Palladium supported on Al_2O_3-CeO_2 modified with ionic liquids as a highly active catalyst of the Suzuki-Miyaura cross-coupling.

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Streszczenie

Palladium catalysts immobilized on Al_2O_3–CeO_2 and modified with ionic liquids (ILs), formed Suzuki–Miyaura products with yields of up to 97%. A catalyst containing [bmim]BF_4 showed unchanged activity in three consecutive runs. During the Suzuki–Miyaura reaction, Pd(0) nanoparticles were formed with a diameter of 6–10 nm depending on the kind of IL used. The distribution of palladium inside the Al_2O_3–CeO_2 support was not uniform, with the maximum in the central part of the wire. The migration of palladium in the support was observed during the reaction.

Słowa kluczowe

palladium, Suzuki-Miyaura reaction, XPS, TEM, Alumina-based oxides, Ionic liquid

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