Electronic Supplementary Information

Selective production of glycols from xylitol over Ru/CTF-catalysts –
Suppressing decarbonylation reactions

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2 *Physisorption measurement of CTF-materials*

![Physisorption isotherms for prepared CTF-materials.](image)

**Figure S1:** Physisorption isotherms for prepared CTF-materials.

3 *Gas Chromatograms*

![Gas chromatograms of the peracetylated reaction solution of xylitol hydrogenolysis over Ru/C.](image)

**Figure S2:** Gas chromatograms of the peracetylated reaction solution of xylitol hydrogenolysis over Ru/C.
Figure S3: GC-chromatograms of the peracetylated reaction solution of xylitol hydrogenolysis over Ru/CTF-b.

Ara = Arabitol  
Thr = Threitol  
Rib = Ribitol  
Ery = Erythritol

4 Homogeneous Catalysis

Figure S4: Monitoring conversion and yield over time for Ru(BiPy)_3 (473 K, 8 MPa H_2, 2.0 g xylitol, 20 mL H_2O).
5 XPS N 1s spectra for CTF-b and unreduced Ru/CTF-b

![XPS N 1s spectra for CTF-b and unreduced Ru/CTF-b](image)

**Figure S5:** XPS N 1s spectra for a) CTF-b and b) unreduced Ru/CTF-b referenced to C 1s at 284.50 eV.

6 Leaching of Ru/CTF-b over 5 recycling runs

**Table S1:** Catalyst loading of Ru/CTF-b over multiple recycling runs (results obtained from ICP-OES analysis of the reaction mixture after reaction).

<table>
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<tr>
<th>Run</th>
<th>Ru [ppm]</th>
<th>Ru loss [%]</th>
<th>Calc. Ru loading [%]</th>
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<td>&lt; 0.024</td>
<td>≈ 4.989</td>
</tr>
<tr>
<td>4</td>
<td>&lt; 0.12</td>
<td>&lt; 0.024</td>
<td>≈ 4.989</td>
</tr>
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<td>5</td>
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