Supplementary Information

Linear humidity response of carbon dots modified molybdenum disulfide

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Fig. S1. FT-IR spectrum of CDs
Fig. S2. SEM images of (a and b) CM6 and (c and d) CM12
Fig. S3. Raman spectra of Pure-MoS$_2$ and CDs-MoS$_2$

Fig. S4. Repeatability of humidity response for M6 and M12 at 75% RH
Fig. S5. $I$-$V$ curves of M9, CM6, CM9 and CM12

Table S1. Atomic percentages of C, O, S and Mo for M9, CM6, CM9 and CM12

<table>
<thead>
<tr>
<th>Products</th>
<th>C (at%)</th>
<th>O (at%)</th>
<th>S (at%)</th>
<th>Mo (at%)</th>
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</thead>
<tbody>
<tr>
<td>M9</td>
<td>0</td>
<td>12.34</td>
<td>51.78</td>
<td>35.88</td>
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<tr>
<td>CM6</td>
<td>21.19</td>
<td>53.56</td>
<td>0.71</td>
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<tr>
<td>CM9</td>
<td>20.17</td>
<td>20.58</td>
<td>34.01</td>
<td>25.24</td>
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<tr>
<td>CM12</td>
<td>19.81</td>
<td>18.33</td>
<td>34.68</td>
<td>27.19</td>
</tr>
</tbody>
</table>