## n-BuLi-Initiated Ring-Opening Cyclization of Cyclopropene Derivatives


$\mathrm{R}^{1}=\mathrm{H}, \mathrm{Me}, \mathrm{Cl}, \mathrm{F}$
$\mathrm{R}^{2}=\mathrm{Ph}, \mathrm{CO}_{2} \mathrm{Me}, \mathrm{SO}_{2} \mathrm{Ph}$ $\mathrm{R}^{3}=\mathrm{CO}_{2} \mathrm{Me}, \mathrm{CO}_{2} \mathrm{Et}$ $\mathrm{n}=0,1$

up to $72 \%$ yield

Selected examples:


Proposed mechanism:


Significance: The authors report a new access to benzocycles from cyclopropene derivatives. Treatment of 2-acetyl or 2-acetoxymethyl cyclopropenes with $n$-BuLi leads to deprotection and subsequent ring-opening cyclization to yield benzofurans and isochromenes in a one-pot procedure.

DOI: 10.1055/s-0031-1290542; Reg-No.: P02512SF

Comment: Based on deuterium experiments a plausible mechanism is proposed: The reaction of A with $n$-BuLi forms $\mathbf{B}$ and the oxygen anion in $\mathbf{B}$ attacks the cyclopropene moiety to give $\mathbf{D}$. Alternatively, an excess of $n$-BuLi may further deprotonate the olefinic proton to generate dianion $\mathbf{C}$, which may also undergo ring-opening cyclization to give $\mathbf{E}$.

