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Graphical Abstracts/J. Fluorine Chem. 128 (2007) 1341–1344

J. Fluorine Chem., 128 (2007) 1345

The decomposition products of sulfur hexafluoride (SF_6): Reviews of environmental and health risk analysis

Wen-Tien Tsai

Graduate Institute of Bioresources, National Pingtung University of Science and Technology, Pingtung 912, Taiwan

Under the spark condition, the final toxic products of SF_6 decomposition in the presence of water vapor have been proposed in the literature to be hydrogen fluoride (HF) and sulfur dioxide (SO_2) or sulfuric acid (H_2SO_4).

$$\boldsymbol{SF_6} \quad [spark] \longrightarrow \boldsymbol{SF_4} + 2F \quad [H_2O] \longrightarrow \boldsymbol{SOF_2} + 2HF \quad [H_2O] \longrightarrow \boldsymbol{SO_2} + 2HF \quad 2[H_2O] \longrightarrow \boldsymbol{H_2SO_4} + 4\boldsymbol{HF}$$

J. Fluorine Chem., 128 (2007) 1353

New synthesis of polyfluoroalkanesulfonylureas

Z. Benfodda, L. Delon, F. Guillen, H. Blancou

Institut des Biomolécules Max Mousseron (IBMM), UMR CNRS 5247, Université de Montpellier I et de Montpellier II, Université de Montpellier II CC 1706, Place Eugène Bataillon 34095, Montpellier Cedex 05, France

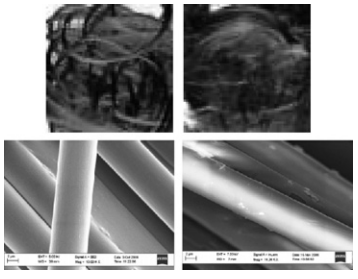
Perfluoroalkanesulfonyl fluoride underwent a reaction with ammonia to give perfluoroalkanesulfonamides (**1**). Then, the perfluoroalkanesulfonamides react with sodium methylate to give the corresponding sodium sulfonamides (**2**). The polyfluoroalkanesulfonyl ureas (**3**) were obtained by reaction of sodium sulfonamides (**2**) with isocyanates.

J. Fluorine Chem., 128 (2007) 1359

Surface and bulk properties of severely fluorinated carbon fibres

Kingsley K.C. Ho[a], Graham Beamson[b], George Shia[c], Natalya V. Polyakova[d], Alexander Bismarck[a]

[a]*Department of Chemical Engineering, Polymer and Composite Engineering (PaCE) Group, Imperial College London, London SW7 2AZ, UK*
[b]*STFC Daresbury Laboratory, National Centre for Electron Spectroscopy and Surface Analysis, Daresbury, Warrington, Cheshire WA4 4AD, UK*
[c]*Lodestar Ltd. Inc., 8 Arbor Drive, Howell, NJ 07731, USA*
[d]*SRI "Electrical Carbon Products" Electrougly, Moscow 142455, Russia*



High temperature direct fluorination of carbon fibres leads to the introduction of C–F covalent bonds. Severely fluorinated carbon fibres containing predominately covalent C–F_x bonds have been fabricated and their surface and bulk properties characterised.

doi:10.1016/S0022-1139(07)00317-X

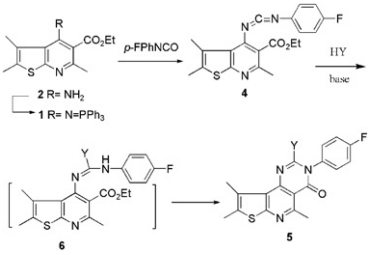
J. Fluorine Chem., 128 (2007) 1369

A facile synthesis and fungicidal activities of novel fluorine-containing pyrido[4,3-*d*]pyrimidin-4(3*H*)-ones

Qingyun Ren[a], Zeping Cui[a], Hongwu He[a], Yucheng Gu[b]

[a]*The Key Laboratory of Pesticide & Chemical Biology, Ministry of Education, College of Chemistry, Central China Normal University, 152 Luoyu Road, Wuhan, Hubei 430079, PR China*
[b]*Jealott's Hill International Research Centre, Syngenta, Bracknell, Berkshire RG42 6EY, United Kingdom*

Sixteen novel 2-substituted-pyrido[4,3-*d*]pyrimidin-4(3*H*)-ones **5a–5p** were easily synthesized *via* tandem aza-Wittig and annulation reactions. Their structures were clearly verified by IR, ^{1}H NMR, EI-MS spectroscopy and elemental analysis, and **5a**, analyzed by single-crystal X-ray diffraction. The results of preliminary bioassay indicated that some compounds possess significant fungicidal activities.

