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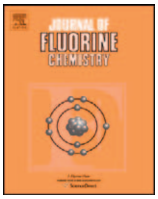

Graphical Abstracts/J. Fluorine Chem. 132 (2011) 147–150

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Low-temperature synthesis of K_2NbO_3F powders by an alternative approach of solid-state reaction

Tingting Su, Heng Jiang, Hong Gong

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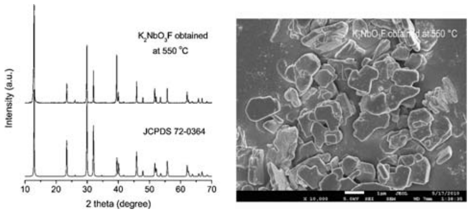
An alternative solid-state method is proposed to prepare K_2NbO_3F powders in temperature range from 550 to 700 °C. XRD and SEM/EDS results reveal that layered perovskite K_2NbO_3F powders are synthesized and the particle size is about 0.5–1 μm in diameter and 100–200 nm in thickness when the calcination temperature reaches 550 °C.



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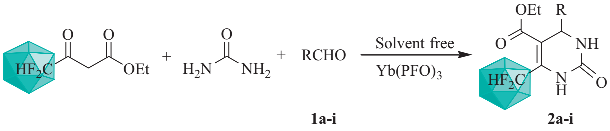
One-pot synthesis of difluoromethyl-containing dihydropyrimidinones catalyzed by $Yb(PFO)_3$ under solvent and dehydrating agent free conditions

Mingxi Wu, Jinlong Yu, Wenwen Zhao, Jingjing Wu, Song Cao

Shanghai Key Laboratory of Chemical Biology, Center of Fluorine Chemical Technology, School of Pharmacy, East China University of Science and Technology, Shanghai 200237, China

The difluoromethyl-containing dihydropyrimidinone derivatives were synthesized by cyclocondensation of ethyl 4,4-difluoroacetoacetate, urea, and aldehydes in the presence of ytterbium perfluorooctanoate under



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The first application of 4-alkoxy-1,1,1-trifluoroalk-3-en-2-ones in a three-component condensation protocol for the synthesis of 3-acyl-4-aryl-2-(trifluoromethyl)-2-hydroxy-3,4,7,8-tetrahydro-2*H*-chromen-5(6*H*)-ones

Helio G. Bonacorso[a], Jussara Navarini[a], Carson W. Wiethan[a], Guilherme P. Bortolotto[a], Gisele R. Paim[a], Susiane Cavinatto[a], Marcos A.P. Martins[a], Nilo Zanatta[a], Miguel S.B. Caro[b]

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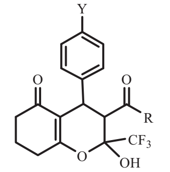

Y=H, Me, Cl, NO_2, CHO and R= Alkyl, Aryl, Heteroaryl
(30 Examples)

The one-pot three-component condensation protocol for the preparation of a new series of 3-acyl-4-aryl-2-(trifluoromethyl)-2-hydroxy-3,4,7,8-tetrahydro-2*H*-chromen-5(6*H*)-ones, employing 4-alkyl(aryl/heteroaryl)-4-methoxy-1,1,1-trifluoroalk-3-en-2-ones, is described.

doi:10.1016/S0022-1139(11)00047-9

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Regioselective synthesis of 5-trifluoromethyl-1,2,3-triazole nucleoside analogues via TBS-directed 1,3-dipolar cycloaddition reaction

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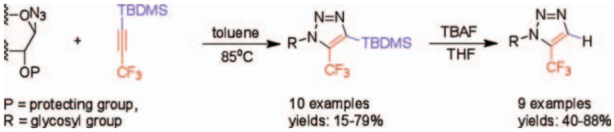
[b]*Key Laboratory of Organofluorine Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, 345 Lingling Road, Shanghai 200032, China*



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Formation and reactivity of *gem*-difluoro-substituted pyridinium ylides: Experimental and DFT investigation

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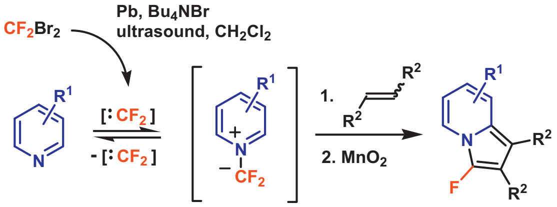
β-Fluoroindolizines have been synthesized by 1,3-dipolar cycloadditions of *gem*-difluorosubstituted pyridinium ylides reversibly generated from substituted pyridines under difluorocarbene generation conditions.



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A facile procedure for synthesis of 3-[2-(*N*,*N*-dialkylamino)ethyl]-3-fluorooxindoles by direct fluorination of *N*,*N*-dialkyltryptamines

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A practical procedure for the synthesis of 3-fluorooxindole derivatives having basic amine moieties in excellent yields in one step from the corresponding tryptamines has been described.

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Robust synthesis of trifluoromethionine and its derivatives by reductive trifluoromethylation of amino acid disulfides by CF_3I/Na/Liq.NH_3 system

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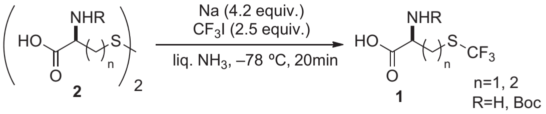
Department of Frontier Materials, Graduate School of Engineering, Nagoya Institute of Technology, Gokiso, Showa-ku, Nagoya 466-8555, Japan



We disclose the reductive trifluoromethylation of chemically stable homocystine and cystine to provide corresponding trifluoromethyl ethers by the CF_3I/Na/Liq.NH_3 system. The method described offers a robust synthesis of pharmaceutically important trifluoromethionine, suitable for multigram synthesis.

