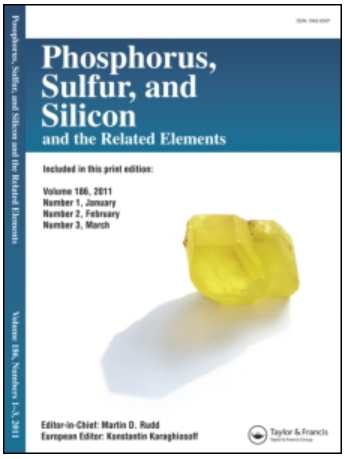

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SOME REACTIONS OF ELECTRONRICH ACETYLENES WITH SULFUR COMPOUNDS

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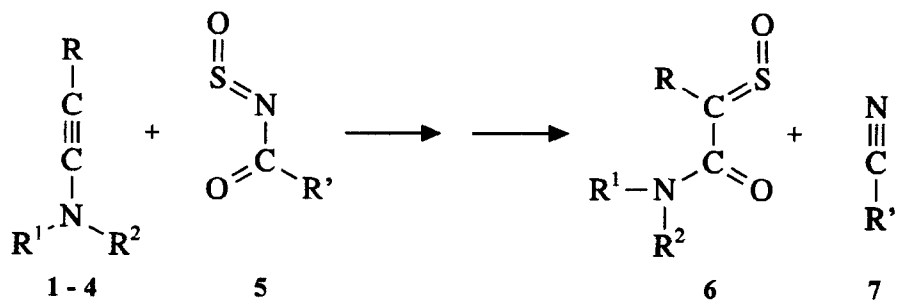
Abstract: Some known and some new electronrich acetylenes react with N-sulfinyl-sulfonamides and -carboxamides to give α-sulfinyl-acetic acid derivatives. Reaction of ynediamines with tosylazide furnished the new N^2-tosylazo-oxalamidines.

INTRODUCTION

Ynamines react with N-sulfinyl-sulfonamides to give N^2-sulfonyl-2-sulfinyl-alkanamidines[1], while ynamines and ynethers furnish 2-sulfinyl-alkanamides and -alkanimidoesters by treatment with N-sulfinyl-carboxamides[2]. 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

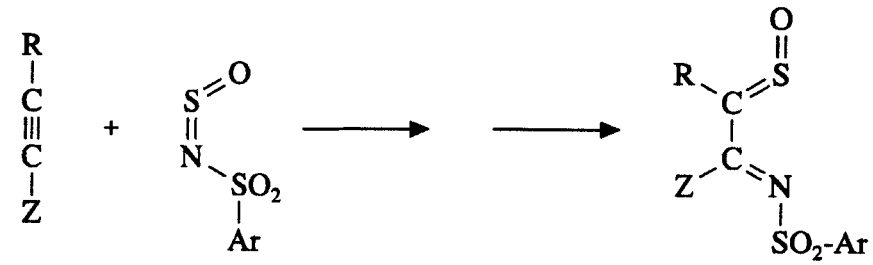
Ynamines **1-4**, bearing acyl[3], carbamoyl[3], arylthio[3] and morpholinothio[4] groups react with N-sulfinyl-carboxamides **5** to give in an expected manner[2] the corresponding 2-sulfinyl-acetamide derivatives **6** and the nitriles **7**.[4,5]



1 - 4 **5** **6** **7**

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

Ynethers **8** and **9**, bearing alkyl[3], aryl[3] and morpholinothio[4] groups or ynamines **3**, **4** and **10** with arylthio-[3], morpholinothio-[4] or additional amino[6] groups in the ß-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]

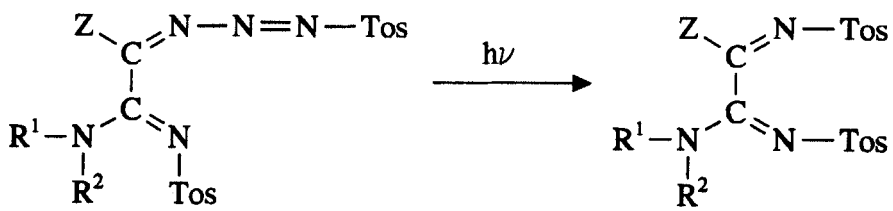


3, 4, 8 - 11 **12** **13**

8 $Z = OR^1$, R = Alk, Ar **10** $Z = NR^1R^2$, $R = NR^3R^4$

9 $Z = OR^1$, R = S-Morph **11** $Z = NMeNMe_2$ $R = SiMe_3$

Ynediamines **10**[7] and the novel diethylamino-trimethylhydrazino-ethyne **14**[7] react with two equivalents of tosylazide to give N^2-tosylazo-oxalamidines **15**, which lose nitrogen by photochemical treatment to furnish oxalamidines **16**.



15 **16**

$Z = NR^3R^4$ (10); $NMeNMe_2$ (14)

LITERATURE

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