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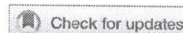
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## Functionalization of bioactive substrates with a $F_5SCH = CH$ moiety

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A.N. Nesmeyanov Institute of Organoelement Compounds, Russian Academy of Sciences, Moscow, Russian Federation

### ABSTRACT

A convenient approach to modify bioactive substrates such as daunorubicin, cytosine, and camphene with a pentafluorosulfanylvinyl moiety have been suggested.  $F_5S-CH = CH$  derivatives of daunorubicin were obtained by acylation with reactive 4-nitrophenyl-4-(pentafluoro- $\lambda^6$ -sulfanyl)alkenyl carbonates, while the corresponding conjugates of anthracycline antibiotic daunorubicin, alkaloid cytosine and camphene were synthesized using a click chemistry procedure.

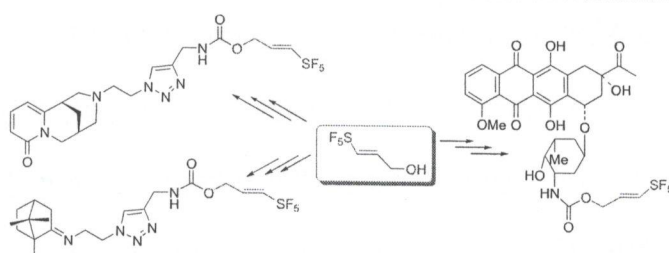
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### KEYWORDS

Fluorosulfanylvinyl derivatives; daunorubicin; cytosine; camphene; click reactions



## 1. Introduction

During last few decades, the applications of fluorinated compounds have been rapidly expanding. They are successfully used as medications, agrochemicals, polymers, solvents, heat transfer fluids, plant protection products, *etc.* [1–3]. A wide spectrum of useful properties of fluorinated compounds is determined by unique electronic and steric properties of the fluorine atom. Recently, the focus of attention has turned to the pentafluorosulfanyl group ( $SF_5$ ) which occupies a special place among the polyfluorinated substituents. This group is sometimes referred to as a ‘super-trifluoromethyl group’ but there are distinct differences between the properties of  $SF_5$  and the  $CF_3$  group [4]. The pentafluorosulfanyl group,  $SF_5$ , is more sterically demanding and is characterized by a different molecular geometry characterized by pyramidal electron density, while  $CF_3$  has an inverted cone

**CONTACT** Valery K. Brel  v\_brel@mail.ru  A.N. Nesmeyanov Institute of Organoelement Compounds, Russian Academy of Sciences, 28 ul. Vavilova, Moscow 119991, Russian Federation