A novel synthetic route to heterocyclic quinones.

Abstract

A new synthetic route to heterocyclic quinones was presented. This involved the addn. of nucleophiles to the quinone methides generated from azidoquinones. The resulting azidohydroquinones gave aminoquinones which, in turn, led to heterocyclic quinones via condensation of the amino substituent with proximal electrophilic sites. In an example, refluxing azidoquinone I in aq. THF 1.5 h gave 79% aminoquinone II. Extending the reflux time to 5 h gave 74% the ring-closed indoloquinone III.

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\begin{align*}
\text{I} & : \quad \text{CH(CO}_2\text{Me)}_2 N_3 \\
\text{II} & : \quad \text{C(CO}_2\text{Me)}_2 O H \\
\text{III} & : \quad \text{CO}_2\text{Me}
\end{align*}
\]