## Supplementary Information

**Highly dispersed NiMo@rGO nanocomposite catalysts fabricated by****a two-step hydrothermal method for hydrogen evolution**

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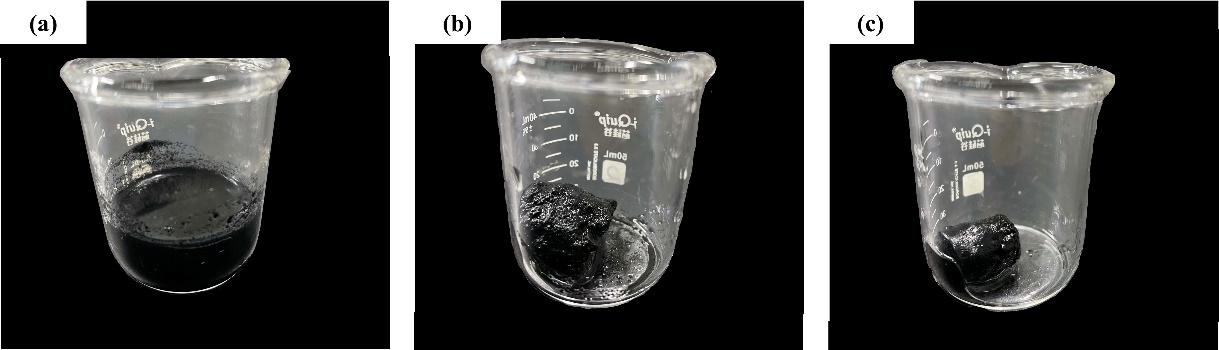
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**Table S1. EDS elemental data of NiMo@rGO-1**

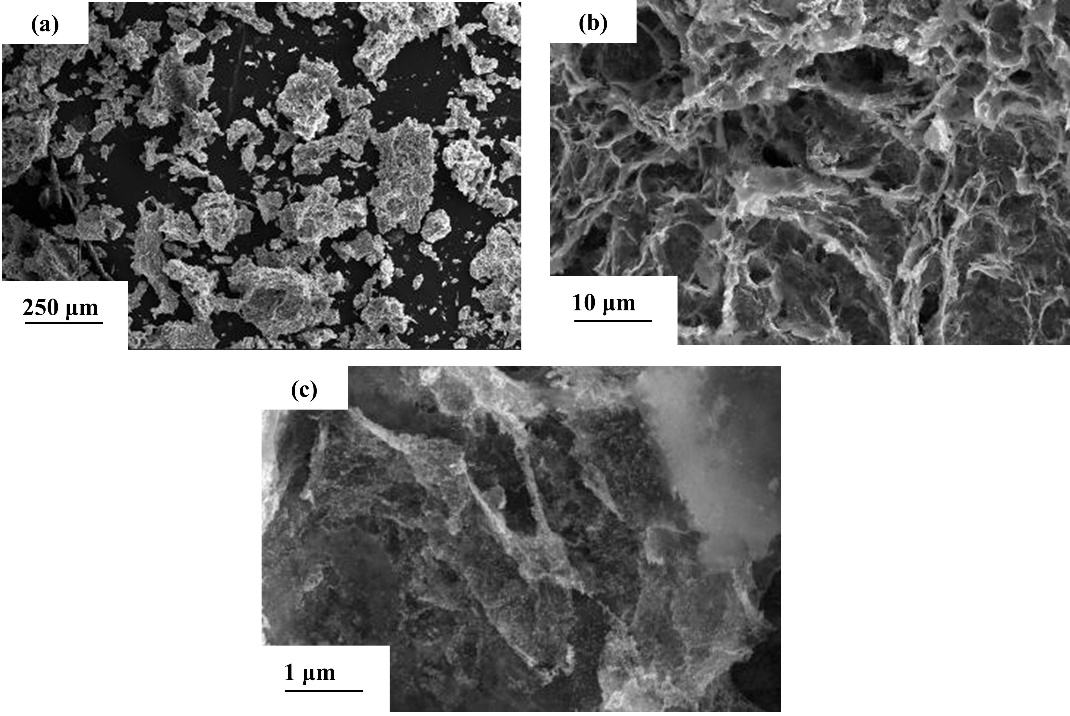
|  |  |
| --- | --- |
| Element | Mass fraction / wt% |
| C | 37.97 |
| O | 16.22 |
| Ni | 42.49 |
| Mo | 3.32 |

