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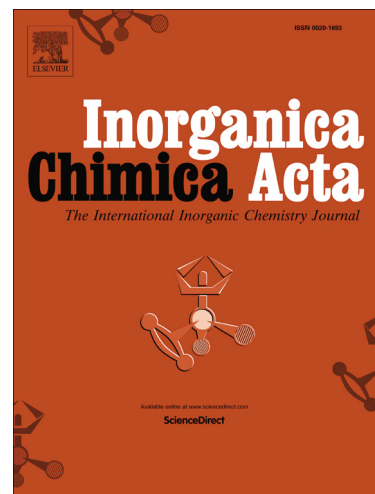
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Regioselective cyclometallation of N-methyl-N-(naphthalen-2-ylmethyl)-2-(pyridin-2-yl)ethanamine with palladium(II) acetate and catalytic reduction of various functional groups

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Abstract

The preparation of novel unsymmetrical, tridentate ligand, N-methyl-N-(naphthalen-2-ylmethyl)-2-(pyridin-2-yl) ethanamine (**1**), has been described. Ligand **1** reacts with Pd(OAc)₂ to give the corresponding cyclometallated complex, which could not be isolated. The substitution reactions of the in-situ prepared cyclometallated complex with LiCl/LiBr afforded the corresponding palladacycles (3-((methyl(2-(pyridin-2-yl)ethyl)amino)methyl)naphthalen-2-yl)palladium(II) chloride (**2**) / bromide (**3**). Both the complexes having one γ '-C-H, N(alkyl) and N(aryl) atom, form square planar complexes with halogens (Cl for **2** and Br for **3**) as the fourth ligand. Interestingly, ligand **1** has two *ortho*-activated (γ -C-H and γ '-C-H) hydrogen

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