

Supporting information of Deoxygenation of methyl palmitate over SiO₂-supported nickel phosphide catalysts: effects of pressure and kinetic investigation

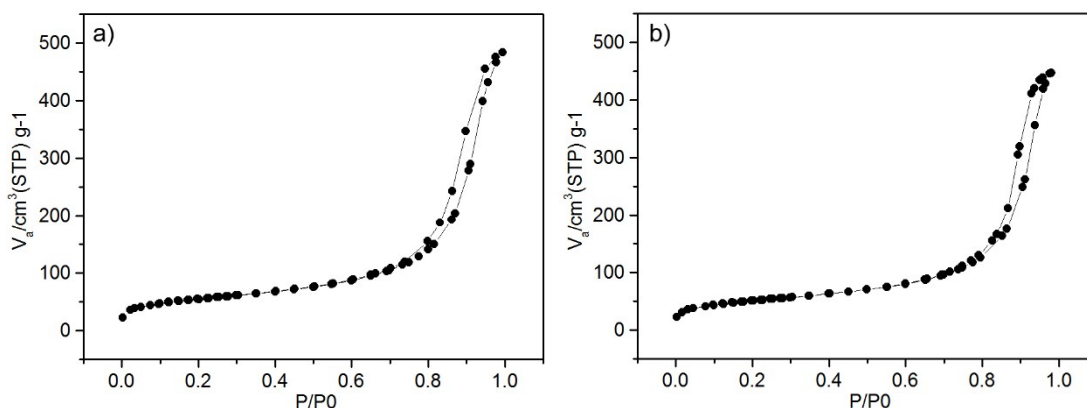


Fig. S1. Adsorption and desorption isotherms of Ni₂P/SiO₂. a) fresh, b) used.

Catalysts	Ni ₂ P/SiO ₂ fresh	Ni ₂ P/SiO ₂ used
CO uptake (μmol/g)	1.4	1.2

Table S1 CO uptake of fresh and used catalysts.

Temperature (°C)	Pressure (MPa)	Palmitic acid (%)	Hexadecanal (%)	Hexadecane (%)	Pentadecane (%)	Pentadecene (%)	Hexadecene (%)
270	0.1	trace	0.53	0.045	58.11	38.81	2.04
	1	6.28	0.78	0.046	72.02	16.21	4.53
	3	18.81	1.00	0.059	71.32	3.54	5.25
290	0.1	trace	0.30	0.010	37.64	58.39	2.88
	1	2.20	0.72	0.016	81.70	8.83	5.98
	3	4.84	0.96	0.066	84.32	2.21	7.34
310	0.1	trace	0.12	0.067	29.77	65.68	4.28
	1	0.56	0.51	0.055	89.23	3.97	5.39
	3	0.86	0.48	0.034	89.34	0.44	8.65

Table S2 Selectivity of product at different reaction temperature and pressure. At all reaction condition, selectivity of hexadecene is trace.