

Graphical Abstracts/J. Fluorine Chem. 120 (2003) v–viii

J. Fluorine Chem., **120** (2003) 99

Surface properties of fluorinated single-walled carbon nanotubes

Young Seak Lee^{a,b}, Tae Hyun Cho^b, Byoung Ky Lee^c, Jae Seong Rho^c, Kay Hayeok An^d,
Young Hee Lee^d

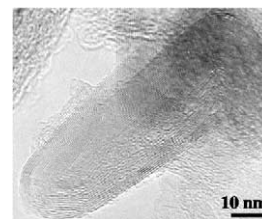
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The change of atomic and electronic structures of SWCNTs fluorinated at various temperatures was investigated using X-ray photoelectron spectroscopy (XPS), electrical resistivity measurements and transmission electron microscopy (TEM).



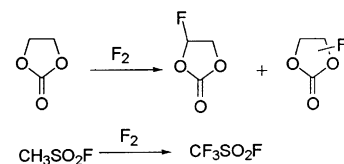
J. Fluorine Chem., **120** (2003) 105

Development of direct fluorination technology for application to materials for lithium battery

Masafumi Kobayashi, Tetsuya Inoguchi, Takashi Iida, Takashi Tanioka, Hiroshi Kumase, Yasushi Fukai

New Materials Laboratory, New Products Development Division, Kanto Denka Kogyo Co. Ltd., 1497 Shibukawa, Gunma 377-8513, Japan

Direct fluorination of 1,3-dioxolan-2-one or methanesulfonyl fluoride with elemental fluorine was carried out to provide 4-fluoro-1,3-dioxolan-2-one or trifluoromethanesulfonyl fluoride, respectively.



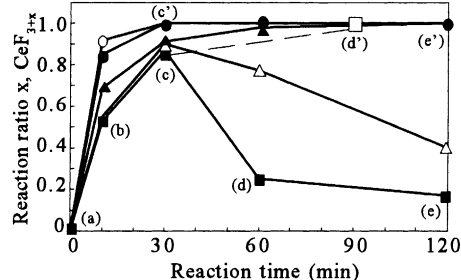
J. Fluorine Chem., **120** (2003) 111

Reaction between cerium trifluoride and elemental fluorine

Jae-Ho Kim, Susumu Yonezawa, Masayuki Takashima

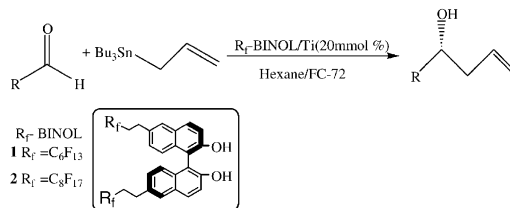
Department of Materials Science and Engineering, Faculty of Engineering, Fukui University, 3-9-1 Bunkyo, Fukui-shi 910-8507, Japan

The plot of reaction ratio against reaction time at the various temperatures under a fluorine pressure of 20kPa (■, 523K; △, 538K; ▲, 553K; ●, 563K; ○, 573K).

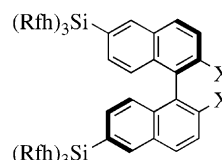


J. Fluorine Chem., **120** (2003) 117**6,6'-Bisperfluoroalkylated BINOLs promoted asymmetric allylation of aldehydes**

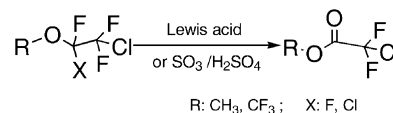
Yue-yan Yin, Gang Zhao, Zhan-shan Qian, Wei-xing Yin

State Key Laboratory of Organometallic Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, 354 Fenglin Lu, Shanghai, 200032, PR China*J. Fluorine Chem.*, **120** (2003) 121**Enantioselective carbon-carbon bond forming reactions using fluorous chiral catalysts**

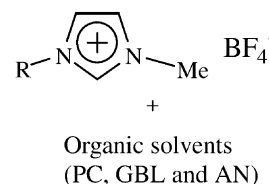
Yutaka Nakamura, Seiji Takeuchi, Yoshiaki Ohgo

*Niigata University of Pharmacy and Applied Life Sciences, 5-13-2 Kamishin'ei cho, Niigata 950-2081, Japan**(R)*-FBINOLs and *(R)*-F₁₃BINAP have been prepared. They are easily separable from the products and reusable in the asymmetric reactions.

$Rfh = C_6F_{13}CH_2CH_2$, $X = OH$: (*R*)-F₁₃BINOL
 $Rfh = C_8F_{17}CH_2CH_2$, $X = OH$: (*R*)-F₁₇BINOL
 $Rfh = C_6F_{13}CH_2CH_2$, $X = PPh_2$: (*R*)-F₁₃BINAP

J. Fluorine Chem., **120** (2003) 131**Defluorination of homologous chlorofluoroethers to chlorofluoroacetates**Heng-dao Quan^a, Masanori Tamura^a, Ren-xiao Gao^b, Akira Sekiya^a^a*National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba Central 5, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan*^b*Research Institute of Innovative Technology for the Earth (RITE), c/o AIST, Tsukuba Central 5, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan**J. Fluorine Chem.*, **120** (2003) 135**Physical and electrochemical properties of 1-alkyl-3-methylimidazolium tetrafluoroborate for electrolyte**

Tetsuo Nishida*, Yasutaka Tashiro, Masashi Yamamoto

*Research Division, Stella Chemifa Corporation 227, 7-cho, Kaizan-cho, Sakai, Osaka 590-0982, Japan*1-Alkyl-3-methylimidazolium tetrafluoroborate ($n = 2-4$) and several organic solvents intermingled with each other and the solutions exhibited some enhancement in conductivity compared to triethylmethylammonium tetrafluoroborate solution.

