Electronic Supplementary information

Platinum on 2-Aminoethanethiol Functionalized MIL-101 as a Catalyst for Alkenes Hydrosilylation

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S1. 1.5%Ptδ+/AET-MIL-101 (a); Recovered 1.5%Ptδ+/AET-MIL-101 catalyst (b)

S2. XPS spectra of the recovered 1.5%Ptδ+/AET-MIL-101
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(i) Heptamethyltrisiloxane

Me₃SiOSiOSiMe₃

¹H NMR (400 MHz, CDCl₃, ppm) δ 4.36 (s, 1H), 0.13-0.07 (m, 21H).

(ii) Allyl alcohol polyether and heptamethyltrisiloxane reaction product (Table 3 entry 1)

Me₃SiOSiOSiMe₃

C — CH₂O(C₃H₆O)₃(C₂H₄O)₆H

¹H NMR (400 MHz, CDCl₃, ppm) δ 3.76-3.38 (m, 37H), 3.07-2.95 (m, 1H), 2.71 (s, 1H), 1.59-1.52 (m, 2H), 0.4 (s, 1H), 0.18-0.04 (m, 26H).

(iii) Allyl alcohol polyether and heptamethyltrisiloxane reaction product (Table 3 entry 2)

Me₃SiOSiOSiMe₃

C — CH₂O(C₂H₄O)₃H

¹H NMR (400 MHz, CDCl₃, ppm) δ 3.71-3.38 (s, 18H), 2.60 (s, 1H), 1.6 (s, 2H), 0.43 (s, 1H), 0.11-0.07 (m, 21H).

(iv) 1-Dodecene and heptamethyltrisiloxane reaction product (Table 3 entry 3)

Me₃SiOSiOSiMe₃

CH₂ — (CH₃)₉Me

¹H NMR (400 MHz, CDCl₃, ppm) δ 1.63-1.20 (m, 5H), 0.87 (s, 1H), 0.11-0.08 (m, 7H).

(v) 1-Tetradecene heptamethyltrisiloxane reaction product (Table 3 entry 4)

Me₃SiOSiOSiMe₃

CH₂ — (CH₃)₁₀Me

¹H NMR (400 MHz, CDCl₃, ppm) δ 1.30-1.25 (m, 6H), 0.87 (s, 1H), 0.13-0.05 (m, 7H).

(vi) Styrene heptamethyltrisiloxane reaction product (Table 3 entry 4)
$^{1}\text{H} \text{NMR} (400 \text{ MHz, CDCl}_3, \text{ppm}) \delta 2.66-2.63 (m, 1H), 0.85 (s, 1H), 0.13-0.01 (m, 18H).

S4 $^{1}\text{H} \text{NMR spectra of the synthesized compounds}$
