

## Electronic Supplementary Information

### 3D hierarchical rare-earth metal composite nanofiber membranes for highly durable and efficient photodegradations of organic pollutants

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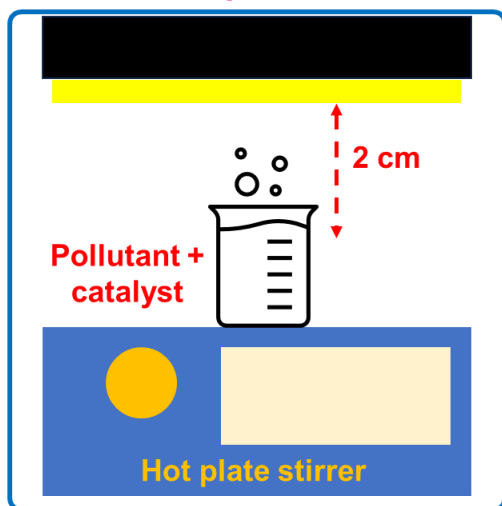
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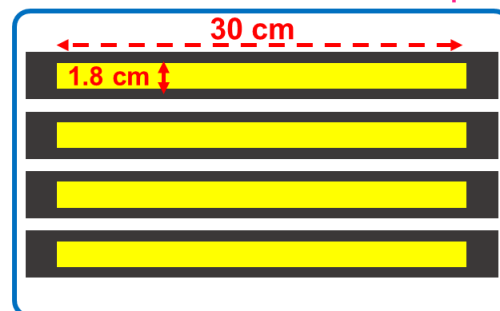
**Table S1 The quantitative element concentration based on EDS elemental analysis of the Re-NFs sample.**

| Element | Mass (wt%) | Atomic (wt%) |
|---------|------------|--------------|
| C       | 10.31      | 27.67        |
| N       | 1.04       | 2.40         |
| O       | 19.76      | 39.81        |
| F       | 9.72       | 16.50        |
| Ce      | 59.17      | 13.62        |

**Photocatalytic chamber**

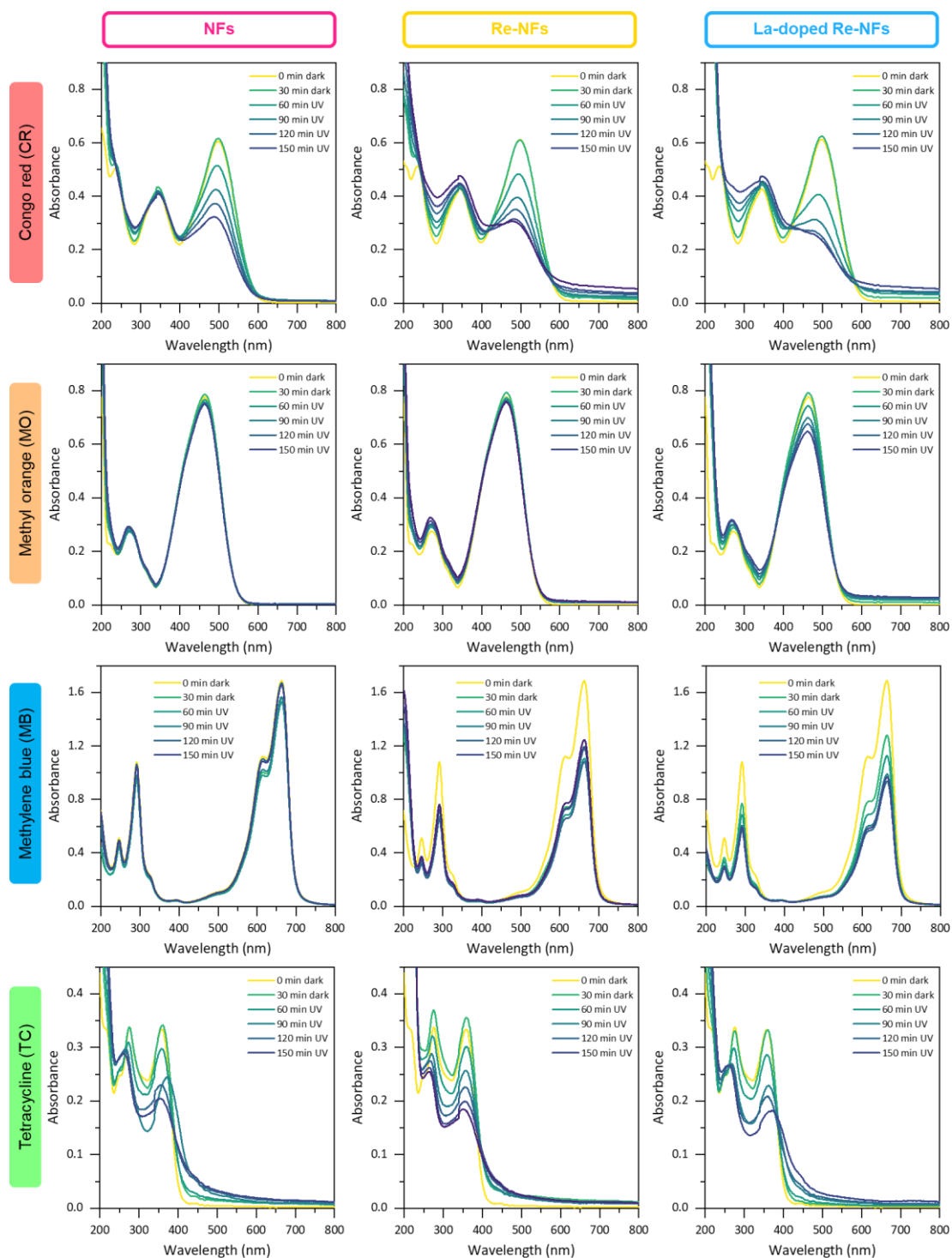


**2D view of the UV lamp**



**4 UVC lamp,  $\lambda \approx 253.7$  nm, 10 W**

**Figure S1 The in-detailed photocatalysis experiment condition with some detailed**



**Figure S2 The UV-Vis spectra of the NFs, Re-NFs, and La-doped Re-NFs during photocatalysis experiment using various pollutants (i.e., CR, MO, MB, and TC)**