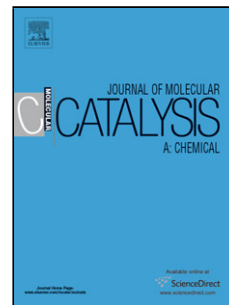


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Title: Suzuki-Miyaura Coupling Reactions Using Novel Metal Oxide Supported Ionic Palladium Catalysts

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Highlights

- Five novel cerium-tin-palladium-oxides ($\text{Ce}_{0.99-x}\text{Sn}_x\text{Pd}_{0.01}\text{O}_{2-\delta}$ ($x = 0 - 0.99$)) have been prepared out of non-toxic and inexpensive precursors using a simple and rapid single step solution combustion method
- The catalysts proved to be highly active ($\text{TOF} > 12,000\text{h}^{-1}$) for Suzuki-Miyaura cross-couplings of phenylboronic acid with various bromoarenes
- Only minimal amounts of palladium could be detected in the product solution ($<0.14\text{ mg/L}$)
- The catalysts could be reused for at least five times with only minor changes in activity and with no changes concerning the crystal structure

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