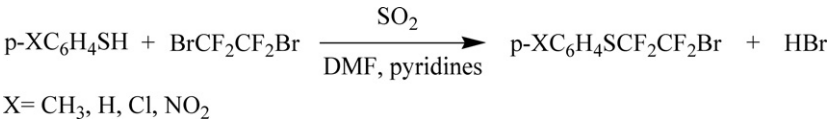


J. Fluorine Chem., 128 (2007) 1376

Selective fluoroalkylation of thiophenols by 1,2-dibromotetrafluoroethane activated by sulfur dioxide

Vyacheslav G. Koshechko, Lydiya A. Kiprianova, Ludmyla I. Fileleeva, Ludmyla I. Kalinina

L.V. Pisarzhevsky Institute of Physical Chemistry of the National Academy of Sciences of Ukraine, Pr. Nauky 31, Kiev 01039, Ukraine

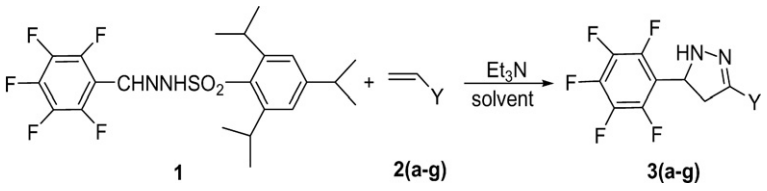


J. Fluorine Chem., 128 (2007) 1379

A novel synthesis of 5-perfluorophenyl 4,5-dihydro-1H-pyrazoles in THF or water

Wan Pang[a,b], Shifa Zhu[b], Huanfeng Jiang[a], Shizheng Zhu[b]

[a]*College of Chemistry, South China University of Technology, Guangzhou 510640, China*
[b]*Key Laboratory of Organofluorine Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, 354 Fenglin Lu, Shanghai 200032, China*



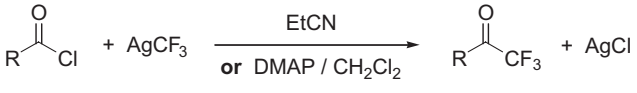
J. Fluorine Chem., 128 (2007) 1385

Silver compounds in synthetic chemistry. Part 5: Selective syntheses of trifluoromethylketones, $RCOCF_3$, from trifluoromethylsilver, $AgCF_3$, and corresponding acyl chlorides, RCOCl

Mikhail M. Kremlev[a], Aleksej I. Mushta[a], Wieland Tyrra[b], Dieter Naumann[b], Hendrik T.M. Fischer[b], Yurii L. Yagupolskii[a]

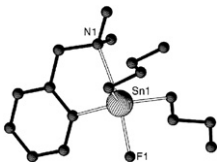
[a]*Institute of Organic Chemistry, National Academy of Sciences of the Ukraine, Murmanskaya St. 5, UA-02094 Kiev, Ukraine*
[b]*Institut für Anorganische Chemie, Universität zu Köln, Greinstr. 6, D-50939 Köln, Germany*

Trifluoromethylketones of aromatics, heteroaromatics and olefins are formed selectively from reactions of trifluoromethylsilver and the corresponding carboxylic acid chlorides in moderate to excellent yields.



J. Fluorine Chem., 128 (2007) 1390

Structure of *C*, *N*-chelated *n*Butyltin(IV) fluorides and their use as fluorinating agents of some chlorosilanes, chlorophosphine and metal halides



Petr Švec[a], Petr Novák[a], Milan Nádvorník[a], Zdeňka Padělková[a], Ivana Císařová[b], Lenka Kolářová[c], Aleš Růžička[a], Jaroslav Holeček[a]

[a]*Department of General and Inorganic Chemistry, Faculty of Chemical Technology, University of Pardubice, nám. Čs. legií 565, CZ-532 10, Pardubice, Czech Republic*

[b]*Department of Inorganic Chemistry, Faculty of Natural Science, Charles University in Prague, Hlavova 2030, 128 40 Praha 2, Czech Republic*

[c]*Department of Analytical Chemistry, Faculty of Chemical Technology, University of Pardubice, nám. Čs. legií 565, CZ-532 10, Pardubice, Czech Republic*

The solid-state structure of {2-[$(CH_3)_2NCH_2$]C_6H_4}*n*Bu_2SnF was studied by XRD techniques. Products of fluorination of {2-[$(CH_3)_2NCH_2$]C_6H_4}*n*$BuSnCl_2$ by different methods are described by NMR spectroscopy. The successful attempts to fluorinate various chlorosilanes, chlorophosphine and metal halides by {2-[$(CH_3)_2NCH_2$]C_6H_4}*n*Bu_2SnF are reported.

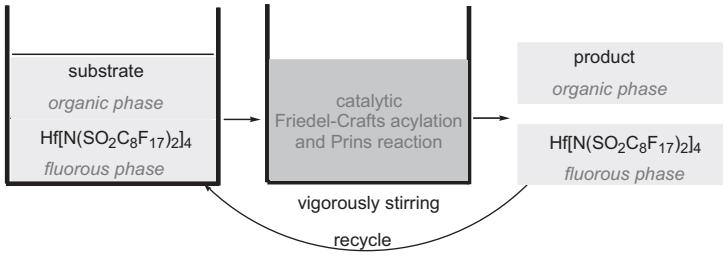
J. Fluorine Chem., 128 (2007) 1396

Recyclable hafnium(IV) bis(perfluorooctanesulfonyl)amide complex for catalytic Friedel–Crafts acylation and Prins reaction in fluorous biphase system

Xiuhua Hao, Akihiro Yoshida, Nobuto Hoshi

The Noguchi Institute, 1-8-1 Kaga, Itabashi-ku, Tokyo 173-0003, Japan

At low catalyst loadings (≤1 mol%), fluorous biphase $Hf[N(SO_2C_8F_{17})_2]_4$ Lewis acid catalyst can work efficiently for Friedel–Crafts acylation and Prins reaction.



