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SELECTED CHEMICAL REACTIONS OF SULFUR DIFLUORIDE

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Sulfur difluoride was discovered in 1969 using microwave and mass spectroscopy [1,2]. It has a strong tendency to disproportionate and dimerises to SF_3SF by condensation. The dimerisation and disproportionation process was investigated very thoroughly [3] and the gas phase structure of SF_3SF has been determined [4]. The best synthesis of SF_2 was found to be the gas phase reaction of COS with F_2 [5]. The chemistry of SF_2 can be studied by cocondensation with various reagents. For example by cocondensation of SF_2 with SF_4 and SSF_2 the new binary sulfur fluorides SF_3SF_3 and SF_3SSF respectively are formed. Further reactions will be presented.

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4 J.E. Boggs, M.v.Carlowitz, H. Oberhammer and H. Willner, J. Mol. Struct. in press.

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