



## Graphical Abstracts/J. Fluorine Chem. 129 (2008) 1129–1132

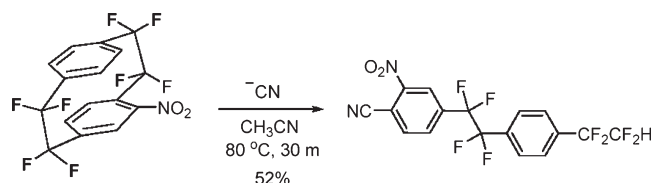
J. Fluorine Chem., 129 (2008) 1133

## Novel ring-cleaving reaction of 4-nitro-1,1,2,2,9,9,10,10-octafluoro[2.2]paracyclophane with nucleophiles

William R. Dolbier Jr., Yian Zhai, Wei Xu, Will Wheelus, Florian Dulong, Efram Goldberg, Ion Ghiviriga, Merle A. Battiste

Department of Chemistry, University of Florida, Gainesville, FL 32611-7200, United States

Nucleophilic ring opening reactions of 4-nitro-AF4 are reported.

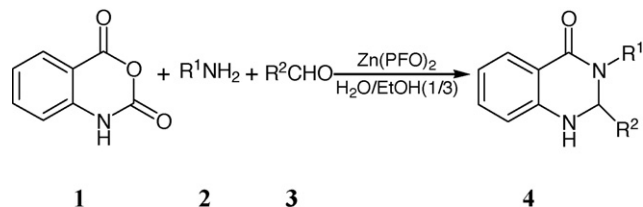


J. Fluorine Chem., 129 (2008) 1139

A novel catalyst zinc(II) perfluorooctanoate [Zn(PFO)<sub>2</sub>]-catalyzed three-component one-pot reaction: Synthesis of quinazolinone derivatives in aqueous micellar media

Li-Min Wang, Liang Hu, Jue-Hua Shao, Jianjun Yu, Liang Zhang

Key Laboratory for Advanced Materials &amp; Institute of Fine Chemicals, East China University of Science and Technology, 130 Meilong Lu, Shanghai 200237, People's Republic of China

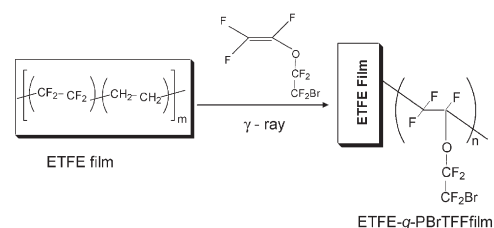
Zinc(II) perfluorooctanoate [Zn(PFO)<sub>2</sub>] is found to catalyze efficiently the three-component one-pot cyclocondensation reaction of isatoic anhydride, amines and aldehydes under aqueous micellar media to afford the corresponding quinazolinone derivatives in good yields.

J. Fluorine Chem., 129 (2008) 1146

## Radiation-induced grafting of perfluorinated vinyl ether into fluorinated polymer films

Maolin Zhai<sup>ab</sup>, Shin Hasegawa<sup>a</sup>, Jinhua Chen<sup>a</sup>, Yasunari Maekawa<sup>a</sup><sup>a</sup>Conducting Polymer Materials Group, Environment and Industrial Materials Research Division, Quantum Beam Science Directorate, Japan Atomic Energy Agency (JAEA), 1233 Watanuk-machi, Takasaki, Gunma 370-1292, Japan<sup>b</sup>Beijing National Laboratory for Molecular Sciences (BNLMS), Department of Applied Chemistry, College of Chemistry and Molecular Engineering, Peking University, 100871 Beijing, PR China

2-Bromotetrafluoroethyl trifluorovinyl ether (BrTFF) was introduced homogeneously into poly(ethylene-co-tetrafluoroethylene) (ETFE) films by radiation-induced graft polymerization.

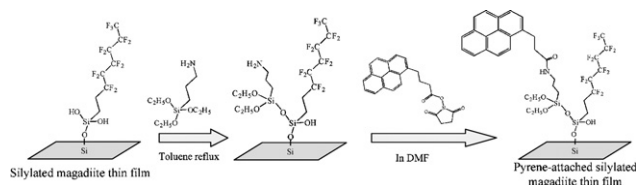


*J. Fluorine Chem.*, 129 (2008) 1150

## Preparation of silylated magadiite thin-film-containing covalently attached pyrene chromophores

Y. Matsuo<sup>a</sup>, Y. Yamada<sup>a</sup>, M. Nishikawa<sup>a</sup>, T. Fukutsuka<sup>b</sup>, Y. Sugie<sup>a</sup><sup>a</sup>Department of Materials Science and Chemistry, Graduate School of Engineering, University of Hyogo, 2167 Shosha, Himeji, Hyogo 671-2210, Japan<sup>b</sup>Department of Interdisciplinary Environment, Kyoto University, Yoshida-nihonmatsu-cho, Sakyo-ku, Kyoto 606-8501, Japan

