Supporting Information

Synthesis of 3D Porous MoS$_2$/g-C$_3$N$_4$ Heterojunction as a High Efficiency Photocatalyst for Boosting H$_2$ Evolution Activity

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Fig. S1 the spectrum of CEL-HXF300+CUT400

Fig. S2 XRD patterns of the MoS$_2$
**Fig. S3** $N_2$ adsorption/desorption isotherms of the g-$C_3N_4$ and BPMCN samples.

**Fig. S4** Pore size distribution curves of the g-$C_3N_4$ and BPMCN samples.
Table S1 BET specific surface area and pore volume of the g-C$_3$N$_4$ and BPMCN samples

<table>
<thead>
<tr>
<th>Samples</th>
<th>g-C$_3$N$_4$</th>
<th>BPMCN-0.25</th>
<th>BPMCN-0.7</th>
<th>BPMCN-1.8</th>
<th>BPMCN-2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>BET (m$^2$g$^{-1}$)</td>
<td>4.48</td>
<td>23.084</td>
<td>31.923</td>
<td>25.735</td>
<td>20.582</td>
</tr>
<tr>
<td>Pore Volume (cm$^3$g$^{-1}$)</td>
<td>0.0257</td>
<td>0.168</td>
<td>0.1915</td>
<td>0.1588</td>
<td>0.1411</td>
</tr>
</tbody>
</table>

Fig. S5 XPS valence band spectra of the as-prepared catalysts