



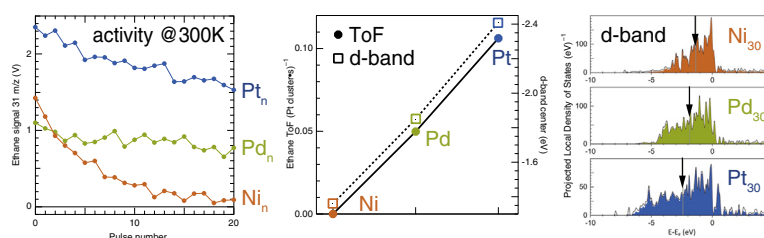
Contents

PRIORITY COMMUNICATION

Ethylene hydrogenation on supported Ni, Pd and Pt nanoparticles: Catalyst activity, deactivation and the d-band model

pp 51–58

Andrew S. Crampton, Marian D. Rötzer, Florian F. Schweinberger, Bokwon Yoon, Uzi Landman, Ueli Heiz

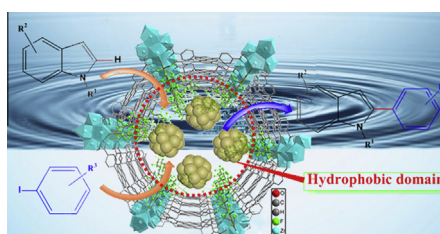


REGULAR ARTICLES

Water-medium C–H activation over a hydrophobic perfluoroalkane-decorated metal-organic framework platform

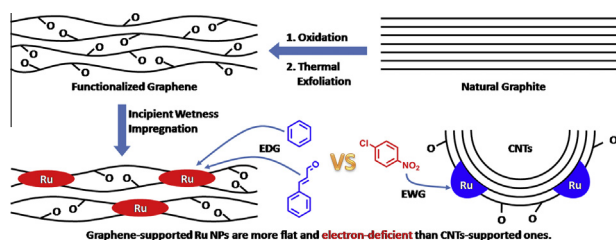
pp 1–7

Yuan-Biao Huang, Min Shen, Xusheng Wang, Ping Huang, Ruiping Chen, Zu-Jin Lin, Rong Cao*

**Ruthenium nanoparticles loaded on functionalized graphene for liquid-phase hydrogenation of fine chemicals: Comparison with carbon nanotube**

pp 8–16

Yong Wang, Zeming Rong*, Yue Wang, Jingping Qu



pp 17–28

Figure 1 consists of two panels. Panel (a) is a line graph showing the conversion percentage of MCM over time (TOS in minutes) for five different catalysts. The catalysts are H-MCM-22(12) (black squares), D-MCM-22(16) (red triangles), D-MCM-22(17) (green circles), D-MCM-22(14) (blue inverted triangles), and D-MCM-22(34) (magenta diamonds). The catalysts are ranked by their coke content (wt. %): 13.0, 8.1, 8.5, 11.0, and 3.2, respectively. Panel (b) shows two ^{13}C NMR spectra. The top spectrum is for D-MCM-22(34) with peaks labeled at 61, 56, and 49 ppm. The bottom spectrum is for H-MCM-22(12) with a peak labeled at 56 ppm.

(a) Conversion vs. TOS

Catalyst	Coke / wt. %
H-MCM-22(12)	13.0
D-MCM-22(16)	8.1
D-MCM-22(17)	8.5
D-MCM-22(14)	11.0
D-MCM-22(34)	3.2

(b) ^{13}C NMR Spectra

Sample	Peak Labels (ppm)
D-MCM-22(34)	61, 56, 49
H-MCM-22(12)	56

pp 29–39

$R(CH_3)_2N^+CH_3X^-$ vs $R(CH_3)_2N^+(CH_2)_2OHX^-$

 $R = CH_3 \text{ or } C_{16}H_{33}; X^- = I^-; Br^-; Cl^-; HCO_3^-; Ms^-; Tf^-$

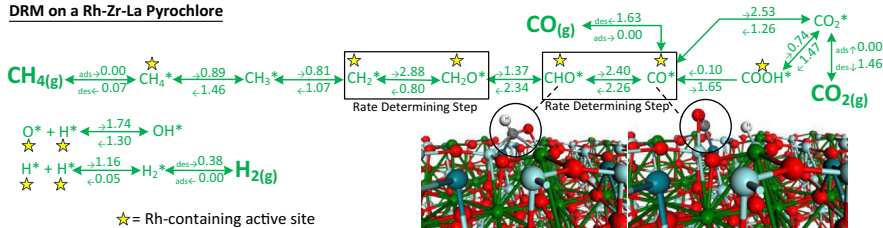
pp 40–50

Figure 1 consists of two panels. The left panel is a TEM image showing the morphology of the catalysts, with a 5 nm scale bar. The right panel is a Tafel plot showing the relationship between the logarithm of the current density ($\log j_0$) and the exchange current density (i_0) for Pt/CeO₂ (black line) and Ru/CeO₂ (red line). The plot includes data points and linear fits for both catalysts.

i_0 ($\mu\text{A}\cdot\text{cm}^{-2}$)	$\log j_0$ (Pt/CeO ₂)	$\log j_0$ (Ru/CeO ₂)
1.2	95	55
3.8	58	35
5.8	35	22
7.2	20	10

pp 59–70

DRM on a Rh-Zr-La Pyrochlore



Download English Version:

<https://daneshyari.com/en/article/60649>

Download Persian Version:

<https://daneshyari.com/article/60649>

[Daneshyari.com](https://daneshyari.com)