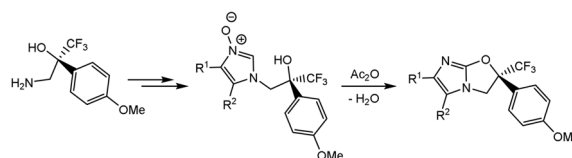




Graphical Abstracts/J. Fluorine Chem. 189 (2016) iv–viii

Synthesis of optically active trifluoromethyl-substituted 2,3-dihydroimidazo[2,1-*b*]oxazolesGrzegorz Mlostoń^a, Aneta Wróblewska^a, Heinz Heimgartner^b^aDepartment of Organic and Applied Chemistry, University of Łódź, Tamka 12, PL-91-403 Łódź, Poland^bDepartment of Chemistry, University of Zürich, Winterthurerstrasse 190, CH-8057 Zürich, Switzerland

- CF₃-containing β-amino alcohols were used to prepare imidazole *N*-oxides.
- Fluorinated hydroxyalkyl chain at N(1) enables Ac₂O-induced heterocyclization.
- Products were identified as trifluoromethylated imidazo[2,1-*b*]oxazole.
- The key-intermediate is a highly reactive imidazolium cation.

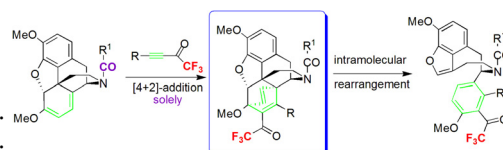
*J. Fluorine Chem.*, 189 (2016) 1

Reactions of thebaine derivatives with trifluoroacetyl acetylenes: [4+2]-addition solely

Irina V. Sandulenko, Daria V. Semenova, Maria V. Zelentsova, Sergey K. Moiseev, Andrey B. Koldobskii, Alexandr S. Peregudov, Ivan S. Bushmarinov, Valery N. Kalinin

Institute of Organoelement Compounds, Russian Academy of Sciences, ul. Vavilova, 28, V-334, Moscow 119991, Russia

- Trifluoroacetyl acetylenes produce [4+2]-adducts solely with thebaine derivatives.
- *N*-Acyl derivatives of thebaine must be used to produce the [4+2]-adducts.
- The trifluoroacetyl substituted [4+2]-adducts easily rearrange to benzazocines.
- The rearrangement can be prevented by the addition of a nucleophile.

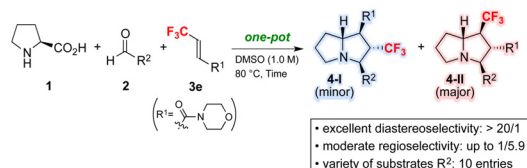
*J. Fluorine Chem.*, 189 (2016) 7

One-pot synthesis and theoretical calculation for trifluoromethylated pyrrolizidines by 1,3-dipolar cycloaddition with azomethine ylides and β-trifluoromethyl acrylamides

Yoshiki Toma, Masataka Kunigami, K-jiro Watanabe, Masahiro Higashi, Satoru Arimitsu

Department of Chemistry, Biology and Marine Science, University of the Ryukyus, 1 Senbaru, Nakagami, Nishihara, Okinawa 903-0123, Japan

- A new one-pot synthesis of trifluoromethylated pyrrolizidines was developed.
- High diastereoselectivity (d.r. ≥ 20/1) was observed in most of cases.
- The chemoselectivity is overcome by the separate addition of reagents.
- The origin of regio- and stereoselectivity were investigated by DFT calculation.



- excellent diastereoselectivity: > 20/1
- moderate regioselectivity: up to 1/5.9
- variety of substrates R²: 10 entries

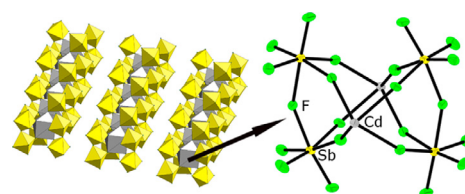
J. Fluorine Chem., 189 (2016) 22

One dimensional group 12 metal undecafluoroditantalates

Gašper Tavčar, Evgeny Goreshnik

Department of Inorganic Chemistry and Technology, Jožef Stefan Institute, Jamova cesta 39, SI-1000 Ljubljana, Slovenia

● New one dimensional mercury and cadmium undecafluoroditantalates were prepared. ● System $M(II)F_2/TaF_5$ ($M = Cd, Hg$) in aHF as solvent was studied. ● Geometry of $Ta_2F_{11}^-$ anion was elucidated.



