

C₄₈ Buckybowl and C₆₀ Fullerene Precursors on the Basis of Truxenone

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The synthesis of bromine-substituted truxenone derivatives which constitute prospective precursors of geodesic structures is presented. The underlying mechanism of fullerene formation from truxenone-based precursors during flash pyrolysis is discussed. Isolable quantities of C₆₀ fullerene have been achieved by intramolecular condensation of a precursor containing all 60 carbon atoms in appropriate positions, 72 out of the 90 required C–C bonds, and 3 bromine atoms.

Key words: Fullerene, Truxenes, Flash Pyrolysis, Cyclization