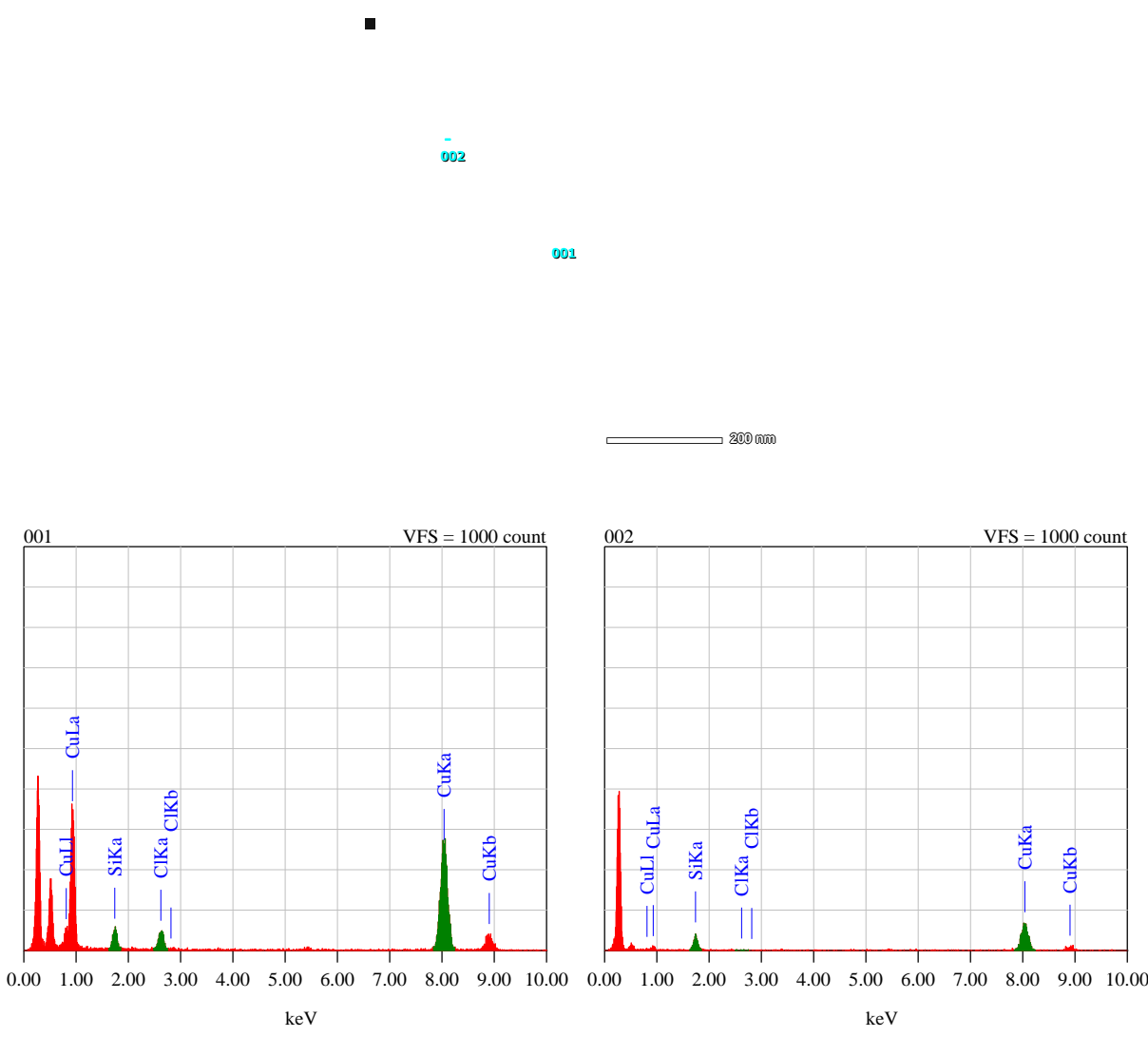


**Figure S1.** Energy-dispersive X-ray (EDX) microanalysis of Fe-aminoparticle which is adapted from the reference.<sup>36</sup>