**Table S2.** **EDS elemental data of nanoparticles on the surface of NiMo@rGO-1**

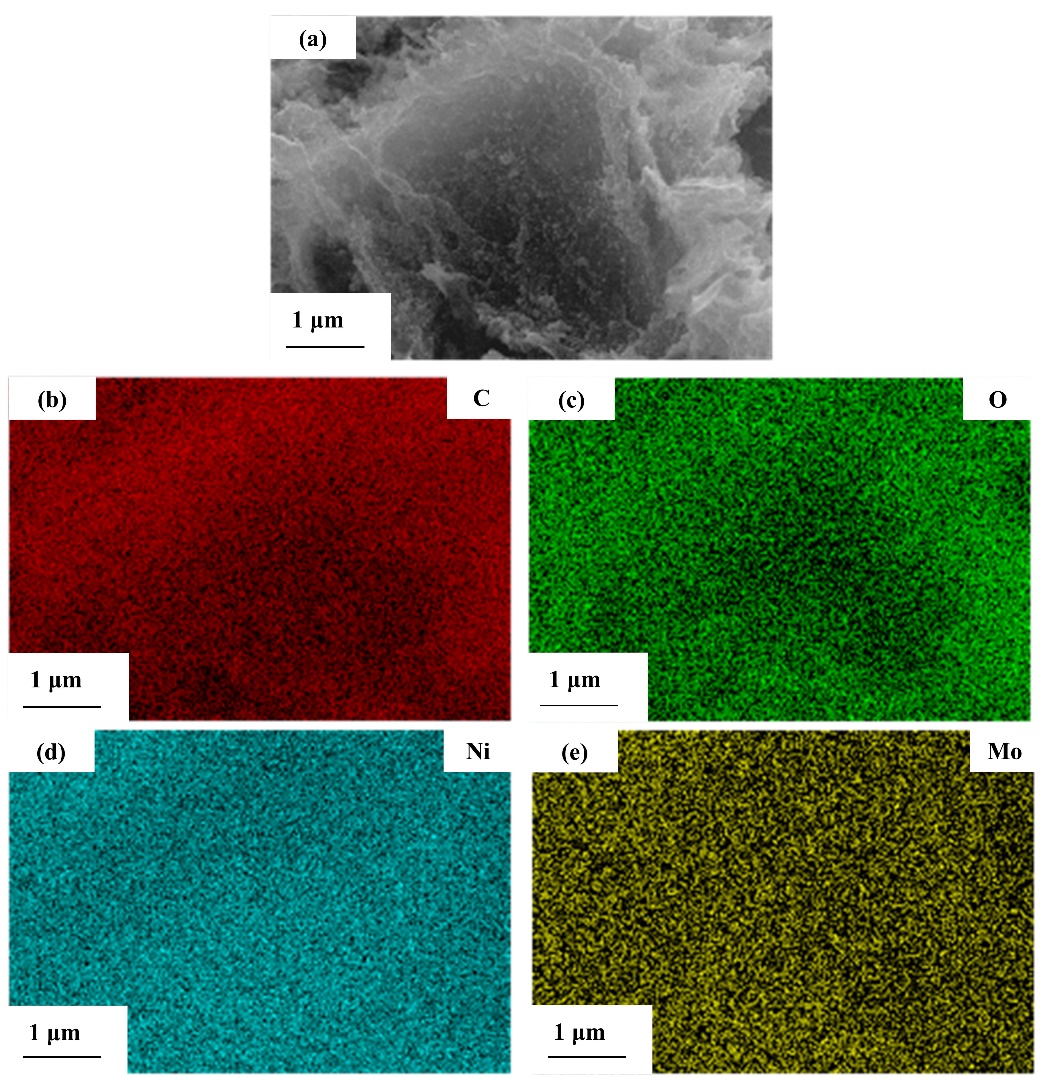
|  |  |
| --- | --- |
| Element | Mass fraction / wt% |
| C | 2.39 |
| O | 4.37 |
| Ni | 86.65 |
| Mo | 6.59 |



