

RECENT ADVANCES IN USING HF-BF_3 CATALYST IN F- AND C-ACYLATIONS AND RELATED REACTIONS OF TRIFLUOROMETHOXY- AND TRIFLUOROMETHYLTHIOBENZENES

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Trifluoromethoxy- and trifluoromethylthiophenylketones can be prepared in a four steps synthesis with poor yields in final products.

FRIEDEL and CRAFTS acylation of trifluoromethoxy- and trifluoromethylthiobenzene fail to give ketones in a one step synthesis when using chlorinated Lewis acids (AlCl_3 - FeCl_3 ...). This results from halogen exchange on - OCF_3 and - SCF_3 groups.

The use of a fluorinated catalyst system as HF-BF_3 avoid exchange reaction and acylation can occur under mild conditions with good results.

- Low temperature and pressure
- high yields (very often $> 90\%$)
- very high regioselectivity in para-position.

Other reactions like formylation or sulfonylation relate to the same method.