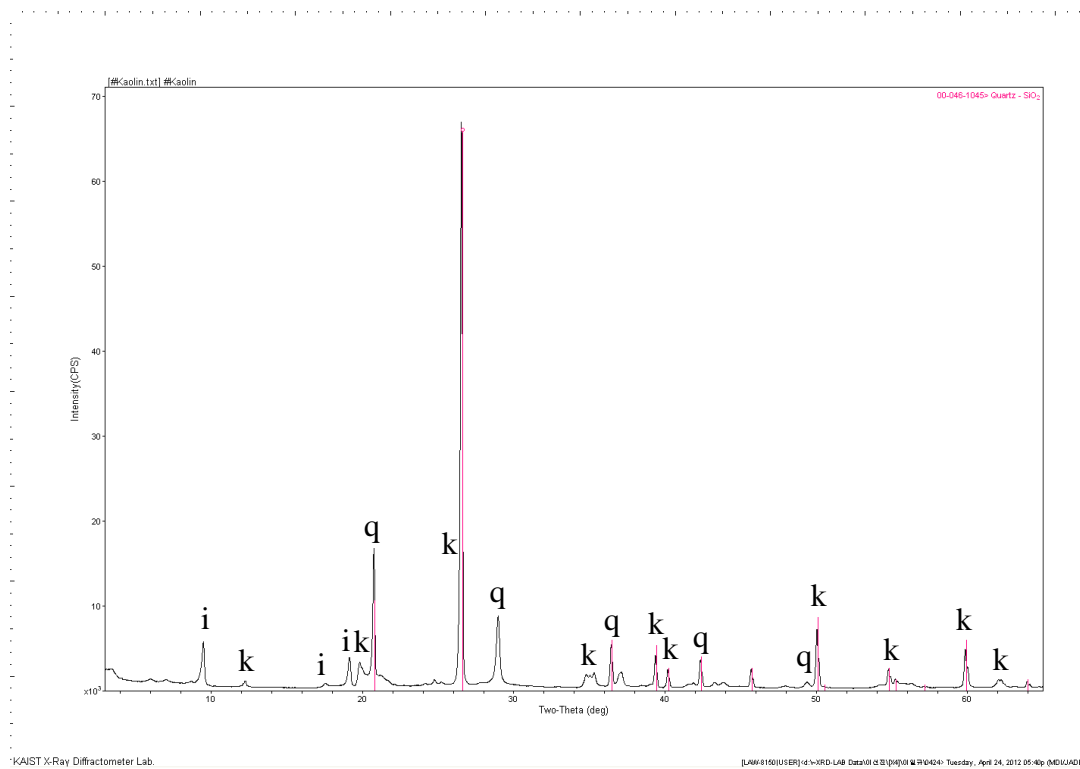
**Figure S2.** Energy-dispersive X-ray (EDX) microanalysis of Mn-aminoparticle.

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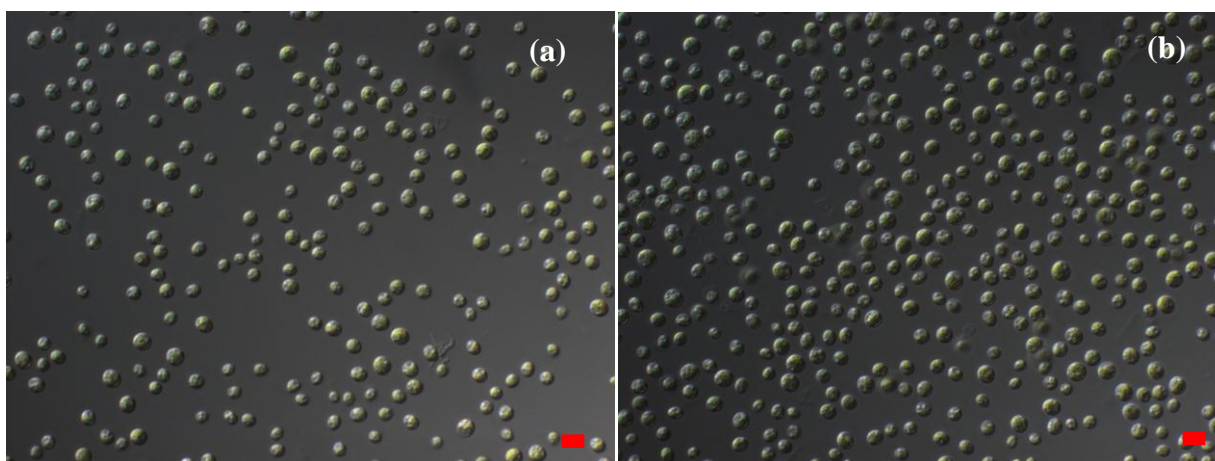
**Figure S3.** Energy-dispersive X-ray (EDX) microanalysis of Cu-aminoparticle.

