Supplementary Information

Kinetic model for the reduction of furfural through MPV reaction (Equation (1)–(3)):

\[
\frac{dC_{\text{Furfural}}}{dt} = -k_1 \cdot C_{\text{Furfural}} \quad (1)
\]

\[
\frac{dC_{\text{Furfuryl alcohol}}}{dt} = k_1 \cdot C_{\text{Furfural}} - k_2 \cdot C_{\text{Furfuryl alcohol}} \quad (2)
\]

\[
\frac{dC_{\text{Furfuryl-iPropyl Ether}}}{dt} = k_2 \cdot C_{\text{Furfuryl-iPropyl Ether}} \quad (3)
\]

Objective Function—Sum of squares error for each reaction time (t) and for each chemical (c) (Equation (4)).

\[
Obj = \sum_c \sum_{t=0}^t (C_{c,\text{experimental}} - C_{c,\text{calculated}})^2 \quad (4)
\]

**Figure S1.** Evolution of the products distribution with the reaction time as a function of temperature. Dots: experimental data; Lines: model predicted values.
Figure S2. MPV reduction of furfural with i-PrOH—Recycling Tests. Reaction Conditions: Catalyst loading: 0.2 g; reaction temperature: 90; furfural to catalyst mass ratio: 1.0; i-PrOH to furfural molar ratio: 50; reaction time: 6 h.

Table S1. Pre-exponential factor and apparent activation energy for the kinetic constants determined for MPV reduction of furfural

<table>
<thead>
<tr>
<th>Reactions</th>
<th>$k_0$ (h$^{-1}$)</th>
<th>$E_A$ (J·mol$^{-1}$·K$^{-1}$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Reaction 1" /></td>
<td>33.8</td>
<td>$11.7 \times 10^5$</td>
</tr>
<tr>
<td><img src="image" alt="Reaction 2" /></td>
<td>1204.8</td>
<td>$19.9 \times 10^5$</td>
</tr>
</tbody>
</table>

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