**Fig. S1. Digital photographs of catalysts (a) NiMo@rGO-1, (b) NiMo@rGO-2, and (c) NiMo@rGO-3.**



**Fig. S2. SEM images of Ni@rGO: (a) 250× magnification; (b) 5000× magnification; (c) 50000× magnification.**



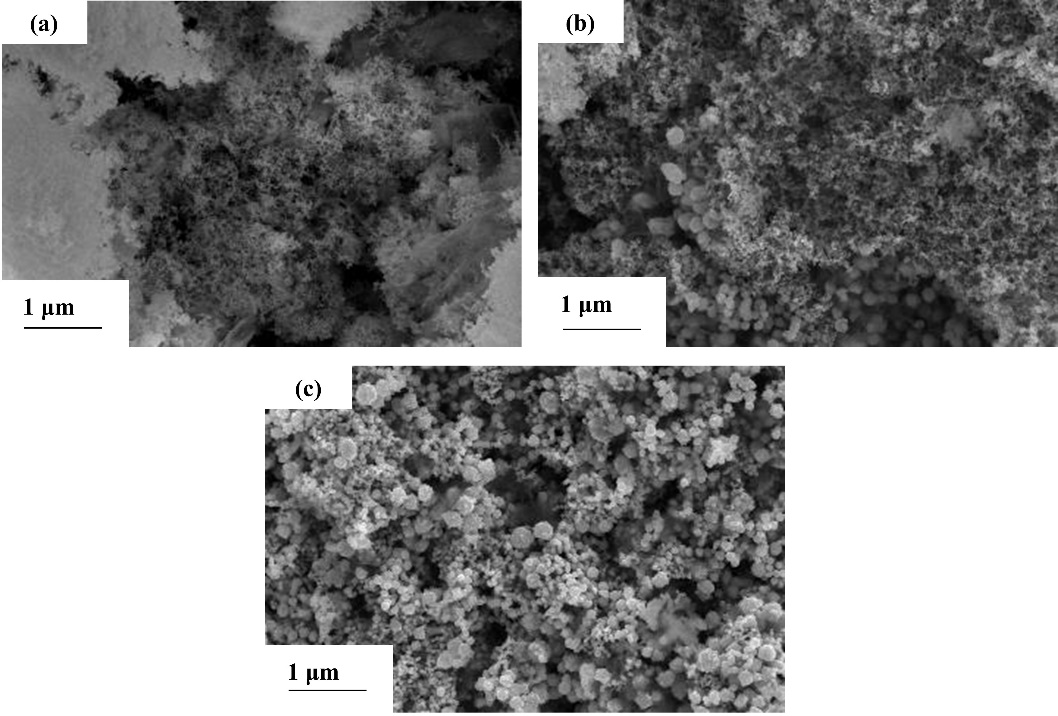
**Fig. S3. EDS mappings of NiMo@rGO-1 at 50000× magnification.**



**Fig. S4. Raman spectrum of** **NiMo@rGO-1.**



**Fig. S5. CV curves of the catalysts at scan rates ranging from 10 to 50 mV·s−1: (a) NiMo@rGO-1, (b) NiMo@rGO-2, (c) NiMo@rGO-3, and (d) Ni@rGO.**



**Fig. S6. SEM images of NiMo particles at 50000× magnification: (a) NiMo-1, (b) NiMo-2, and (c) NiMo-3.**



**Fig. S7. HER performance of NiMo@rGO-1, NiMo-1, and rGO aerogel: (a) LSV curves and (b) EIS of the materials; (c) CV curves of NiMo-1 and (d) rGO aerogel.**