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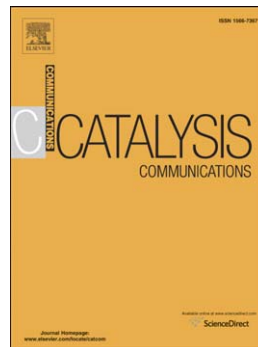
Rhodium complexes supported on nanoporous activated carbon for selective hydroformylation of olefins

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**Rhodium complexes supported on nanoporous activated carbon for
selective hydroformylation of olefins**

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Abstract

Activated carbon with nanoporous structure, high surface area (2500 m²/g) and total pore volume (2.35 cm³/g) was prepared from Mango seed shell (*Mangifera indica* L.) via chemical activation method and used as support to impregnate active hydroformylation rhodium complexes HRhCO(PPh₃)₃ and Rh(acac)(CO)₂. The prepared catalysts were characterized by XRD, SEM, TEM, NMR, IR, TGA, and N₂ adsorption/desorption techniques. The supported catalysts have shown excellent selectivity for aldehydes (~99%) in the hydroformylation of olefins with good stability and recyclability up to 4 cycles.

Keywords: Bio-wastes; Microporous-mesoporous carbon; High surface area; Hydroformylation; olefins; Rhodium.

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