Reactions of Polycyclic Ketones with Nucleophilic Reagents

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Well known and easy to prepare pentacyclo[5.4.0.0²,6.0³,10.0⁵,9]undecane-8,11-dione reacts easily with common nucleophilic reagents i.e., amines, thioles, Grignard etc. In many cases transannular cyclization was observed and oxa-, aza- or thia-bridged derivatives were isolated.

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\text{[Diagram showing chemical reactions and structures]}
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In the present study the dione and its monocarbonyl derivative were examined in the reactions with reactive nucleophiles generated in situ, (such as: trifluoromethyl anion, dimethoxycarbene) and several new derivatives were obtained.