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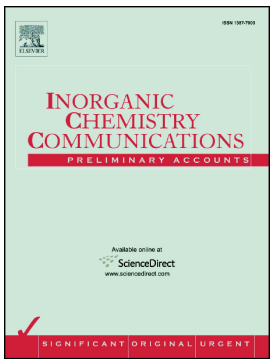

First structurally characterized anion exchanged product of noval cyclohexane containing substituted thio piperazinium chloride [C6H11S(CH2)3C4H9N2C6H5Cl (L1Cl)]: Synthesis, crystal structure and supramolecularity of (L1NO3)

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First structurally characterized anion exchanged product of noval cyclohexane containing substituted thio piperazinium chloride [$C_6H_{11}S(CH_2)_3C_4H_9N_2C_6H_5Cl$ (L^1Cl)] : synthesis, crystal structure and supramolecularity of (L^1NO_3).

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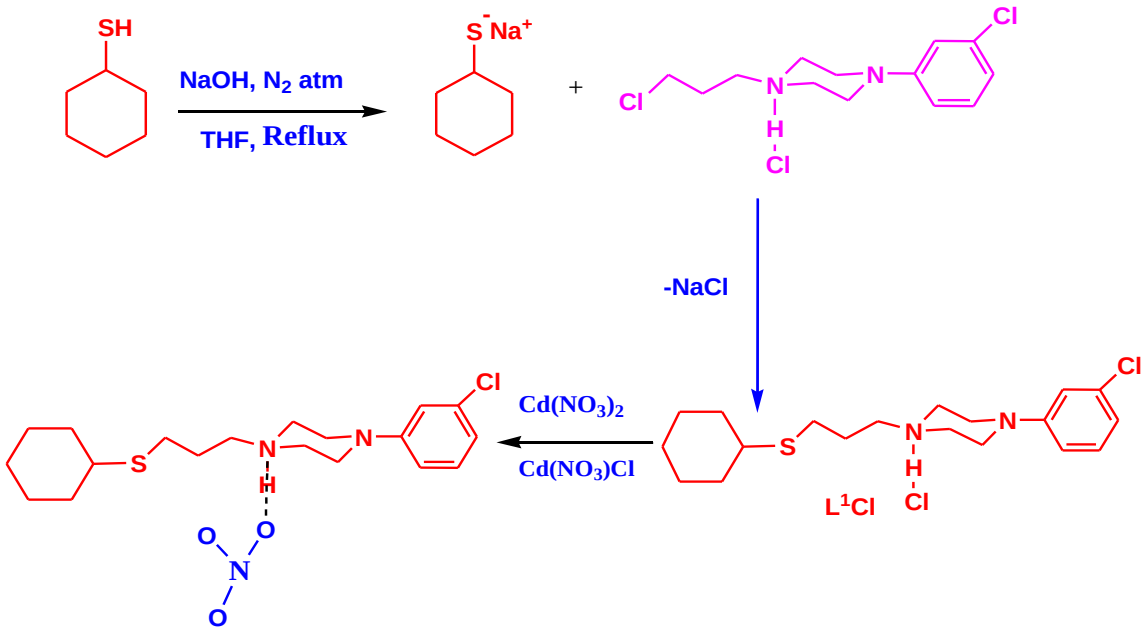
Graphical Abstract



Abstract

*[$C_6H_{11}S(CH_2)_3C_4H_9N_2C_6H_5Cl$ (L^1Cl)] has been synthesized by reaction of cyclohexyl thiol with 1-(chlorophenyl) -4- (3-chloropropyl) piperazine hydrochloride(**P^1**) under dry nitrogen atmosphere. The **L^1Cl** on reaction with $Cd(NO_3)_2$ forms a compound [**L^1 NO_3**] having NH-----O hydrogen bonding. The single crystal structure of the compound L^1NO_3 is solved. The characteristic feature of these reactions is the retention of the piperazinium character from starting material(**P^1**) to ligand formation(**L^1Cl**) as well as in the formation of anion exchange*