

This article was downloaded by:

On: 28 January 2011

Access details: *Access Details: Free Access*

Publisher *Taylor & Francis*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Phosphorus, Sulfur, and Silicon and the Related Elements

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713618290>

Pyrolysis of Amino Acid Derived Stabilised Ylides as a Route to Chiral Acetylenic Amines and Amino Acids and Gaba Analogues

R. Alan Aitken^a; Nazira Karodia^a

^a School of Chemistry, University of St. Andrews, Fife, U. K.

To cite this Article Aitken, R. Alan and Karodia, Nazira(1996) 'Pyrolysis of Amino Acid Derived Stabilised Ylides as a Route to Chiral Acetylenic Amines and Amino Acids and Gaba Analogues', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 111: 1, 181

To link to this Article: DOI: 10.1080/10426509608054810

URL: <http://dx.doi.org/10.1080/10426509608054810>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

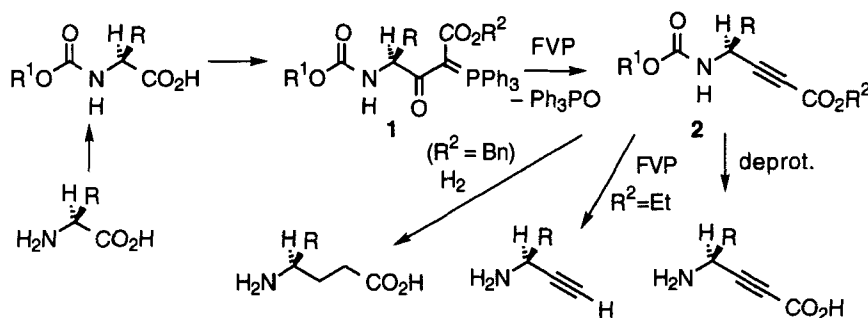
The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

PYROLYSIS OF AMINO ACID DERIVED STABILISED YLIDES AS A ROUTE TO CHIRAL ACETYLENIC AMINES AND AMINO ACIDS AND GABA ANALOGUES

R. ALAN AITKEN* and NAZIRA KARODIA

School of Chemistry, University of St. Andrews, North Haugh, St. Andrews, Fife, KY16 9ST, U. K.

We recently reported the pyrolysis of stabilised ylides as a method for overall conversion of carboxylic acids to homologous acetylenic esters and terminal alkynes.^{1,2} This has now been applied successfully to amino acids. A wide range of alkoxycarbonyl protected amino acids have been converted to the stable crystalline ylides **1**. These have been fully characterised, and upon FVP, eliminate Ph_3PO to afford the protected



acetylenic amino acids **2** in good yield and without significant racemisation. Subsequent reactions of these extremely versatile intermediates have been used to gain access to a wide variety of chiral amine and amino acids of great interest as potential selective enzyme inhibitors and components for modified peptide structures.

REFERENCES

1. R. A. Aitken, C. E. R. Horsburgh, J. G. McCreadie and S. Seth, *J. Chem. Soc., Perkin Trans. 1*, 1727 (1994).
2. R. A. Aitken and S. Seth, *J. Chem. Soc., Perkin Trans. 1*, 2461 (1994).