

***N,N'*-Di(alkyloxy)imidazolium Salts: New Patent-free Ionic Liquids and NHC Precatalysts**

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Dedicated to Prof. Helgard G. Raubenheimer on the occasion of his 65th birthday

1-Hydroxyimidazole-3-oxides (2-H, 2-Me) were alkylated with (RO)₂SO₂ (R = Me, Et) to give the new 1,3-di(alkyloxy)imidazolium cations which were isolated as hexafluorophosphates. Ion metathesis yielded new hydrophobic ionic liquids (bis(trifluoromethanesulfonyl)imides, tris(pentafluoroethyl)trifluorophosphates). Bromination afforded 2-bromo derivatives which were converted to Ni and Pd *N*-heterocyclic carbene complexes by oxidative insertion. Fifteen crystal structures were determined by X-ray diffraction. The *N*-alkyloxy groups are twisted out of the imidazole ring plane and adopt either *syn* or *anti* conformations in the solid state.

Key words: Carbene, Imidazolium Salt, Ionic Liquid, NHC, Nickel, Palladium