Appendix A. Supplementary material

Direct synthesis of 2-ethylhexanol via n-butanal aldol condensation-hydrogenation reaction integration over Ni/Ce-Al$_2$O$_3$ bifunctional catalyst

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Fig. S1 H$_2$-TPR profiles of Ni/Ce-Al$_2$O$_3$ catalysts prepared at different calcination temperatures
Fig. S2 H\textsubscript{2}-TPR profiles of Ni/Ce-Al\textsubscript{2}O\textsubscript{3} catalysts prepared at different calcination time
1-3 h; 2-4 h; 3-5 h; 4-6 h

Fig. S3 H\textsubscript{2}-TPR profiles of Ni/Ce-Al\textsubscript{2}O\textsubscript{3} catalysts prepared at different reduction temperature
1-520 °C; 2-570 °C; 3-620 °C

Fig. S4 H\textsubscript{2}-TPR profiles of Ni/Ce-Al\textsubscript{2}O\textsubscript{3} catalysts prepared at different reduction time
1-3 h; 2-4 h; 3-5 h; 4-6 h
Fig. S5 H₂-TPD profiles of the fresh and the recovered Ni/Ce-Al₂O₃ catalysts
1: fresh  2: recovered①  3: recovered②