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SOME REACTIONS OF ELECTRONRICH ACETYLENES WITH SULFUR COMPOUNDS

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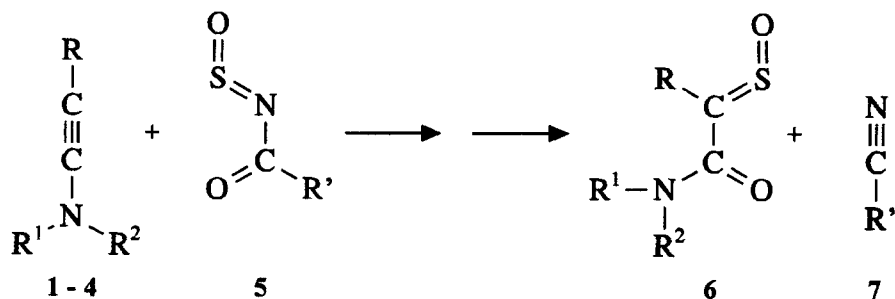
Abstract: Some known and some new electronrich acetylenes react with N-sulfinyl-sulfonamides and -carboxamides to give α -sulfinyl-acetic acid derivatives. Reaction of ynediamines with tosylazide furnished the new N²-tosylazo-oxalamidines.

INTRODUCTION

Ynamines react with N-sulfinyl-sulfonamides to give N²-sulfonyl-2-sulfinyl-alkan-amidines¹⁾, while ynamines and ynethers furnish 2-sulfinyl-alkanamides and -alkan-imidoesters by treatment with N-sulfinyl-carboxamides²⁾. In the meantime we synthesized new electronrich acetylenes or developed new accesses to known ynamines, and we let them react with the above cited reagents and other sulfur containing reagents.

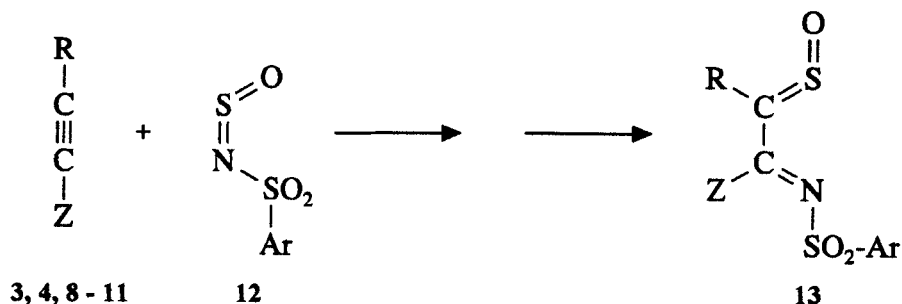
RESULTS

Ynamines 1-4, bearing acyl³⁾, carbamoyl³⁾, arylthio³⁾ and morpholiniothio⁴⁾ groups react with N-sulfinyl-carboxamides 5 to give in an expected manner²⁾ the corresponding 2-sulfinyl-acetamide derivatives 6 and the nitriles 7.^{4,5)}



R = C(O)Ar (1); C(O)NHAr (2); S-Ar (3); S-Morph. (4)

Ynethers **8** and **9**, bearing alkyl³⁾, aryl³⁾ and morpholinothio⁴⁾ groups or ynamines **3**, **4** and **10** with arylthio-³⁾, morpholinothio-⁴⁾ or additional amino⁶⁾ groups in the β -position, and the novel (trimethylsilylethynyl)hydrazine **11**⁷⁾ react with N-sulfinyl-arylsulfonamides **12** to give the expected α -sulfinyl-imidoester- and -amidine derivatives **13**.^{4,7)}



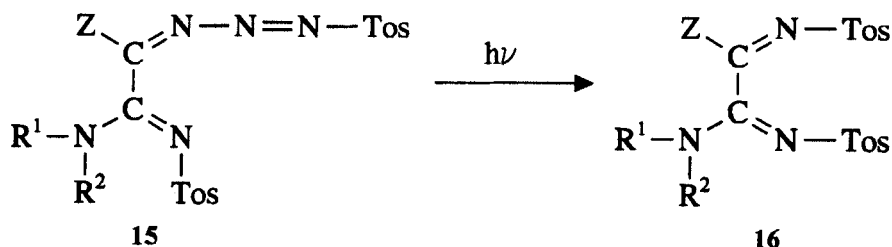
8 Z = OR¹, R = Alk, Ar

10 Z = NR¹R², R = NR³R⁴

9 Z = OR¹, R = S-Morph

11 Z = NMeNMe₂ R = SiMe₃

Ynediamines **10**⁷⁾ and the novel diethylamino-trimethylhydrazino-ethyne **14**⁷⁾ react with two equivalents of tosylazide to give N²-tosylazo-oxalamidines **15**, which lose nitrogen by photochemical treatment to furnish oxalamidines **16**.



Z = NR³R⁴ (**10**); NMeNMe₂ (**14**)

LITERATURE

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3. Synthesized by literature methods.
4. Part of the future doctor thesis of C. E. Finkele.
5. Part of the future doctor thesis of K.-P. Pfeifer.
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