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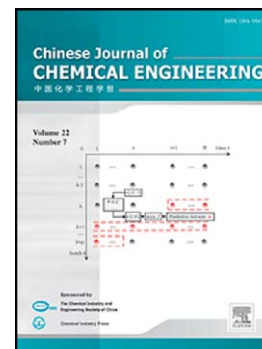
Preparation of Highly Active MCM-41 Supported Ni₂P Catalysts and Its Dibenzothiophene HDS Performance

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Catalysis, Kinetics and Reaction Engineering

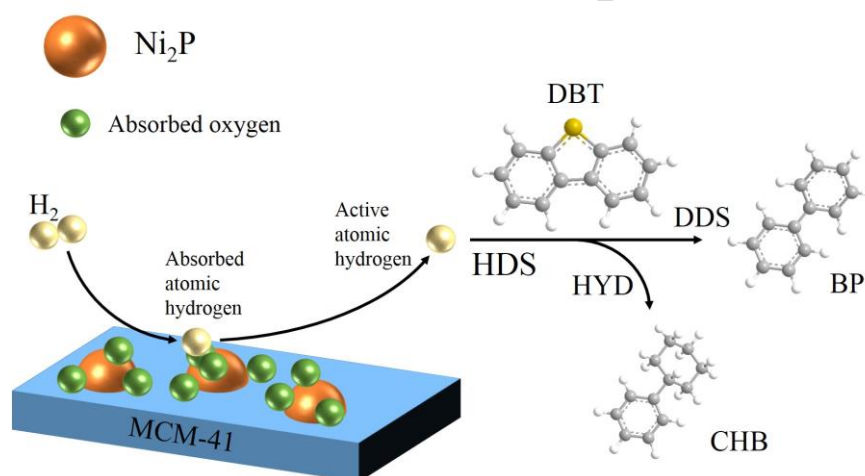
Preparation of Highly Active MCM-41 Supported Ni_2P Catalysts and Its Dibenzothiophene HDS Performance[†]

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Graphic abstract



Abstract Highly active MCM-41 supported nickel phosphide catalysts for hydrodesulfurization (HDS) were synthesized by two different phosphorus sources, in which the surface of Ni_2P catalysts were modified by air instead of being passivated by O_2/N_2 mixture. In addition, the catalysts need not activated with flowing H_2 ($30 \text{ mL} \cdot \text{min}^{-1}$) at 500°C for 2 h prior to reaction as traditional methods. X-ray diffraction (XRD), X-ray photoelectron spectroscopy (XPS), N_2 -adsorption specific surface area measurements and CO chemisorption were used to

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