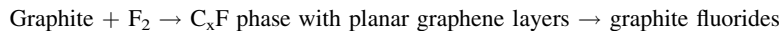
J. Fluorine Chem., **120** (2003) 143

A study on the formation mechanism of graphite fluorides by Raman spectroscopy

Vinay Gupta^a, Tsuyoshi Nakajima^a, Yoshimi Ohzawa^a, Boris Žemva^b

^aDepartment of Applied Chemistry, Aichi Institute of Technology, Yakusa-cho, Toyota-shi 470-0392, Japan

^bJožef Stefan Institute, Jamova 39, 1000 Ljubljana, Slovenia

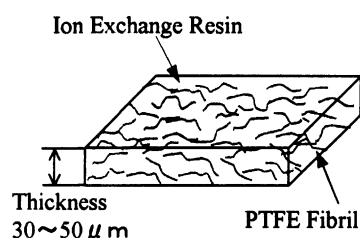
*J. Fluorine Chem.*, **120** (2003) 151

Characterization of fibril reinforced membranes for fuel cells

Satoru Hommura, Yasuhiro Kunisa, Ichiro Terada, Masaru Yoshitake

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Fibril reinforced membranes for fuel cells show high mechanical strength, especially in creep and tear strength, and good cell performance.

*J. Fluorine Chem.*, **120** (2003) 157

Fabrication of high performance thin films from metal fluorocomplex aqueous solution by the liquid phase deposition

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^bDepartment of Chemical Science and Engineering, Faculty of Engineering, Graduate School of Science and Technology, Kobe University, Rokkodai, Nada, Kobe 657-8501, Japan

The Nb₂O₅ thin films containing Pt, Au ionic species are deposited from a mixed solution of niobium source, H₃BO₃, Pt(NH₃)₄Cl₂ and HAuCl₄ aqueous solutions under the ambient temperature and atmosphere. In the case of Au/SiO₂ composite film, (NH₄)₂SiF₆ solution is used as a mother solution.

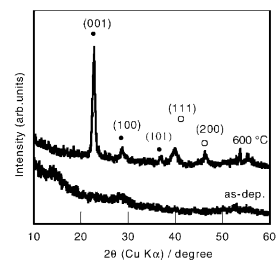


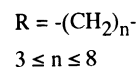
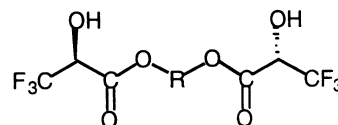
Fig. XRD patterns of Pt/Nb₂O₅ composite films.

J. Fluorine Chem., **120** (2003) 165

A crystal engineering utilization of hexafurcated hydrogen bonding to construction of subnano fluorinated tunnels

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A seven centered (hexafurcated) hydrogen bonding system found in the crystals of the trifluorolactates and a crystal engineering utilization of the hydrogen bonding for construction of subnano fluorinated tunnels are described.

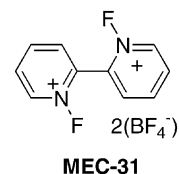


J. Fluorine Chem., **120** (2003) 173

Electrophilic fluorination with *N,N'*-difluoro-2,2'-bipyridinium salt and elemental fluorine

Kenji Adachi, Yutaka Ohira, Ginjiro Tomizawa, Sumi Ishihara, Satoshi Oishi
Research and Development Department No. 2, Chemical Division, Daikin Industries Limited, 3 Miyukigaoka, Tsukuba-shi, Ibaraki 305-0841, Japan

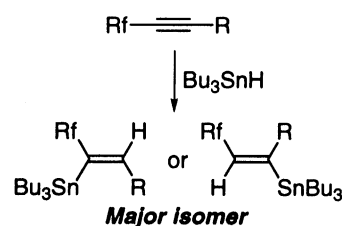
N,N'-Difluoro-2,2'-bipyridinium bis(tetrafluoroborate) (MEC-31) was shown to be a highly reactive electrophilic fluorinating agent with the highest effective fluorine content in its class and to be recycled. In the fluorination of 1,3-dicarbonyl compounds with elemental fluorine, the introduction method of fluorine gas was very important in order to make a reaction efficient.

*J. Fluorine Chem.*, **120** (2003) 185

A highly regio- and stereo-selective hydrostannation reaction of various fluorine-containing internal acetylene derivatives

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The fluorine-containing acetylene derivatives react with Bu_3SnH to give the corresponding fluoroalkylated vinylstannanes in high yields.

*J. Fluorine Chem.*, **120** (2003) 195

Preparation of α - or β -trifluoromethylated vinylstannanes and their cross-coupling reactions

In Howa Jeong, Young Sam Park, Myong Sang Kim, Yong Sup Song

Department of Chemistry, Yonsei University, Wonju 220-710, South Korea

α - or β -Trifluoromethylated vinylstannanes were prepared and utilized for the cross-coupling reactions with aryl iodides or acyl chlorides in the presence of Pd catalyst and copper salt.

