

Hydrodeoxygenation–Isomerization of Methyl Palmitate over SAPO-11-Supported Ni-Phosphide Catalysts

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Table S1. Textural properties of SAPO-11 and NiP_I/SAPO-11 samples.

	$V_{\text{micro}}, \text{cm}^3/\text{g}$	$V_{\text{meso}}, \text{cm}^3/\text{g}$	$S_{\text{micro}}, \text{m}^2/\text{g}$	$S_{\text{BET}}, \text{m}^2/\text{g}$
SAPO-11	0.064	0.08	166	188
NiP_I/SAPO-11 ¹	0.007	0.03	3	29
NiP_I/SAPO-11 ²	0	0.03	0	8

¹ After TPR at 600 °C. ² After reaction.

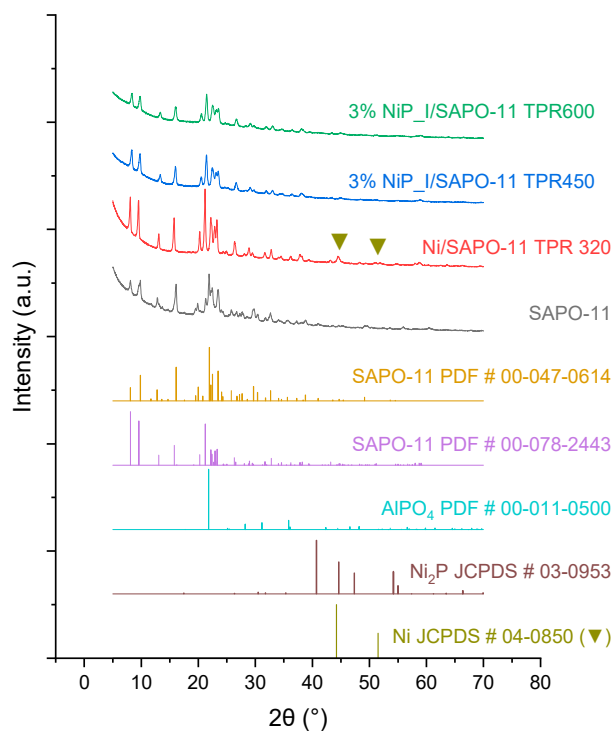


Figure S1. XRD patterns of Ni/SAPO-11 and NiP_I/SAPO-11 samples.

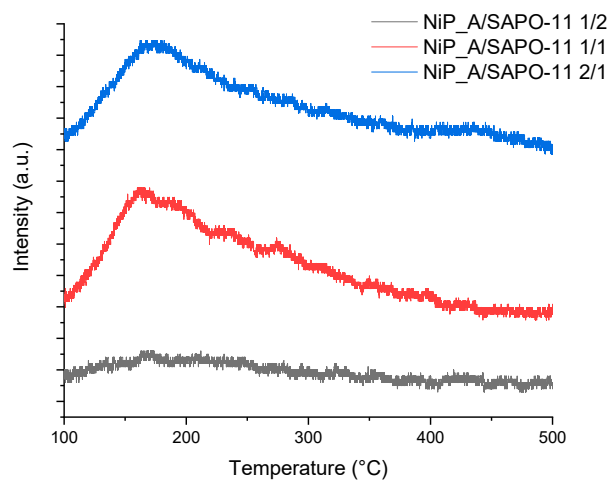


Figure S2. NH₃-TPD curves of 3% NiP_A samples.

