

Graphical Abstracts/J. Fluorine Chem. 128 (2007) 159–162

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Editorial

Bill Dolbier Jr., John Winfield

*Department of Chemistry, University of Glasgow, Joseph Black Building,
Glasgow G12 8QQ, United Kingdom*

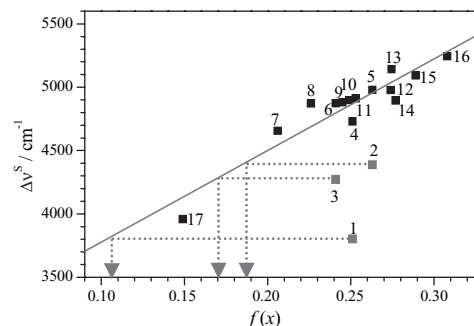
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A spectroscopic study on medium polarity in fluorous alcohol

Takeshi Araki, Noboru Kitamura

*Division of Chemistry, Graduate School of Science, Hokkaido University, 060-0810
Sapporo, Japan*

The dielectric constant of a fluorous aliphatic alcohol was shown to be much lower than that of the relevant non-fluorous alcohol, as demonstrated by absorption and fluorescence spectroscopies.

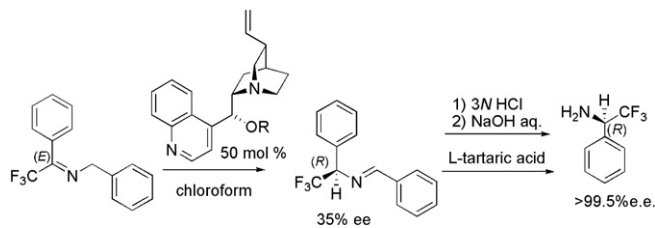


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Catalytic asymmetric synthesis of α -(trifluoromethyl)benzylamine via cinchonidine derived base-catalyzed biomimetic 1,3-proton shift reaction

Vadim A. Soloshonok, Manabu Yasumoto

*Department of Chemistry and Biochemistry, University of Oklahoma,
Norman, OK 73019, United States*



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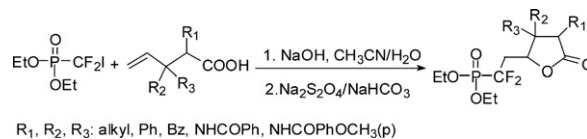
Synthesis of γ -butyrolactones containing α,α -difluoromethylenyl bisphosphonate initiated by $\text{Na}_2\text{S}_2\text{O}_4$

Xueyan Yang^a, Yaoping Zhu^a, Xiang Fang^a, Xianjin Yang^a, Fanhong Wu^{a,b}, Yongjia Shen^a

^aLaboratory for Advanced Material, Institute of Fine Chemicals, ECUST, Shanghai 200237, China

^bKey Laboratory of Organofluorine Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai 200032, China

γ -Butyrolactones containing α,α -difluoromethylenyl bisphosphonates moiety were obtained by the reaction of diethyl iododifluoromethylphosphonate and 4-pentenoic acids initiated by $\text{Na}_2\text{S}_2\text{O}_4$.



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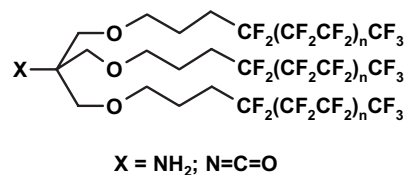
Three-fold polyfluoroalkylated amines and isocyanates based on tris(hydroxymethyl)aminomethane (TRIS)

Robert Kaplánek^{a,b}, Tomáš Bříza^{a,b}, Martin Havlík^a, Pavel Martásek^b, Vladimír Král^a

^aDepartment of Analytical Chemistry, Institute of Chemical Technology in Prague, Technická 5, 16628 Prague 6, Czech Republic

^bFirst Faculty of Medicine, Charles University in Prague, Kateřinská 32, 12108 Prague 2, Czech Republic

Three-fold polyfluoroalkylated amines were prepared from tris(hydroxymethyl)aminomethane (TRIS) in five steps including perfluoroalkyl iodide addition to the corresponding allyl derivative, reduction of C-I bond and deprotection of the amino group. They can be easily converted to the corresponding isocyanates.