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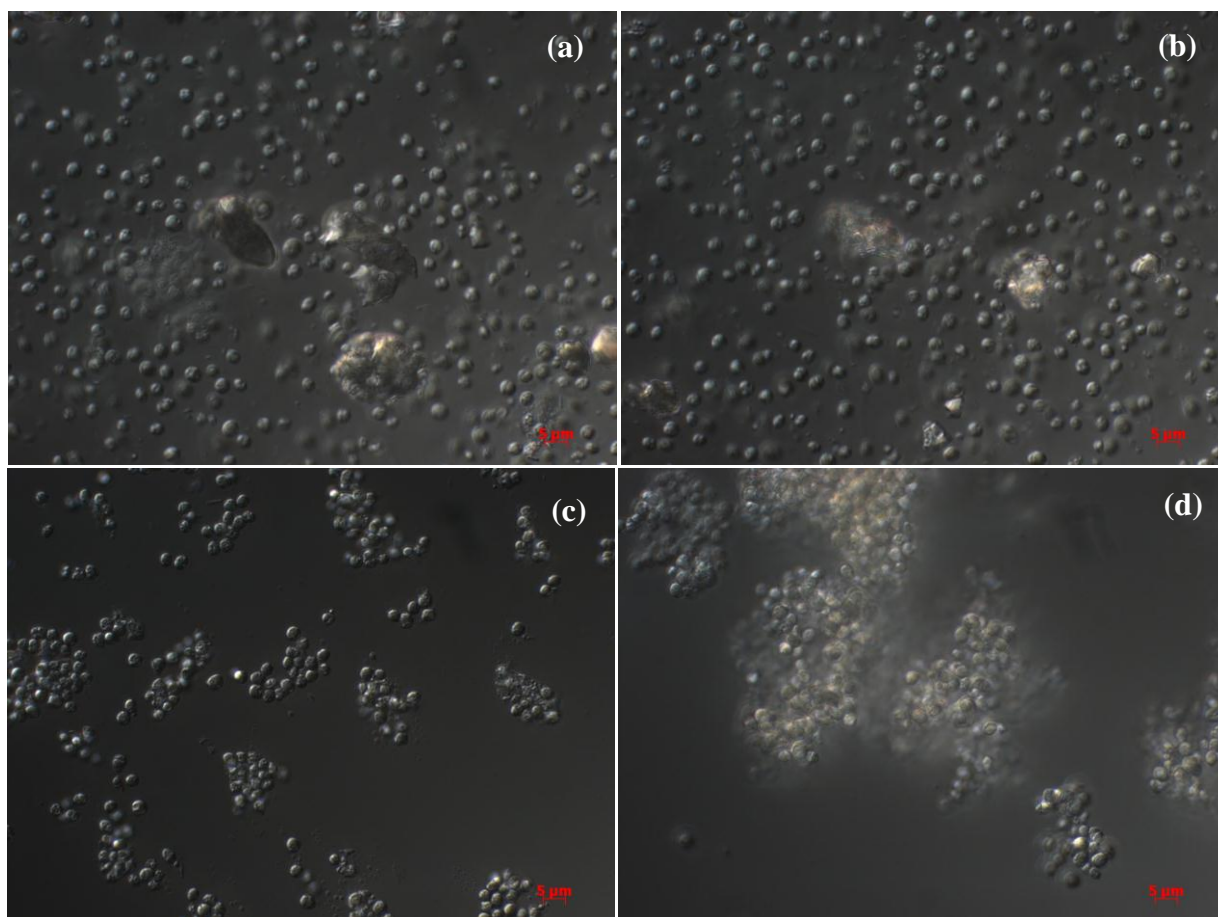
**Figure S4.** XRD pattern of kaolin (k: kaolinite, q: quartz, i: illite).

