Journal of Catalysis 278 (2011) iii–vii

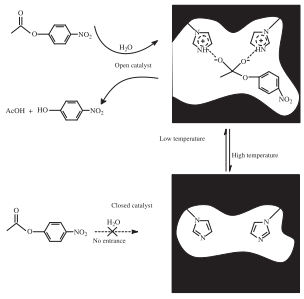
Contents lists available at ScienceDirect

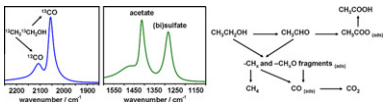
Journal of Catalysis

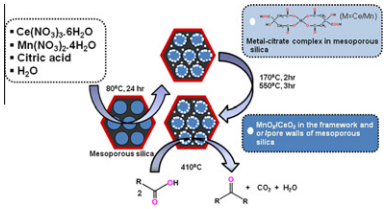
journal homepage: www.elsevier.com/locate/jcat

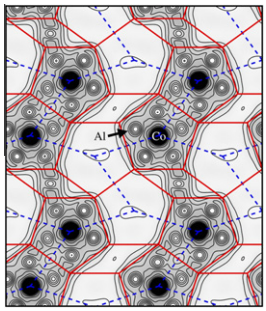
Journal of Catalysis Vol. 278, Issue 2, 2011

Contents

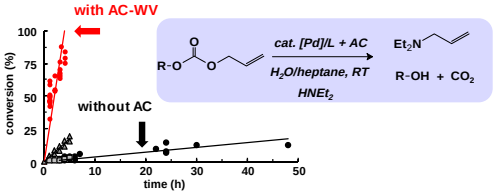




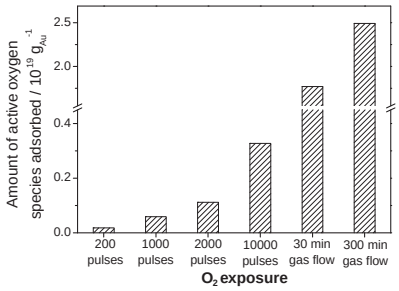




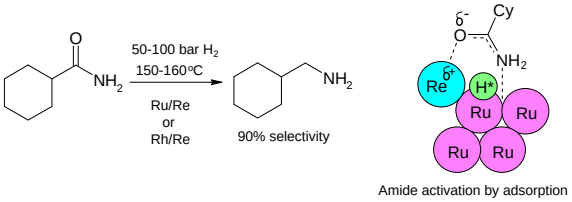
Electron density distribution in the catalytically active (100) surface of $Al_{13}Co_4$.



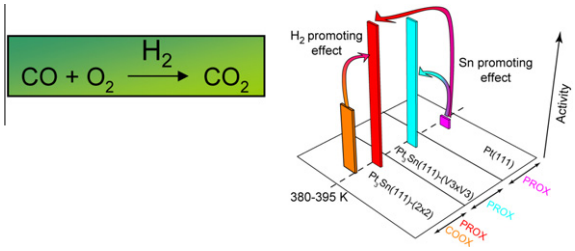
Addition of activated carbon, with appropriate physicochemical characteristics, appears as a simple and efficient method to solve mass-transfer limitations in aqueous organometallic catalysis. New insights into the role of carbon support during the catalytic course are reported.



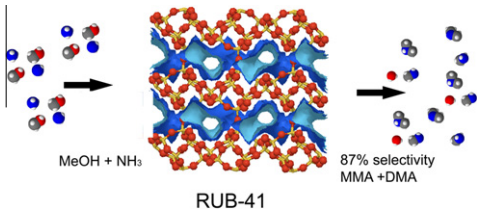
The oxidation of CO on nanoporous Au, in particular the activation of molecular O_2, was investigated by a combination of kinetic and TAP measurements, showing the formation of stable adsorbed active oxygen via dissociative O_2 adsorption.



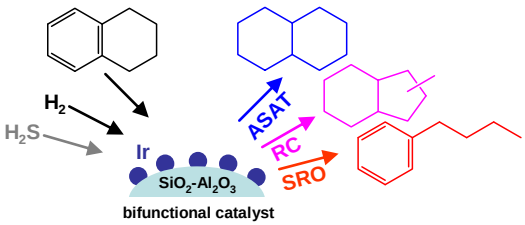
Recyclable Ru/Re and Rh/Re bimetallic catalysts are effective for the highly selective (90%) reduction of primary amides such as $CyCONH_2$ to the corresponding primary amine $CyCH_2NH_2$.



