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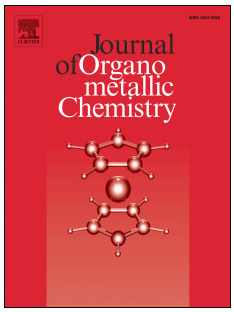

Polymer supported palladium complex as a reusable catalyst for Suzuki coupling

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Polymer supported palladium complex as a reusable catalyst for Suzuki coupling

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Abstract

Novel, simple and efficient catalytic system based on a polymer supported Pd complex of 2,6-bis(benzimidazolyl)pyridine, Pd(PS-BBP)Cl_2, was found to be highly active for Suzuki–Miyaura cross-coupling of aryl halides with phenylboronic acids under mild conditions. The catalyst was characterized by CHN analyses, thermogravimetric analyses, BET surface area measurements, ICP-OES, FT-IR and electronic spectral studies. The effect of solvent, base, temperature and catalyst concentration on the coupling reaction of iodobenzene with phenylboronic acid was also investigated. A variety of functional groups are tolerated. The novel catalyst could be recovered in a facile manner from the reaction mixture and could be reused up to seven times without significant loss of catalytic activity.