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Effect of fluorine functional groups on surface and mechanical interfacial properties of epoxy resins

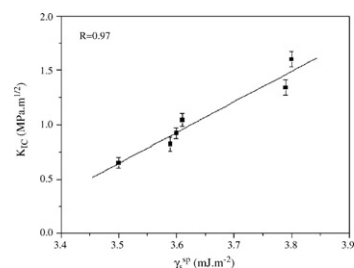
Fan-Long Jin^a, Hak-Yong Kim^b, Soo-Jin Park^c

^aDepartment of Chemical Engineering, Jilin Institute of Chemical Technology, Jilin City 132022, PR China

^bDepartment of Textile Engineering, Chonbuk National University, Chonju 560-756, South Korea

^cDepartment of Chemistry, Inha University, Nam-gu, Incheon 402-751, South Korea

Dependence of the critical stress intensity factor on the specific component of surface free energy for TGDDM/FEP blends.

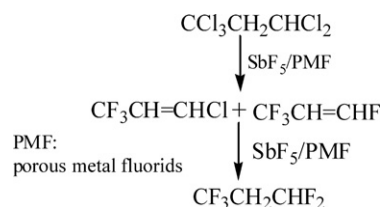


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Preparation of 1,1,1,3,3-pentafluoropropane (HFC-245fa) by using a SbF_5 -attached catalyst

Heng-Dao Quan, Hui-E Yang, Masanori Tamura, Akira Sekiya

National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba Central 5-2, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan



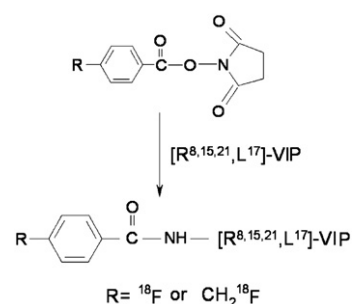
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Preparation of the novel fluorine-18-labeled VIP analog for PET imaging studies using two different synthesis methods

Dengfeng Cheng, Duanzhi Yin, Lan Zhang, Mingwei Wang, Gucai Li, Yongxian Wang

Research Center of Radiopharmaceuticals, Shanghai Institute of Applied Physics, Chinese Academy of Sciences, 2019 JiaLuo Road, Shanghai 201800, China

In an effort to develop ^{18}F -labeled vasoactive intestinal peptide (VIP) analog as a positron emission tomography (PET) imaging agent for tumors, two methods of synthesis have been discussed in this study and we have obtained ^{18}F -labeled products in a convenient way.

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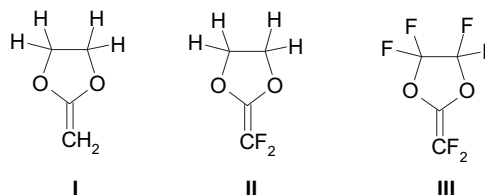
The effect of fluorine substituents on the polymerization mechanism of 2-methylene-1,3-dioxolane and properties of the polymer products

Y. Okamoto^a, F. Mikeš^a, Y. Yang^a, Y. Koike^b

^aPolytechnic University, Polymer Research Institute, 6 MetroTech Center, Brooklyn, NY 11201, USA

^bKeio University, Photonic Polymer Project, K² Town Campus, Kawasaki 212 0054, Japan

The effect of fluorine substituents on the polymerization mechanism of 2-methylene-1,3-dioxolanes (**I**, **II**, **III**) and properties of the polymer products were investigated.

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A novel and facile synthesis of 2,3-dihydrofuran derivatives containing trifluoromethyl group

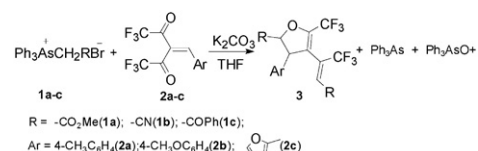
Jiaxian Qian^a, Weiguo Cao^{a,b,c}, Hui Zhang^a, Jie Chen^a, Shizheng Zhu^b

^aDepartment of Chemistry, Shanghai University, Shanghai 200444, China

^bKey Laboratory of Organofluorine Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai 200032, China

^cState Key Laboratory of Organometallic Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai 200032, China

The trifluoromethyl containing 2,3-dihydrofuran derivatives **3** were obtained in moderate yield by the reaction of excess arsonium bromides **1** with β,β -di(trifluoroacetyl)ethylene derivatives **2**.

