

University of Groningen

Synthese en reacties van gesubstitueerde tosylmethylisocyaniden

Possel, Okko

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version

Publisher's PDF, also known as Version of record

Publication date:

1978

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Possel, O. (1978). *Synthese en reacties van gesubstitueerde tosylmethylisocyaniden*. s.n.

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

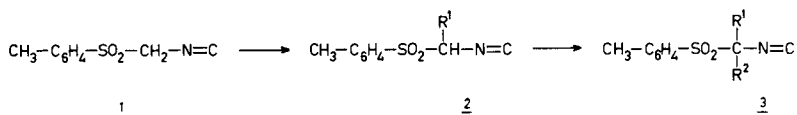
Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

S U M M A R Y

In this thesis the synthesis and the synthetic applications of mono- and disubstituted derivatives of tosylmethyl isocyanide (TosMIC, 1) are described.

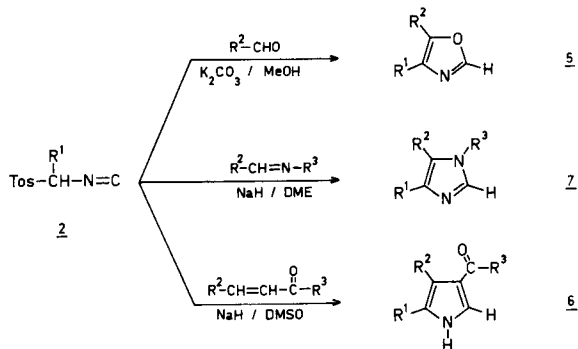
Chapter 1 is an introductory chapter.

Chapter 2 deals with the synthesis of mono- and disubstituted derivatives of 1, mainly by alkylations of the $-\text{CH}_2-$ group. Monoalkylation of 1 with reactive alkyl halides is performed under phase-transfer conditions.

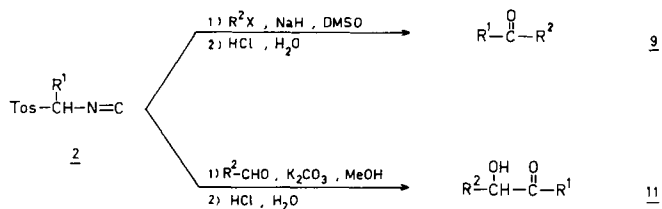


Monoalkylation with less reactive alkyl halides is carried out with NaH in DMSO-ether. Dialkylated products are made by alkylation of 1 with 2 equivalents alkyl halide, and by reaction of monoalkylated products with 1 equivalent alkyl halide.

Chapter 3 deals with the use of monoalkylated tosylmethyl isocyanides in the synthesis of oxazoles, imidazoles and pyrroles.



The use of TosMIC as a formyl anion equivalent is described in chapter 4. Starting with TosMIC a number of carbonyl compounds can be synthesized. In this chapter the synthesis of ketones and α -hydroxyketones in this fashion are described.



Chapter 5 deals with the reduction of substituted tosylmethyl isocyanides with LiAlH_4 into N-methylamines. Reduction with LiAlH_4 of 4-tosyl-2-oxazolines gives β -hydroxy-N-methyl-amines.