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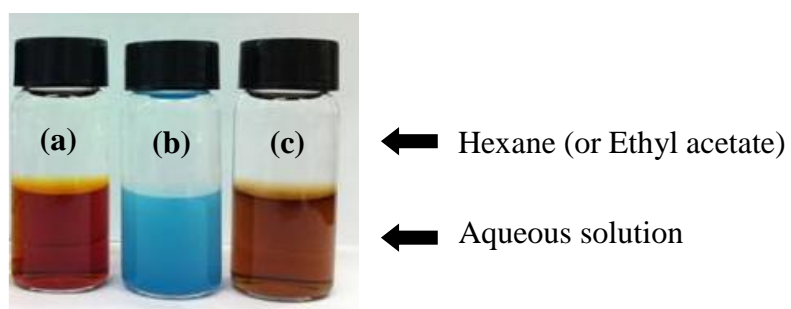
**Figure S5.** Optical microscopy images (a, b) of *Chlorella* sp. used in this study. Scale bars = 5  $\mu\text{m}$ .

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23 **Figure S6.** Optical microscopy images of *Chlorella* sp. after kaolin (a,b) and  $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$   
24 (c,d) treated with 1%  $\text{H}_2\text{O}_2$ .

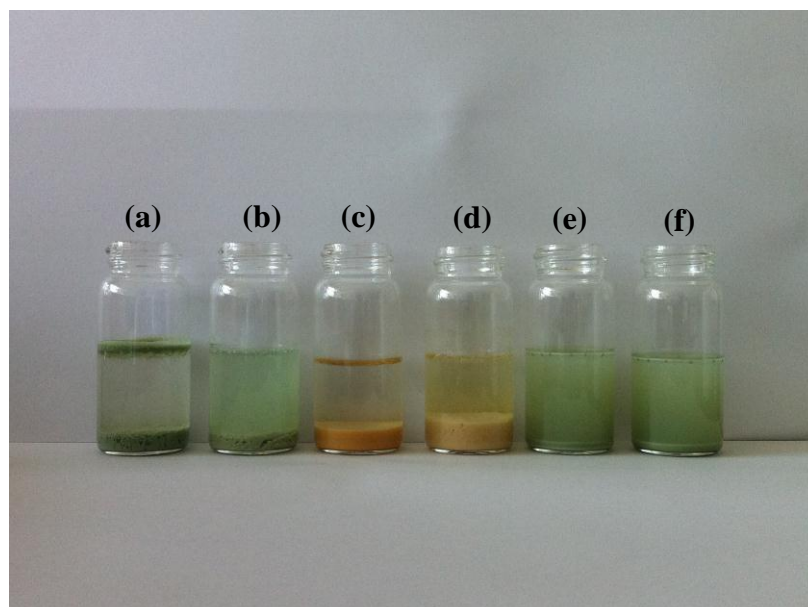
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**Figure S7.** Photographs of a partitioning behavior for Fe-aminoparticle (a), Cu-aminoparticle (b), and Mn-aminoparticle (c) at 2 mg/mL in hydrophobic (10 mL) and hydrophilic (10 mL) phases.



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22 **Figure S8.** Photographs of *Chlorella* sp. after treatment with Mn-aminoparticle (a), Cu-  
23 aminoparticle (b), Fe-aminoparticle (c), FeCl<sub>3</sub> (d), kaolin (e), and no particle (f) in the  
24 presence of 1% H<sub>2</sub>O<sub>2</sub>.

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