Hydrogenation of bio-derived succinic acid over supported rhenium catalysts prepared by microwave-assisted thermolytic method

Xin Di a, Zhengfeng Shao a, Chuang Li a, Wenzhen Li b and Changhai Liang a,*

a Laboratory of Advanced Materials and Catalytic Engineering, Dalian University of Technology, Dalian 116024, China. Tel/Fax: +86 411 84986353; E-mail address: changhai@dlut.edu.cn.

b DCBE, Biorenewables Research Laboratory, Iowa State University, Iowa 50011, USA.
Fig. 1S TEM images of supported Re catalysts (a: Re/C-5, b: Re/C-7, c: Re/C-10) and (d) the EDX spectra of Re/C-5.

In Fig. 1S, above 100 particles were measured when calculating the average particle size of Re/C-5 catalyst. Fig. 1S(d) shows the EDX spectra of Re/C-5. The characteristic peak at 8.05 keV corresponds to Cu-Kα energy from the substrate material. The EDX spectra also shows that the catalysts have C-Kα (0.31 keV) and O-Kα (0.53 keV). The peaks at 1.84 keV, 8.63 keV and 10.01 keV are attributed to Re-Mα, Re-Lα and Re-Lβ respectively.[1]
**Table 1S. ICP results of rhenium in reaction liquid.**

<table>
<thead>
<tr>
<th>Recycle</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>Re content in reaction liquid</td>
<td>0.17 ppm</td>
<td>0.17 ppm</td>
<td>0.18 ppm</td>
<td>0.19 ppm</td>
<td>0.21 ppm</td>
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</table>
Reference