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Synthesis and Characterization of the NNN Pincer Compounds

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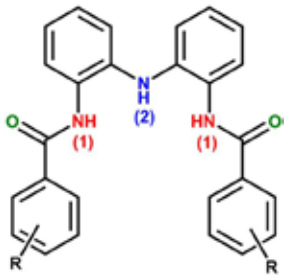
In the present work, our research group is interested in developing synthesis and characterization of new amide derivatives. *N,N'*-(2,2'-azanediyl-*bis*(2,1-phenylene))-*bis*(2-chlorobenzamide), HL^1, *N,N'*-(2,2'-azanediyl-*bis*(2,1-phenylene))-*bis*(3-chlorobenzamide), HL^2, and *N,N'*-(2,2'-azanediyl-*bis*(2,1-phenylene))-*bis*(4-chlorobenzamide), HL^3, pincer compounds were synthesized with excellent yield from *bis*(2-aminophenyl) amine compound with addition of different benzoyl chloride substituent groups. The compounds have been characterized by spectroscopic ^{1}H NMR, ^{13}C NMR, COSY, HMQC and FT-IR techniques. We observed that R alkyl group which binds to the compound at different positions forms electron distribution on -(C=O)- and NH- groups. We confirmed that these results agree with the chemical shift of ^{1}H and ^{13}C NMR signals (Figure 1).



R: *o*-Cl, *m*-Cl and *p*-Cl

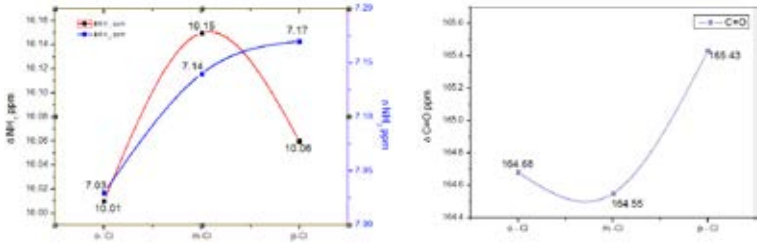


Figure 1. ^{1}H and ^{13}C NMR chemical shift values for *o, m* and *p*-chlorobenzamide pincer compounds.

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Keywords: Synthesis, Tris(amidate) Ligand, Benzamide Derivative, Pincer Ligand.