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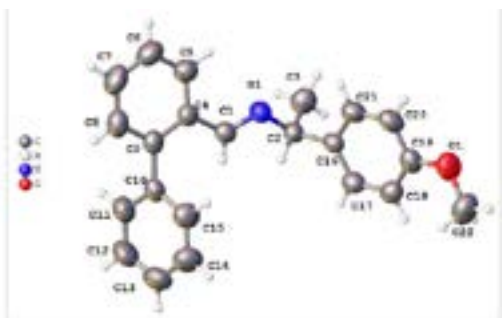
Green synthesis of a chiral imine and its Pd(II) complex

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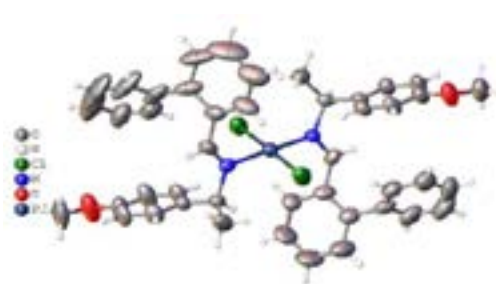
Statement of the Problem: Schiff base compounds are widely studied and used, attracting much attention in both organic synthesis and metal ion complexation. Recently we have focused our attention on the synthesis of chiral Schiff bases by using green techniques.

Methodology: We synthesized a new chiral imine using the solvent-free approach. The reaction occurs under mild conditions and requires easier workup procedures and simpler equipment, compared to similar reactions carried-out in solution. On the other hand, the ever increasing interest in Pd(II) complexes stems from their useful applications in many areas such as materials science, determination of enantiomeric excesses and absolute configuration of chiral compounds, asymmetric synthesis, etc.

Findings: The reaction of the enantiopure imine ligand leads to the formation of a new palladium complex, and both the compounds have been characterized by IR, ¹H and ¹³C NMR, MS-FAB+. The crystal and molecular structure for the palladium complex derived from imine obtained with biphenyl-2-carboxaldehyde and S-(-)-4-methoxymethylbencylamine, has been confirmed by X-ray analysis. Further discussion on these complexes will be provided.



Crystal structure of the imine



Crystal structure of the Pd (II) complex

Biography

Gloria E Moreno obtained her PhD in Chemical Sciences at the Universidad Autónoma de Puebla. She has experience in research and teaching at the Faculty of Chemistry Engineering and she is one of the members of the Laboratorio de Síntesis de Complejos. Her research interests include the synthesis and characterization of organometallic compounds by using Green Chemistry methods.

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