Styrene synthesis:
In-situ Characterization and Reactivity Measurements over Unpromoted and Potassium Promoted Iron Oxide Model Catalysts

By
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Abstracts
Acronyms

AES  Auger-Electron Spectroscopy
$E_{\text{ads}}$  Adsorption energy
EDX  Energy Dispersive X-ray Emission Analysis
EB  Ethylbenzene
St  Styrene
fcc  face centered cubic
FID  Flame Ionization Detector
hcp  hexagonal close packed
ISS  Ion Scattering Spectroscopy
$k_i$  rate constant
K  Equilibrium constant
LEED  Low-Energy Electron Diffraction
ML  monolayer
$v$  frequency factor
NEXAFS  Near-Edge X-ray Absorption Fine Structure
p  gas pressure
PEEM  Photoelectron Emission Spectroscopy
$q_s$  Isosteric heat of adsorption
r  Reaction rate
RDS  Rate Determining Step
SEM  Scanning Electron Microscope
SIMS  Secondary Ion Mass Spectrometry
STM  Scanning Tunneling Microscopy/Microscope
T  Temperature
TCD  Thermal Conductivity Detector
TDS  Thermal Desorption Spectroscopy
TEM  Transmission electron microscopy
TPO  Temperature Programmed Oxidation
UPS  Ultraviolet Photoelectron Spectroscopy
XPS  X-ray Photoelectron Spectroscopy
XRD  X-ray Diffraction

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