

Synthesis of 5-Methyl-1,2,3,4,5,6-hexahydrocyclopenta[g]carbazole-1,7-diones and Crotonyl-2-isopropyl-1-oxo-1,2,3,4-tetrahydrocarbazoles from 1-Oxo-1,2,3,4-tetrahydrocarbazoles by Friedel-Crafts Reaction

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The reaction of 1-oxo-1,2,3,4-tetrahydrocarbazoles (**1**) with crotonic acid in polyphosphoric acid afforded hitherto unknown 5-methyl-1,2,3,4,5,6-hexahydrocyclopenta[g]carbazole-1,7-diones (**2**) and 6-crotonyl-2-isopropyl-1-oxo-1,2,3,4-tetrahydrocarbazoles (**3**) in a single step. A plausible mechanism for the formation of the title compounds has been proposed, and all new compounds were characterized by IR, NMR, mass spectral methods and elemental analysis.

Key words: 1-Oxo-1,2,3,4-tetrahydrocarbazoles, Crotonic Acid, Polyphosphoric Acid, 1,2,3,4,5,6-Hexahydrocyclopenta[g]carbazole-1,7-diones, Friedel-Crafts Reaction