J. Fluorine Chem., 189 (2016) 33

Researches of the optical band positions, spin-Hamiltonian parameters and defect structures for Cr^{3+} -doped colquiriite-type fluoride crystals $LiSrGaF_6$, $LiSrAlF_6$ and $LiCaAlF_6$

Li-Rong Yang^a, Chen-Fu Wei^a, Yang Mei^{b,c}, Wen-Chen Zheng^d

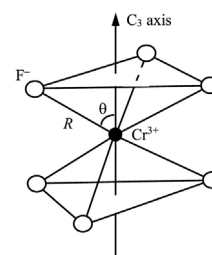
^aSchool of Chemistry & Chemical Engineering, Mianyang Normal University, Mianyang 621000, PR China

^bSchool of Mechanical & Electrical Engineering, Mianyang Normal University, Mianyang 621000, PR China

^cResearch Center of Computational Physics, Mianyang Normal University, Mianyang 621000, PR China

^dDepartment of Material Science, Sichuan University, Chengdu 610064, PR China

● Optical and EPR data of trigonal Cr^{3+} centers in $LiBMF_6$ are calculated. ● Diagonalization method based on two-spin-orbit-parameter model is used. ● The calculated results agree with the observed values. ● Local structures of Cr^{3+} centers in $LiBMF_6$ crystals are estimated.



J. Fluorine Chem., 189 (2016) 39

Aromatic ionic monomer bearing perfluorosulfonate moiety and its polycondensation toward high performance superacid ionomers

Olesia Danyliv^{a,b,c}, Cristina Iojoiu^{a,c}, Valessa Barbier^{a,c,d}, Vincent Martin^{a,c}, Jean-Yves Sanchez^{a,c}

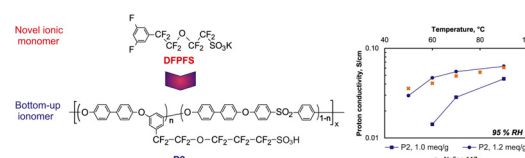
^aUniv. Grenoble Alpes, LEPMI, F-38000, Grenoble, France

^bERAS Labo, SME, F-38330, Saint-Nazaire-Les-Eymes, France

^cCNRS, LEPMI, F-38000, Grenoble, France

^dUniversité Paris-Est de Créteil, ICMPE, 94010 Créteil, France

● Synthesis of a new monomer having a superacid and two *meta*-polymerizable groups is studied. ● Purification of the monomer is optimized in time and technological realization. ● Polycondensation results in mixture of high- and low-molecular weight products. ● Cyclization of the chain end-groups may occur during polycondensation. ● The ionomers show good film-forming, thermo-mechanical and H^+ -conductive properties.



J. Fluorine Chem., 189 (2016) 43

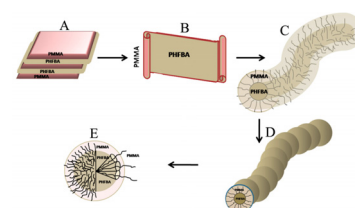
Syntheses and morphologies of fluorinated diblock copolymer prepared via RAFT polymerization

Bishnu P. Koiry^a, Siva Ponnupandian^a, Soumyadip Choudhury^a, Nikhil K. Singha^a

^aRubber Technology Centre, Indian Institute of Technology Kharagpur, Kharagpur 721302, West Bengal, India

^bLeibniz-Institut für Polymerforschung Dresden e.V., Hohe Str. 6, D-01069 Dresden, Germany

● BCPs of PMMA and PHFBA were prepared via RAFT polymerization. ● The BCPs had controlled molecular weight with narrow PDI. ● TEM showed that the BCP had phase separated morphology with lamellar stacking. ● Morphology of BCP can be tuned by using a mixture of solvents, THF and MEK.



J. Fluorine Chem., 189 (2016) 51

Download English Version:

<https://daneshyari.com/en/article/1313495>

Download Persian Version:

<https://daneshyari.com/article/1313495>

[Daneshyari.com](https://daneshyari.com)