J. S. CLARK,* A. BOYER, A. AIMON, P. E. GARCÍA, D. M. LINDSAY, A. D. F. SYMINGTON, Y. DANOY (UNIVERSITY OF GLASGOW, UK)
 Organocatalytic Synthesis of Highly Substituted Furfuryl Alcohols and Amines
Angew. Chem. Int. Ed. **2012**, *51*, 12128–12131.

Organocatalytic Synthesis of Substituted Furfuryl Alcohols and Amines

Significance: The authors present an organocatalytic approach for the synthesis of highly substituted furfuryl alcohols and amines in good to excellent yield. The reaction is catalyzed by tetrahydrothiophene (**2**), using a Lewis base for the activation of the alkynylcarbonyl derivatives **1**. In contrast to **2**, other Lewis bases such as DABCO or Bu₃P led to decomposition.

Comment: While electrophilic metal-catalyzed furan syntheses are common, organocatalytic approaches are rare. Inspired by the work of Krische (*J. Am. Soc. Chem.* **2004**, 4118) and Kuroda (*Tetrahedron* **2004**, 1913), Clark and co-workers applied a Lewis base activation concept for their reaction. By using tetrahydrothiophene (**2**) as a catalyst, an enolate is formed that cyclizes to a sulfur ylide containing furan which can react with different nucleophiles. This method can also be used for a multi-component domino synthesis of substituted furans.

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 Synfacts 2013, 9(1), 0100 Published online: 17.12.2012
 DOI: 10.1055/s-0032-1317898; Reg-No.: B11112SF

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