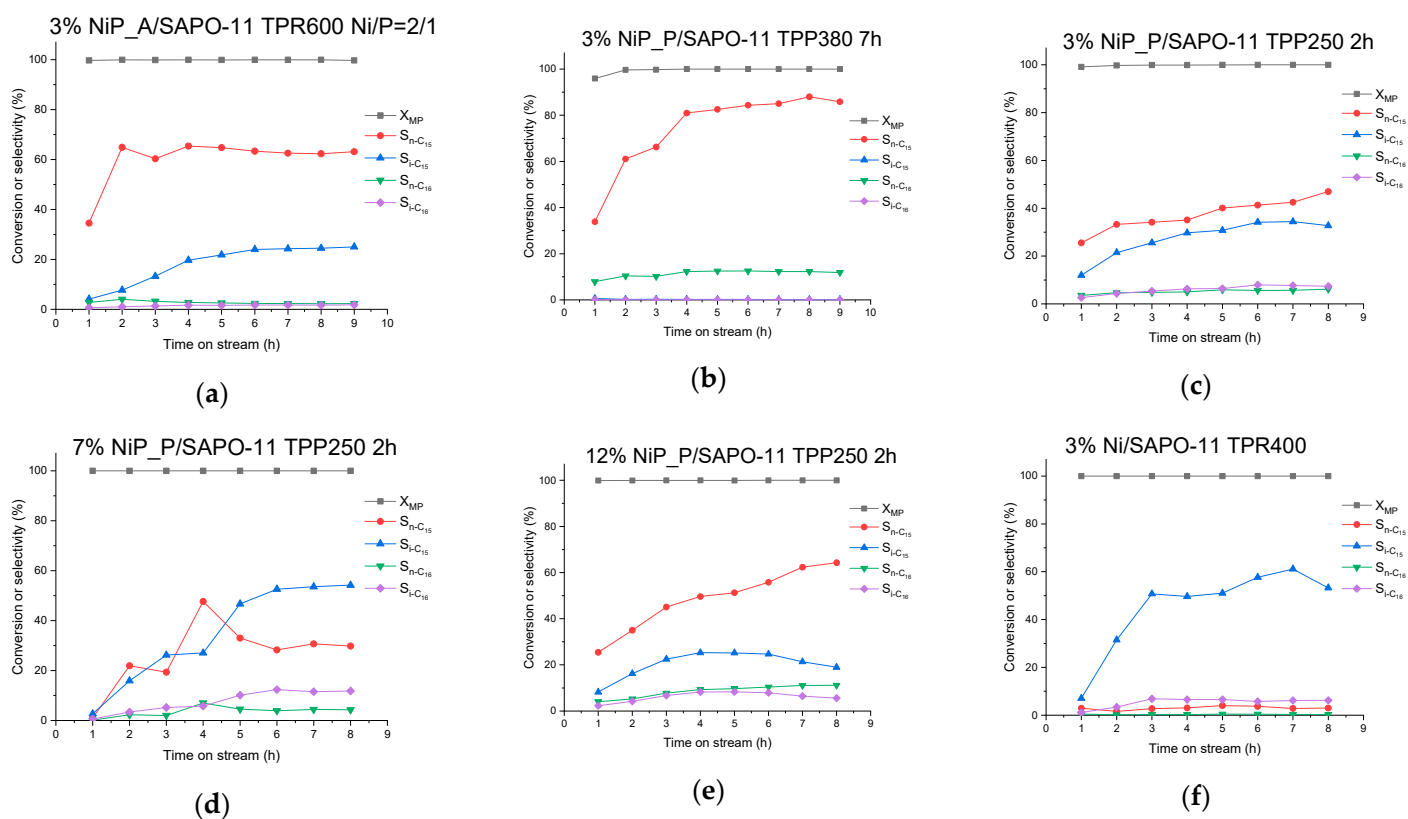


Figure S3. X_{MP} and selectivities of the products vs. time on stream (TOS) over (a) 3% NiP_A/SAPO-11 TPR 600 Ni/P = 2/1, (b) 3% NiP_P/SAPO-11 TPP380 7h, (c) 3% NiP_P/SAPO-11

TPP250 2h, (d) 7% NiP_P/SAPO-11 TPP250 2h, (e) 12% NiP_P/SAPO-11 TPP250 2h, and (f) 3% Ni/SAPO-11 TPR400 in a continuous-flow reactor. T = 340 °C (2 MPa, LHSV = 5.3 h⁻¹, 600 Ncm³/cm³).