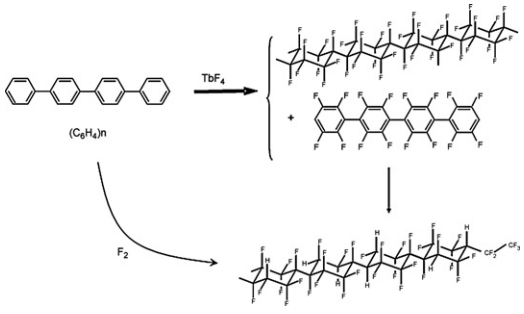
J. Fluorine Chem., 128 (2007) 1402

Fluorination of poly(*p*-phenylene) using TbF_4 as fluorinating agent

Wei Zhang, Marc Dubois, Katia Guérin, André Hamwi

Laboratoire des Matériaux Inorganiques, UMR CNRS-6002, Université Blaise Pascal Clermont-Ferrand, 63177 Aubière, France

Schematic reactions of fluorination of poly(*p*-phenylene) using F_2 and TbF_4 as fluorinating agent.



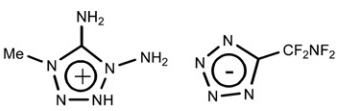
J. Fluorine Chem., 128 (2007) 1410

Synthesis and thermochemical properties of NF_2-containing energetic salts

Chengfeng Ye, Haixiang Gao, Jean'ne M. Shreeve

Department of Chemistry, University of Idaho, Moscow, ID 83844-2343, United States

NF_2-containing energetic salts were prepared and heats of formation were calculated and their detonation properties were predicted.



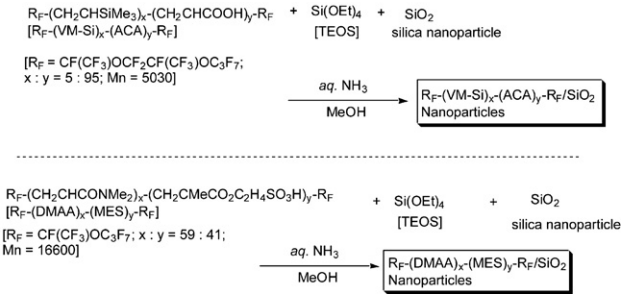
$d = 1.69$ g cm^{-3}, $\Delta_f H°_{298} = 52.56$ kJ mol^{-1}

J. Fluorine Chem., 128 (2007) 1416

Preparation of fluoroalkyl end-capped cooligomers/silica nanoparticles: A new approach to fluorinated nanoparticle inhibitors of Human Immunodeficiency Virus Type 1 and Simian Immunodeficiency Virus (SIV_{mac})

Hideo Sawada[a], Tamikazu Narumi[a], Makiko Kiyohara[b], Masanori Baba[b]

[a]*Department of Frontier Materials Chemistry, Graduate School of Science and Technology, Hirosaki University, Hirosaki 036-8561, Japan*
[b]*Center for Chronic Viral Diseases, Graduate School of Medical and Dental Sciences, Kagoshima University, Sakuragaoka, Kagoshima 890-8520, Japan*



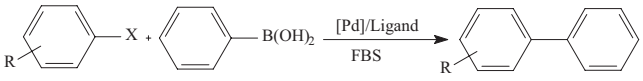
J. Fluorine Chem., 128 (2007) 1421

A novel fluorous palladium catalyst for Suzuki reaction in fluorous media

Ming-Gui Shen, Chun Cai, Wen-Bin Yi

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

Palladium(II) perfluorooctanesulfonate [$Pd(OSO_2R_{f8})_2$] catalyses the highly efficient Suzuki reaction in the presence of a catalytic amount of perfluoroalkylated-pyridine as a ligand in a fluorous biphase system (FBS). The fluorous phase containing the active palladium species is easily separated and can be reused several times without a significant loss of catalytic activity.



J. Fluorine Chem., 128 (2007) 1425

Potentiometric measurement of ionic, acid-labile and covalently bound fluorine

Laura I. Pera, Rodolfo C. Puche, Alfredo Rigalli

Bone Biology and Mineral Metabolism Laboratory, School of Medicine, Rosario National University, Santa Fe 3100, 2000 Rosario, Argentina

When the presence of ionic, acid-labile and covalently bound fluorine is suspected in a sample, it is subjected to potentiometry, distillation and potentiometry and incineration, distillation and potentiometry.