Hollow MOF-Derived CoNi/C Composites as Effective Electromagnetic Absorbers in the X-band and Ku-band

Yadi Yu \textsuperscript{a,b}, Yi Fang \textsuperscript{a,b,*}, Qi Hu \textsuperscript{a,b}, Xueni Shang \textsuperscript{a,b}, Chengchun Tang \textsuperscript{a,b}, Fanbin Meng \textsuperscript{a,b,*}

\textsuperscript{a} School of Materials Science and Engineering, Hebei University of Technology, Tianjin 300130, China.

\textsuperscript{b} Hebei Key Laboratory of Boron Nitride Micro and Nano Materials, Hebei University of Technology, Tianjin 300130, China.

* Corresponding author: Tel: +86 022 60202660.

E-mail: fangyi@hebut.edu.cn (Yi Fang), mengfanbin620@163.com (Fanbin Meng).

![XRD patterns of ZIF-67 and ZIF-67@Ni.](image)

Figure S1. XRD patterns of ZIF-67 and ZIF-67@Ni.
Figure S2. TGA curve of ZIF-67@Ni in a N\textsubscript{2} atmosphere.

![TGA curve](image)

Figure S3. SEM images of (a, b) ZIF-67 and (c, d) ZIF-67@Ni.

![SEM images](image)

Table S1. Specific surface area and total pore volume of ZIF-67@Ni and CoNi-700.

<table>
<thead>
<tr>
<th>Sample</th>
<th>S\textsubscript{BET} (m\textsuperscript{2}g\textsuperscript{-1})</th>
<th>S\textsubscript{DFT} (m\textsuperscript{2}g\textsuperscript{-1})</th>
<th>V\textsubscript{pore} (cm\textsuperscript{3}g\textsuperscript{-1})</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZIF-67@Ni</td>
<td>1289.83</td>
<td>1070.57</td>
<td>0.543</td>
</tr>
<tr>
<td>CoNi-700</td>
<td>135.05</td>
<td>108.80</td>
<td>0.137</td>
</tr>
</tbody>
</table>
Figure S4. The XPS histogram of product composition in different pyrolysis temperatures.

Figure S5. Carbon content was determined by XPS (a) and carbon sulfur analyzer (b).