Electronic Supporting Information

For

Substrate Induced Morphology in a Hydrosulfide-Molybdenum Complex

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1. FESEM image of 1 on glass surface

2. TEM image of cubic motif

3. FESEM of 1 on brass in presence of DCM

4. TEM images of 1 on silicon wafer

5. FTIR spectra as pressed KBr discs

6. Powder XRD patterns

7. Table S1: Thermal conductivity of substrates used
1. 1 on glass surface

![Figure S1: FESEM image of 1 depicting cuboidal motifs on glass surface](image1)

2. TEM image of cuboid

![Figure S2: TEM image and SAED pattern of cuboidal motifs of 1](image2)
3. **1 on brass in presence of DCM**

![Figure S3](image3.png)

**Figure S3**: Rapid evaporation of low boiling dichloromethane solvent resulting in extensive lateral growth of 1 on brass.

4. **TEM image of spheroids**

![Figure S4](image4.png)

**Figure S4**: TEM image and SAED pattern of spheroids of 1 on silicon wafer
5. Powder XRD patterns

*Figure S5:* Powder XRD patterns of 1 and its self-assembled forms on brass (1') and copper substrates are depicted.
6. FTIR spectra as pressed KBr discs

[Image of FTIR spectra with labels]

Figure S6: FTIR spectra of 1 before and after deposition respective substrates are depicted.

7. Table S1: Thermal conductivity of the substrates

<table>
<thead>
<tr>
<th>Substrate</th>
<th>Thermal Conductivity, k (W/m K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brass</td>
<td>109.0</td>
</tr>
<tr>
<td>Copper</td>
<td>385.0</td>
</tr>
<tr>
<td>Zinc</td>
<td>116.0</td>
</tr>
<tr>
<td>Aluminium</td>
<td>205.0</td>
</tr>
<tr>
<td>Glass</td>
<td>149.0</td>
</tr>
<tr>
<td>Silicon</td>
<td>0.8</td>
</tr>
</tbody>
</table>