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Journal of Fluorine Chemistry

journal homepage: www.elsevier.com/locate/fluor

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J. Fluorine Chem., 131 (2010) 892

Synthesis of fluorinated 2,3-dihydropyran-4-ones by cyclocondensation of 1,3-dicarbonyl dianions with aldehydes

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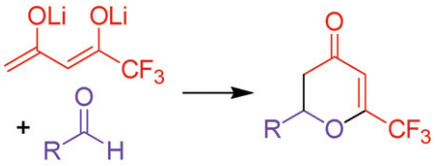
Fluorinated 2,3-dihydro-4H-pyran-4-ones are prepared by cyclocondensation of 1,3-dicarbonyl dianions with aldehydes.



J. Fluorine Chem., 131 (2010) 898

Alkali metal cation complexation and solvent interactions by robust chromium(III) fluoride complexes

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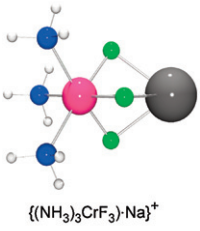
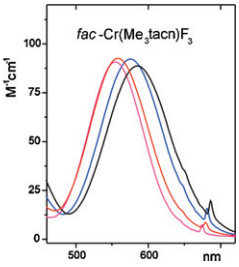
Cationic and uncharged chromium(III)fluoride complexes interact strongly with alkali metal ions in solution as well as in the solid state. This leads to a new structure type of fluoride-bridged clusters. Spectroscopic effects of second sphere interactions are modeled and interpreted by use of DFT calculations.





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Hydroxylammonium fluorometalates: Synthesis and characterisation of a new fluorocuprate and fluorocobaltate

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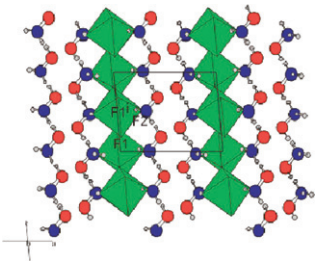
Two new hydroxylammonium compounds, $(NH_3OH)_2CuF_4$ and $(NH_3OH)_2CoF_4$, were prepared and structurally characterised. These are the first examples with 2D layered fluorometalate anions amongst structures with hydroxylammonium cations. Their magnetic properties were studied by SQUID measurements and the thermal decomposition studied by TG analysis and X-ray powder diffraction.



doi:10.1016/S0022-1139(10)00212-5

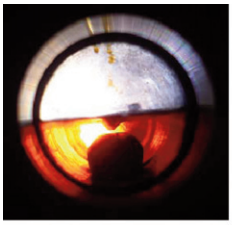
J. Fluorine Chem., 131 (2010) 915

Synthesis of new CO_2-soluble ruthenium(II) and cobalt(II) polypyridine complexes bearing fluorinated alkyl chains and their application to photoreduction of *liq*. CO_2

Takuji Hirose, Shuhei Shigaki, Makoto Hirose, Atsushi Fushimi

Graduate School of Science and Engineering, Saitama University, 255 Shimo-ohkubo, Sakura, Saitama 338-8570, Japan

New CO_2-soluble Ru(II) and Co(II) complexes, $[M(F62O)_3](BArF)_2$, were shown to be useful for the photoreduction of *liq*. CO_2 under high pressure without the use of any other organic solvent.



$BArF^-$: $[3,5\text{-}(CF_3)_2C_6H_3]_4B^-$

$[Ru(\mathbf{F62O})_3](BArF)_2$+$[Co(\mathbf{F62O})_3](BArF)_2$ system

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Bis(perfluoroorganyl)bromonium salts $[(R_F)_2Br]Y$ (R_F = aryl, alkenyl, and alkynyl)

Hermann-Josef Frohn[a], Matthias Giesen[a], Dirk Welting[a], Vadim V. Bardin[b]

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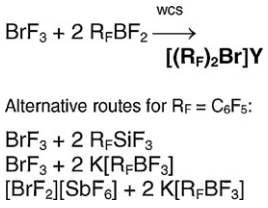
[b]*N. N. Vorozhtsov Novosibirsk Institute of Organic Chemistry, SB RAS, Acad. Lavrentjev Ave. 9, 630090 Novosibirsk, Russia*

Systematic investigation of the substitution of fluorine by perfluoroorganyl groups R_F in BrF_3 and $[BrF_2]^+$ salts. Preparative access to bromonium salts $[(R_F)_2Br]Y$ (Y = $[BF_4]^-$, $[R_FBF_3]^-$) by reactions of BrF_3 with R_FBF_2 (R_F=C_6F_5, $CF_3C{\equiv}C$, *trans*-$CF_3CF{=}CF$, *cis*-$C_2F_5CF{=}CF$).