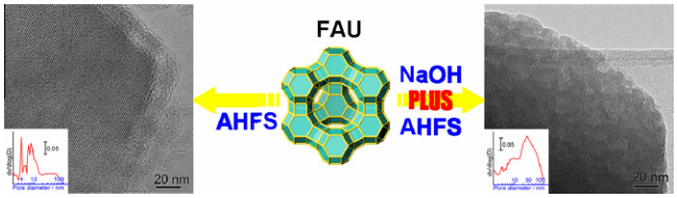
Both Sn and H_2 promote CO oxidation on $Pt_3Sn(1\,1\,1)$ surfaces. The surface structure sensitivity in CO oxidation is cancelled out when the reaction is performed under a large excess of hydrogen.



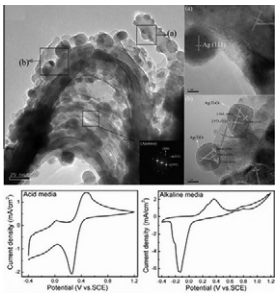
Shape-selective amination of methanol over Al-RUB-41 with selectivities up to 87% towards monomethylamine and dimethylamine.



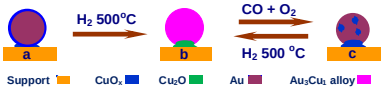
Ir supported on amorphous silica–alumina is sulfur tolerant and catalyzes tetralin hydrogenation, ring contraction, and ring opening without cracking. The selectivity to ring opening increases with the acid/metal site ratio.



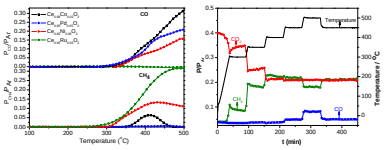
AHFS dealumination leads to severe non-uniform dealumination of zeolite framework and substantial surface silicon deposition. Sequential desilication and dealumination affords sample with mesopore formation and noteworthy improved aluminum–silicon distribution.



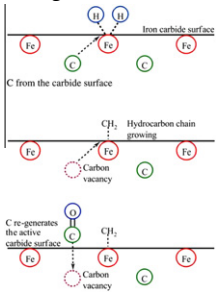
The TEM micrographs for Ag doped TiO_2 nanotubes annealed at 723 K and the cyclic voltammograms in acidic and alkaline media.



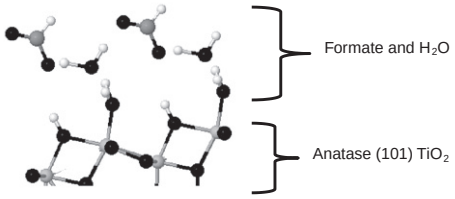
The structural changes of SBA-15-supported Au–Cu bimetallic nanoparticles were studied by in situ techniques. The freshly reduced catalyst is mainly composed of Au_3Cu_1 alloy, which was segregated into a gold core decorated with patches of CuO_x on the surface during the reaction of CO oxidation.



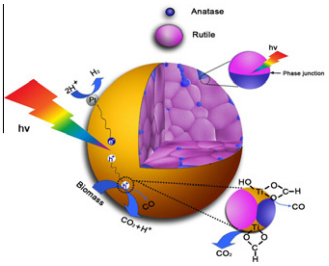
The performance of doped ceria for CO_2 reaction with CH_4.



Fischer-Tropsch synthesis on Fe/SBA-15 supported catalysts was studied to probe the effect of the activation atmosphere on the structural properties. Higher production of total hydrocarbons, higher CO conversion and higher selectivity towards light olefins are obtained when the catalyst is activated in H_2. These results are explained considering that the iron carbides produced from α-Fe are more active than that obtained from Fe_2O_3.



Density functional theory calculations showed water co-adsorbed with formic acid promoted O–H bond dissociation on anatase (1 0 1) depending on formic acid and water coverage. The addition of water also stabilized monodentate formate relative to bidentate formate.



For photocatalytic biomass reforming on Pt/TiO_2 by tuning anatase–rutile phase structure, the hydrogen production activity can be significantly enhanced and CO concentration can be reduced from thousands ppm to 5 ppm.