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Carbonylative Cross Coupling of 2-Bromopyridine with Different Boronic Acids under Carbon Monoxide Atmosphere

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Abstract : The palladium NHC complexes are one of the most interesting and widely investigated complexes in different catalytic transformations, especially C–C bond. Thus, the use of N-heterocyclic carbenes associated with palladium has been reported as efficient catalysts for the carbonyl coupling under mild and varied conditions. Herein, we report the synthesis, characterization, and cytotoxic activities of two new families of benzimidazolium salts. Then we studied the use of this class of benzimidazolium salts as a ligand in the carbonylative cross-coupling of 2-bromopyridine with different boronic acids under CO atmosphere to form unsymmetrical arylpyridine ketones.

Keywords : NHC-Pd(II) catalysts, carbonylative Suzuki cross-coupling reaction, arylboronic acids, 2-bromopyridine, unsymmetrical arylpyridine ketones
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