

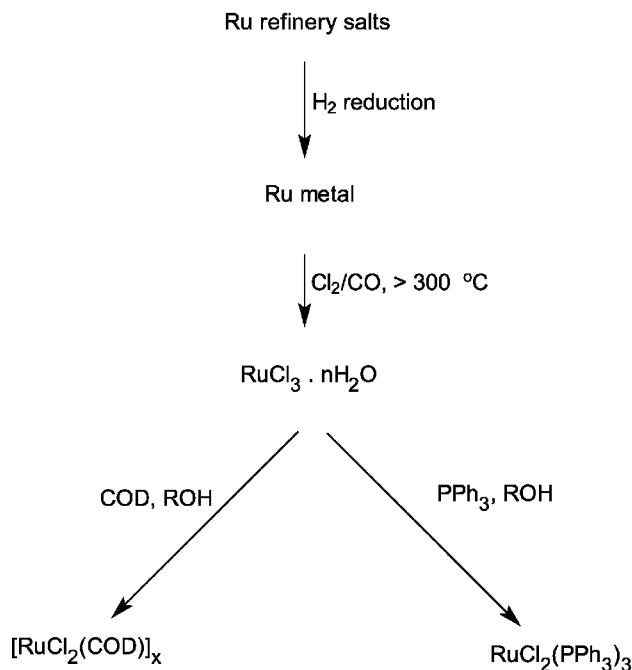


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(54) Title: METHODS FOR PREPARING RUTHENIUM CARBENE COMPLEXES AND PRECURSORS THERETO

FIG. 1



(57) Abstract: Methods of preparing ruthenium carbene complex precursors are disclosed herein. In some embodiments, the methods include reacting a ruthenium refinery salt with an L-type ligand and a reducing agent to form the ruthenium carbene complex precursor. Methods of preparing a ruthenium vinylcarbene complex are also disclosed. In some embodiments, preparing a ruthenium carbene complex includes converting a ruthenium carbene complex precursor into a ruthenium carbene complex having a structure (PR¹R²R³)₂Cl₂Ru=CH-R⁴, wherein R¹, R², R³, and R⁴ are defined herein.

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