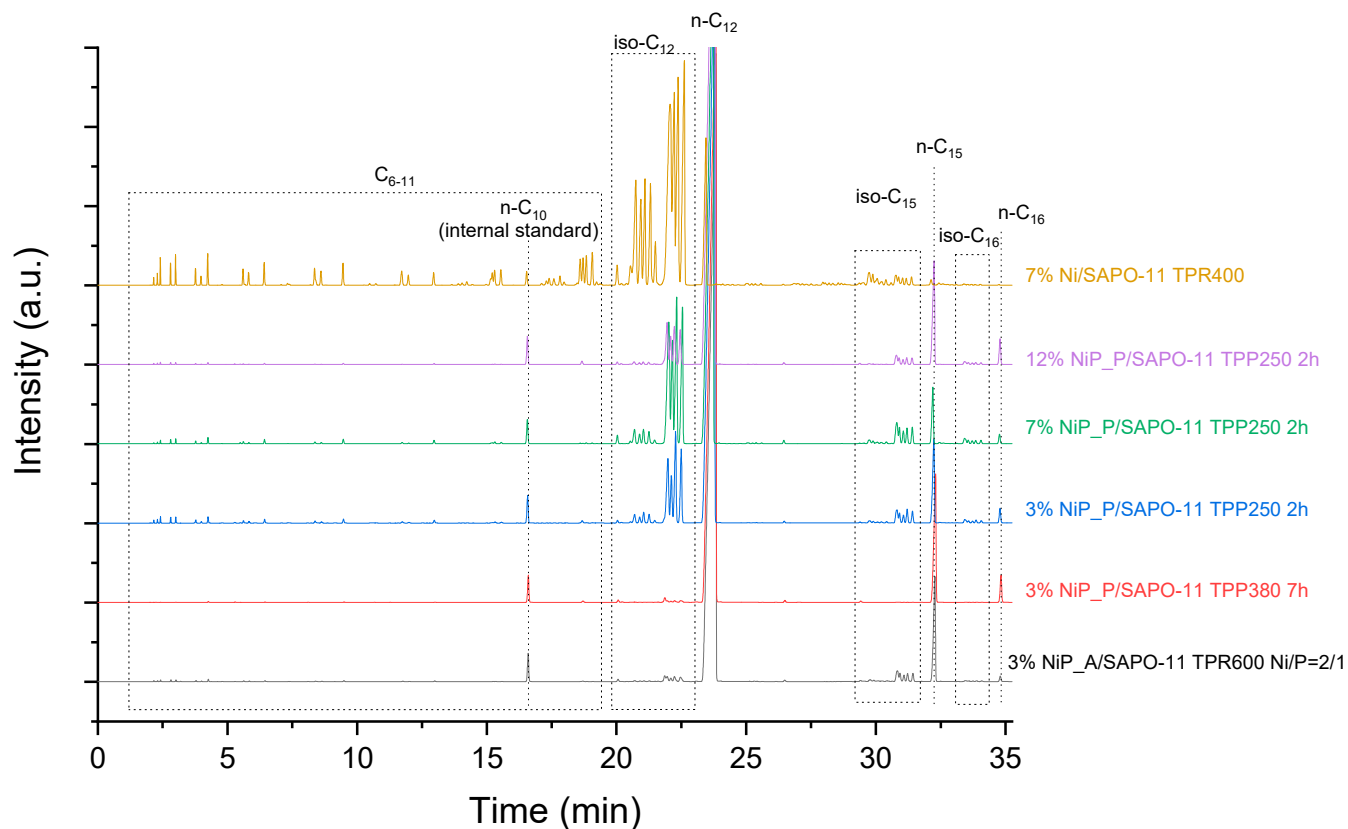


Figure S4. Chromatograms of the products after 8 h TOS over Ni phosphide and Ni catalysts on SAPO-11 in continuous-flow reactor ($X_{MP} = 100\%$). T = 340 °C, 2 MPa, LHSV = 5.3 h⁻¹, 600 Ncm³/cm³.

