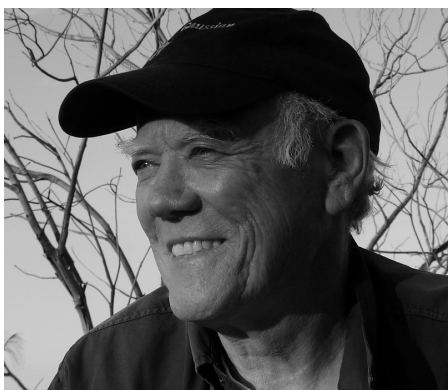


Chemistry of iminopropadienones and related compounds, $RN=C=C=C=X$. Generation, Spectroscopy, Theory and Applications.



Curt WENTRUP

School of Chemistry and Molecular Biosciences,
University of Queensland, Brisbane, AUSTRALIA

Iminopropadienones, $R-N=C=C=C=O$ **2** can be synthesized from several different precursors, including Meldrum's acid derivatives **1**, by either flash vacuum thermolysis (FVT) or microwave irradiation (MW) in solution. The former method is useful for spectroscopic characterization, and the latter method for synthetic applications. The thioketene analogs, $RN=C=C=C=S$, and the bisimines $RN=C=C=C=NR'$ have also been prepared and characterized. Important reactions of **2** include the formation of pharmaceutically important diazepinone derivatives **4** and quinolones **5**. Other diazepines have been prepared photochemically via nitrene rearrangements.

