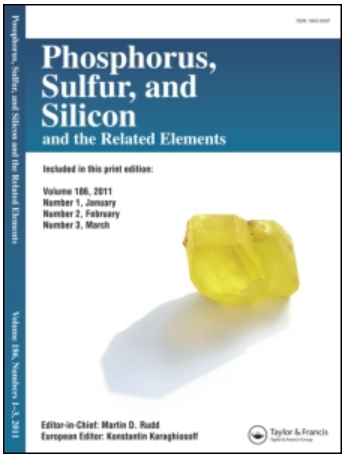


Phosphorus, Sulfur, and Silicon and the Related Elements
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713618290

REACTIONS OF α, β-EPOXYSULFONES WITH AMINES. SYNTHESIS OF INDOLES, ENEDIAMINES AND β-SULFONYLENAMINES

L. Thijs[a]; A. Houwen-claassen[a]; B. Zwanenburg[a]
[a] Department of Organic Chemistry, University of Nijmegen, Nijmegen, The Netherlands

To cite this Article Thijs, L. , Houwen-claassen, A. and Zwanenburg, B.(1979) 'REACTIONS OF α, β-EPOXYSULFONES WITH AMINES. SYNTHESIS OF INDOLES, ENEDIAMINES AND β-SULFONYLENAMINES', Phosphorus, Sulfur, and Silicon and the Related Elements, 6: 1, 303
To link to this Article: DOI: 10.1080/03086647908080425
URL: http://dx.doi.org/10.1080/03086647908080425

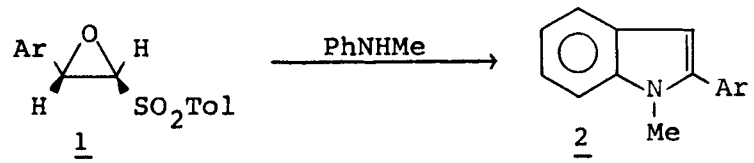
Phosphorus and Sulfur
1979, Vol. 6, p. 303

REACTIONS OF α,β-EPOXYSULFONES WITH AMINES. SYNTHESIS OF INDOLES, ENEDIAMINES AND β-SULFONYLENAMINES.

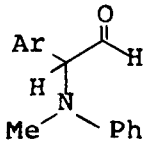
L. Thijs, A. Houwen-Claassen and B. Zwanenburg*

Department of Organic Chemistry, University of Nijmegen, Toernooiveld, Nijmegen, The Netherlands

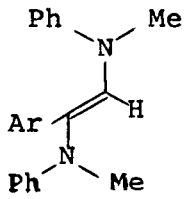
Epoxysulfones are readily accessible by a Darzens condensation of aldehydes or ketones with chloromethylsulfones using phase transfer conditions. Reactions of epoxysulfones 1 with N-methylaniline in refluxing ethanol result in the formation of indoles 2. In order to rationalize this



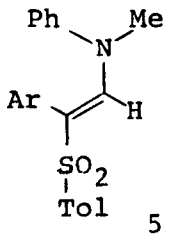
1 2



3



4



5

conversion the initial formation of the aldehydes 3 is proposed, which in a subsequent reaction with N-methylaniline lead to the intermediate enediamines 4. By treatment of 1 with amine under modified conditions these enediamines 4 indeed could be isolated. Furthermore, the epoxides 1 yield β-sulfonylenamines 5 when treated with secundary amines in the presence of an acid catalyst.

The synthesis of 2, 4 and 5 will be discussed in detail.