

SYNTHESES OF HETEROCYCLIC COMPOUNDS
FROM BENZOCYCLOBUTENE DERIVATIVES BY THERMOLYSIS

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Novel syntheses of heterocyclic compounds by intra- and intermolecular reaction of imines with o-quinodimethanes derived from benzocyclobutenes are reported.

1- or 2-Benzocyclobutenyl-3,4-dihydroisoquinolines gave protoberberines, but the methiodide of the above 1-benzo-compound afforded the spirobenzylisoquinoline. The yohimbane system was also obtained by this method. The reaction of benzocyclobutenes with 3,4-dihydroisoquinolines and indole gave tetrahydroprotoberberines and benzo[b]carbazoles, respectively. Cycloaddition of Schiff bases with the cyclobutene derivative also yielded tetrahydroisoquinolines.