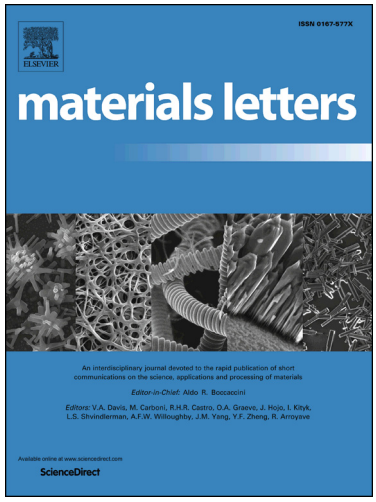

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Design and synthesis of ruthenium nanoparticles on polyanilines (nano Ru@PANIs) via Ru-catalyzed aerobic oxidative polymerization of anilines

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Abstract:

Polyanilines (PANIs)-supported Ru nanoparticles (NPs) were synthesized. The materials may be much more practical for the utilization of low cost Ru instead of the scarce Pd. In contrast to the PANIs-supported Pd NPs (nano Pd@PANIs), the electron-withdrawing groups on PANIs support could enhance the catalytic activities of the nano Ru@PANIs. This is the first report on synthesis of nano Ru@PANIs via Ru-catalyzed aerobic oxidative polymerization of anilines as well as their peculiar properties to the analogues of Pd.

Keywords: Nanoparticles; polymers; nanocomposites; polyaniline; ruthenium.