

Biscyclopentadienyl, Group 4 transition metal complexes are formed by contacting a biscyclopentadienyl Group 4 metal halide, hydrocarbyl, hydrocarbyloxy or amide complex with a conjugated diene. Uniquely, the ansa-rac diastereomer is selectively isolated and may be reconverted to the halide form if desired. When combined with standard activating cocatalysts or activated with an activating technique, the complexes form catalysts for polymerizing olefins, diolefins and/or acetylenically unsaturated monomers.