

ALKYLIDENE SULFUR DIFLUORIDES  $R_2C=SF_2$ , AND ALKYLIDENE  
SULFUR DIFLUORIDE OXIDES,  $R_2C=SF_2=O$

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$(F_3C)_2C=SF_2$  and  $F_3S(F_3C)C=SF_2$  are prepared from fluorinated olefines and  $SF_4$  under  $CsF$  catalysis. Their structure is qualitatively derived from the fact, that there are two different positions for the C-substituents. This indicates a torsionally rigid CS double bond. These compounds undergo easily a 1,2-F-shift reaction, which possibly prevented their earlier detection. The resulting sulfenyl-fluorides, R-S-F, are not stable, either, and undergo further characteristic decomposition reactions.

$FCO-CH=SF_2O$  is made from  $F-CO-CH=SF_4$  by hydrolysis. It is the only alkylidene sulfur difluoride oxide known, so far. quite in contrast to the alkylidene sulfur difluorides these CS double bond is freely rotating at room temperature, but the torsional movement can be frozen out at low temperatures, to give two, at the lowest temperature even three isomers.