Cathodic and anodic photocurrents generation from melem and its derivatives

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Fig. S1 Current-potential curves of ITO/PEDOT:PSS/M-x electrodes in 0.1 M KCl.

Table S1  BET surface areas of the samples.

<table>
<thead>
<tr>
<th>Sample</th>
<th>M-400</th>
<th>M-450</th>
<th>M-500</th>
<th>M-550</th>
<th>M-600</th>
<th>M-650</th>
</tr>
</thead>
<tbody>
<tr>
<td>$S_{BET}$ ($m^2/g$)</td>
<td>3.9</td>
<td>5.6</td>
<td>6.7</td>
<td>7.4</td>
<td>8.5</td>
<td>9.8</td>
</tr>
</tbody>
</table>
Fig. S2 SEM images of M-400 (a), M-450 (b), M-500 (c), M-550 (d), M-600 (e), M-650 (f).

Fig. S3 Proposed reaction mechanism of water oxidation and Reduction by graphitic carbon nitride nanorods.\textsuperscript{21}
Fig. S4 Photocurrent generation from ITO/PEDOT:PSS/M-x electrodes at -0.2 V and 0.8 V vs Ag/AgCl in 0.1 M KCl.

Fig. S5 Photocurrent response from ITO/PEDOT:PSS/M-450 electrode at -0.2 V and 0.8 V vs Ag/AgCl in 0.1 M KCl.