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Theoretical study on the electronic, structural, properties and reactivity of a series of mono-, di-, tri- and tetrafluorothiophenes as monomers for new conducting polymers

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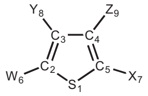
(3-Fluorothiophene) is possible candidate monomer among all fluorothiophenes in the synthesis of corresponding conducting polymers with modified characteristics.



T: W=X=Y=Z=H	thiophene
A: W=F, X=Y=Z=H	2-fluorothiophene
B: Y=F, W=X=Z=H	3-fluorothiophene
C: W=Y=F, X=Z=H	2,3-difluorothiophene
D: W=Z=F, X=Y=H	2,4-difluorothiophene
E: W=X=F, Y=Z=H	2,5-difluorothiophene
F: Y=Z=F, W=X=H	3,4-difluorothiophene
G: W=Y=Z=F, X=H	2,3,4-trifluorothiophene
H: W=X=Y=F, Z=H	2,3,5-trifluorothiophene
I: W=X=Y=Z=F	2,3,4,5-tetrafluorothiophene

All possible mono-, di-, tri-, and tetrafluorothiophenes studied in this work.

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Cu(I)-catalyzed coupling reactions of fluorinated imidoyl halides with terminal alkynes: Convenient synthesis of fluorinated alkynyl imines

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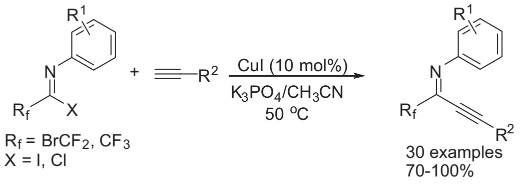

The first example of coupling reactions of fluorinated imidoyl halides with terminal alkynes catalyzed by CuI is presented. Each reaction needed no ligand, and fluorinated alkynyl imines were obtained with excellent yields.

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Evaluation of the hydrophobicity of perfluoroalkyl chains in amphiphilic compounds that are incorporated into cell membrane

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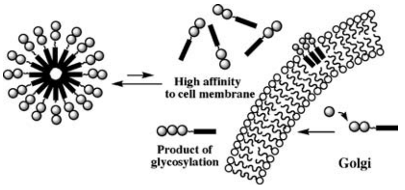
The flourine content of the perfluoroalkyl chain of amphiphilic compounds affects the production of glycolipid-like compounds. Higher fluorine content renders the amphiphilic glycosides to be more hydrophobic. Moreover, the prescence of many fluorine atoms may increase affinity of amphiphilic glycosides to the cell membrane.



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Synthesis and properties of organosoluble polyimides based on novel perfluorinated monomer hexafluoro-2,4-toluenediamine

Inna K. Shundrina, Tamara A. Vaganova, Soltan Z. Kusov, Vladimir I. Rodionov,
Elena V. Karpova, Evgenij V. Malykhin

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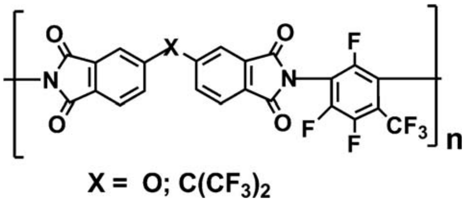

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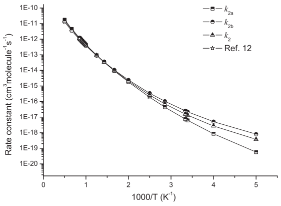
Direct dynamics studies for the reactions of CF_3CHFCF_3 and $CF_3CF_2CHF_2$ with H atoms

Li Wang, Yuan Zhao, Jinglai Zhang

Institute of Environmental and Analytical Sciences, College of Chemistry and Chemical Engineering, Henan University, Kaifeng, Henan 475004, PR China



Plot of the CVT/SCT rate constants calculated at the G3(MP2)//MPW1K/6-311+G(d,p) level along with the available experimental values versus 1000/*T* between 200 and 2000 K for the reaction $CF_3CF_2CHF_2 + H \rightarrow CF_3CF_2CF_2 + H_2$ (R2).

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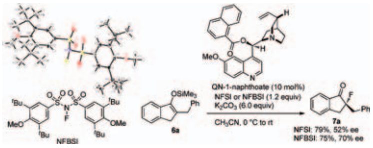
N-Fluoro-(3,5-di-*tert*-butyl-4-methoxy)benzenesulfonimide (NFBSI): A sterically demanding electrophilic fluorinating reagent for enantioselective fluorination

Hiroyuki Yasui[a], Takeshi Yamamoto[a], Takehisa Ishimaru[a], Takeo Fukuzumi[a], Etsuko Tokunaga[a], Kakehi Akikazu[b], Motoo Shiro[c], Norio Shibata[a]

[a]*Department of Frontier Materials, Graduate School of Engineering, Nagoya Institute of Technology, Gokiso, Showa-ku, Nagoya 466-8555, Japan*

[b]*Department of Applied Chemistry, Shinshu University, 4-17-1, Wakasato, Nagano 380-8553, Japan*

[c]*Rigaku Corporation, 3-9-12 Matsubara-cho, Akishima, Tokyo 196-8666, Japan*



We disclose here a novel electrophilic fluorinating reagent, NFBSI as a sterically demanding analogue of popular fluorinating reagent, NFSI. The NFBSI improves the enantioselectivity of the products as much as 18% for the cinchona alkaloid-catalyzed enantioselective fluorination of silylenol ether compared with the cases by NFSI.