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Elemental fluorine. Part 24.[1]: Fluorination of ethers by fluorine and Selectfluor

Richard D. Chambers[a], Takashi Okazoe[b], Graham Sandford[a], Emmanuelle Thomas[a], Jelena Trmcic[a]

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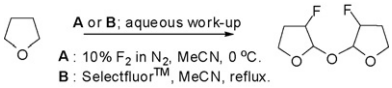
[b]*Asahi Glass Co., 1150, Hazawa-cho, Yokohama, Kanagawa, 221-8755, Japan*

Reactions of dialkyl ethers with either fluorine or Selectfluor™ led to the formation of unusual difluorinated polyether products in modest yields.



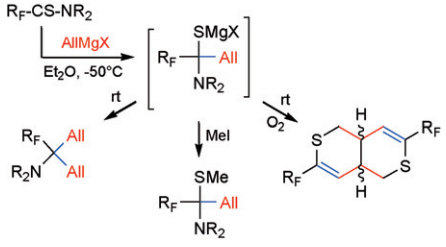
J. Fluorine Chem., 131 (2010) 937

New fused dithiabicyclic compounds from the reaction of *N*,*N*-dialkyl perfluorothioamides with allylmagnesium halides

Fabienne Grellepois[a], Vadim M. Timoshenko[b], Eduard B. Rusanov[b], Yuriy G. Shermolovich[b], Charles Portella[a]

[a]*Université de Reims-Champagne-Ardenne, Institut de Chimie Moléculaire de Reims, UMR CNRS 6229, UFR Sciences, BP 1039, 51687 Reims Cedex 2, France*
[b]*Institute of Organic Chemistry, NAS of Ukraine, Murmanska str. 5, 02660, Kyiv, Ukraine*

The adduct from reaction of *N*,*N*-dialkyl perfluorothioamide is stable at low temperature, then undergoes two condensation processes, one of which leading to new fused bis(dihydrothiopyrane).



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Facile synthesis of α,α-difluoroalkyl aryl thioethers and their oxidative desulfurization–fluorination to trifluorides

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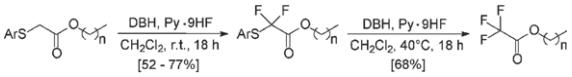
Organisch-Chemisches Institut, Corrensstr. 40, and European Institute for Molecular Imaging, Mendelstraße 11, Westfälische Wilhelms-Universität, D-48149 Münster, Germany

Alkyl 2-arylthio-2,2-difluoroacetates were synthesized from alkyl 2-(arylthio)acetates using the reagents combination of *N*-haloimides and excess Py·9HF at room temperature. Subsequent treatment of the formed fluorinated thioethers with the same reagents at elevated temperature gave alkyl trifluoroacetates by oxidative desulfurization–fluorination.



J. Fluorine Chem., 131 (2010) 951

Electrophilic trifluoromethylation of arenes and N-heteroarenes using hypervalent iodine reagents

Matthias S. Wiehn, Ekaterina V. Vinogradova, Antonio Togni

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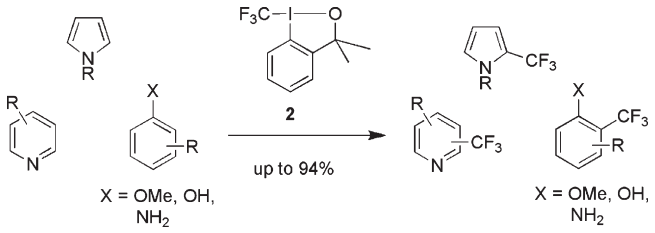
A hypervalent iodine reagent is suitable for the electrophilic trifluoromethylation of a series of nitrogen heterocycles and aromatic compounds. The reaction occurs mostly at the position adjacent to the nitrogen atom.



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Magnesium iodide promoted defluorinative reactions of 2,2-difluorocyclopropyl aryl ketones with aryl imines: A new, general synthesis of 2-alkylideneazetidines

Wei Xu[a], Ion Ghiviriga[a], Qing-Yun Chen[b], William R. Dolbier[a]

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A novel synthesis of 2-alkylideneazetidenes via the defluorinative ring-opening reaction of 2,2-difluorocyclopropyl ketones with imines.