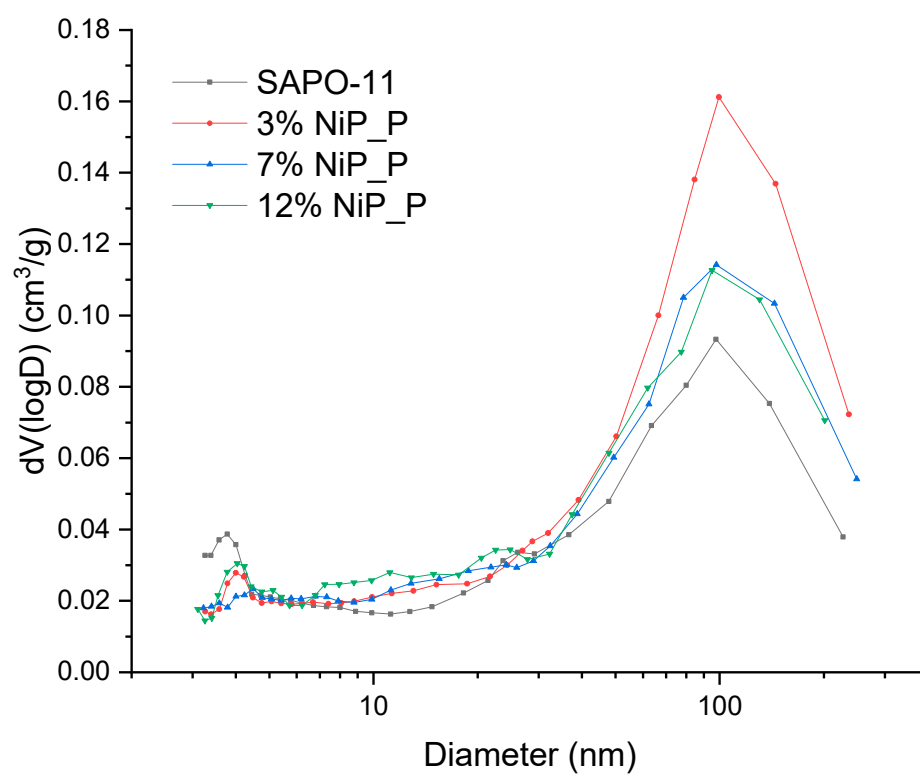


Figure S5. Pore size distributions of SAPO-11 and NiP_P samples.

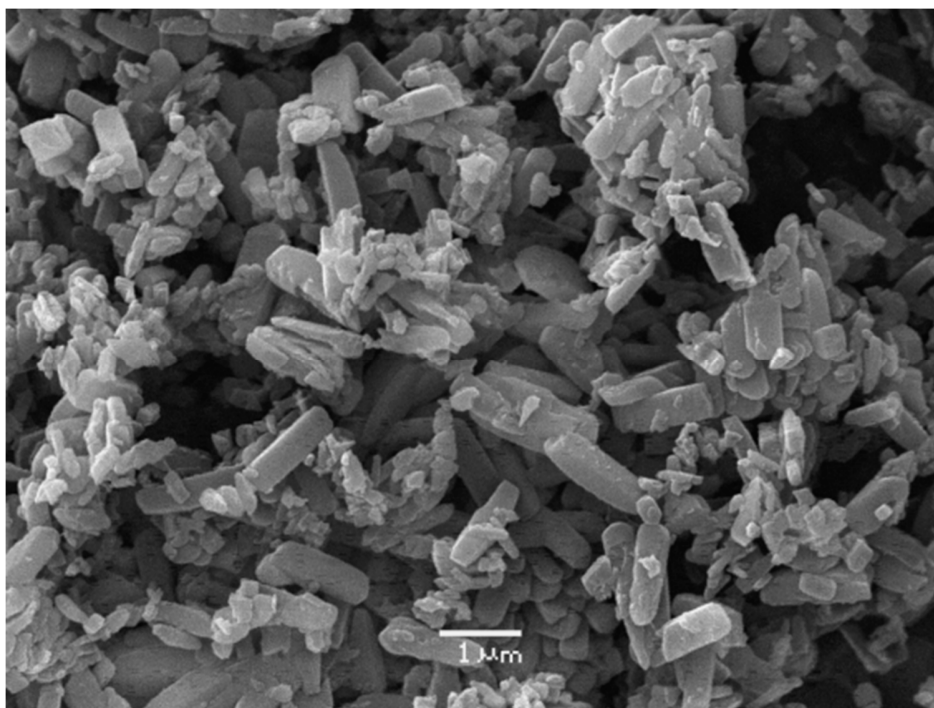


Figure S6. SEM image of the SAPO-11 support.