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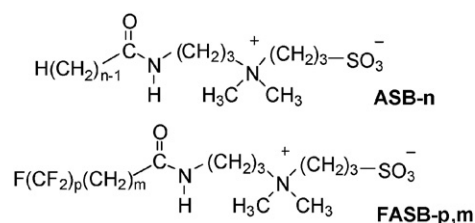
Synthesis and surface properties of new semi-fluorinated sulfobetaines potentially usable for 2D-electrophoresis

Pascal Thebault^a, Elisabeth Taffin de Givenchy^a, Mireille Starita-Geribaldi^b, Frederic Guittard^a, Serge Geribaldi^a

^aLaboratoire de Chimie des Matériaux Organiques et Métalliques, Institut de Chimie, Université de Nice Sophia-Antipolis, Parc Valrose, 06108 Nice Cedex 2, France

^bConnexines et Prolifération Germinale, Physiopathologie Cellulaire et Moléculaire (INSERM U670), UFR de Médecine, Université de Nice Sophia-Antipolis, 28 Avenue de Valombrose, 06107 Nice Cedex 1, France

Semi-fluorinated counterparts (FASB-*p,m*) of amidosulfobetaines ASB-*n* were synthesized, their surface properties compared and their great potentiality in proteomic analysis demonstrated using 2D electrophoresis.



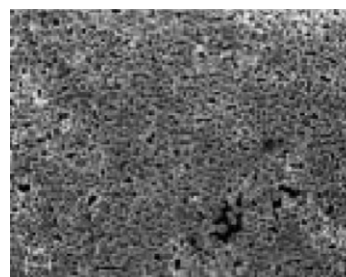
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Microwave-assisted synthesis of spherical monodispersed magnesium fluoride

Mariusz Pietrowski, Maria Wojciechowska

Adam Mickiewicz University, Faculty of Chemistry, 60-780 Poznań, Grunwaldzka 6, Poland

Spherical MgF_2 particles of 0.25–0.36 μm in diameter and high monodispersity (S.D. = 7–15%) were obtained using the microwave-assisted precipitation technique.



Spherical MgF_2 Particles

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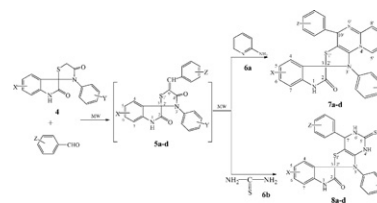
Synthesis of biologically important novel fluorinated spiro heterocycles under microwaves catalyzed by montmorillonite KSF

Kapil Arya^a, Anshu Dandia^b

^a*Indian Oil Corporation Limited, Catalyst Division, R&D center, Sector-13, Faridabad 121007, Haryana, India*

^b*Chemistry Department, University of Rajasthan, Jaipur 302004, India*

Novel fluorinated spiro [indole-3,2'-pyrido[1,2-a]thiazolo[5,4-e]pyrimidines] (**7**) and spiro [indole-3,2'-thiazolo[4,5-d]pyrimidines] (**8**) have been synthesized under microwaves in presence of montmorillonite KSF. Structure–activity relationships between the chemical structures and the antimycobacterial, antifungal activity of the evaluated compounds are also discussed.

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Ytterbium perfluorooctanesulfonates catalyzed synthesis of benzimidazole derivatives in fluorous solvents

Ming-Gui Shen, Chun Cai

Chemical Engineering College, Nanjing University of Science & Technology, Nanjing 210094, China

Catalytic condensation of *o*-phenylenediamine and aldehydes was accomplished using rare earth(III)perfluorooctane sulfonates ($\text{RE}(\text{OPf})_3$), RE = Sc, Y, La ~Lu) as catalysts in fluorous solvents. Ytterbium perfluorooctanesulfonates ($\text{Yb}(\text{OPf})_3$) catalyze the high-efficient synthesis of benzimidazole derivatives in fluorous solvents. By simple separation, fluorous phase containing only catalyst can be reused several times.