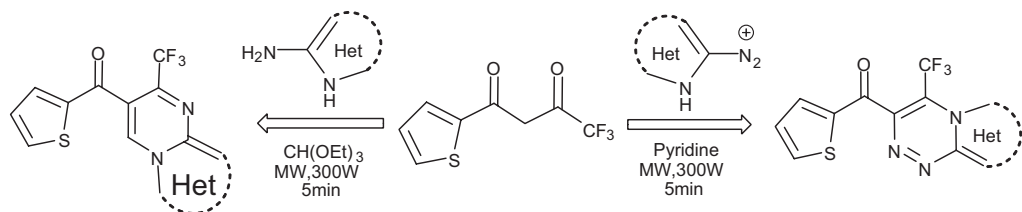
Pyrene chromophores were covalently attached to the layers of silylated magadiite thin-film-containing perfluoroalkyl groups.

*J. Fluorine Chem.*, 129 (2008) 1156

## Microwave-assisted synthesis of fused heterocycles incorporating trifluoromethyl moiety

Mohamed R. Shaaban

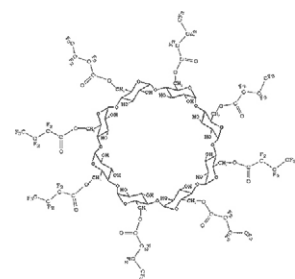
Department of Chemistry, Faculty of Science, Cairo University, Giza 12613, Egypt

*J. Fluorine Chem.*, 129 (2008) 1162

## Sustained release applications of a fluoroalkyl ester-functionalized amphiphilic cyclodextrin by inclusion complex formation with water-soluble drugs in supercritical carbon dioxide

Hullathy Subban Ganapathy<sup>a</sup>, Min Young Lee<sup>a</sup>, Chan Park<sup>b</sup>, Kwon Taek Lim<sup>a</sup><sup>a</sup>Division of Image and Information Engineering, Pukyong National University, San 100, Nam-gu, Busan 608-739, Republic of Korea<sup>b</sup>Division of Materials Science & Engineering, Pukyong National University, San 100, Nam-gu, Busan 608-739, Republic of Korea

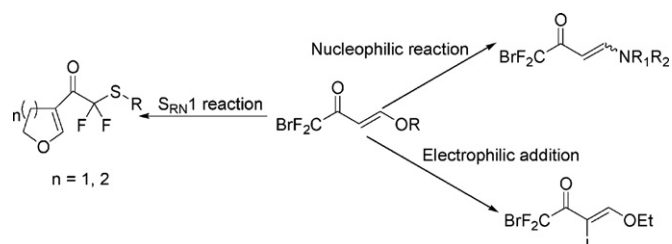
An amphiphilic cyclodextrin, modified with fluoroalkyl ester groups substituted at the primary rim of the macrocycle, was investigated for its potential use as a controlled release carrier for hydrophilic drugs. Host-guest inclusion complexes were prepared using a "green" solvent supercritical carbon dioxide.

*J. Fluorine Chem.*, 129 (2008) 1167

## Synthesis and substitution reactions of $\beta$ -alkoxyvinyl bromodifluoromethyl ketones

Xiang Fang<sup>a</sup>, Yang Chen<sup>a</sup>, Daming He<sup>a</sup>, Xianjin Yang<sup>a</sup>, Fanhong Wu<sup>a,b</sup><sup>a</sup>Laboratory for Advanced Material and Institute of Fine Chemicals, School of Chemistry and Molecular Engineering, East China University of Science and Technology, 130 Meilong Road, Shanghai 200237, China<sup>b</sup>Key Laboratory of Organofluorine Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai 200032, China

$\beta$ -Alkoxyvinyl bromodifluoromethyl ketones were synthesized by the reaction of bromodifluoroacetic anhydride with appropriate vinyl ether. Some electrophilic and nucleophilic reactions of the enones were studied, especially the  $S_{RN}1$  reactions of the enones with thio-nucleophiles.

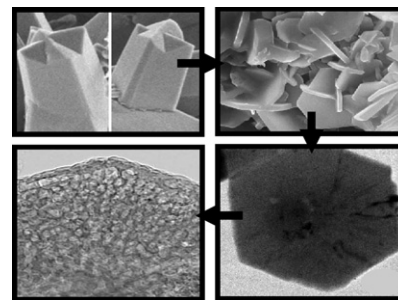


J. Fluorine Chem., 129 (2008) 1173

### Fluorinated transition alumina with $Al_{2-x/3}O_{3-x}F_x$ compositions: Thermal, chemical, structural and morphological investigations

M. Gaudon<sup>a</sup>, J. Majimel<sup>a</sup>, J.-M. Heintz<sup>a</sup>, M. Feist<sup>b</sup>, D. Dambournet<sup>a</sup>, A. Tressaud<sup>a</sup><sup>a</sup>Institut de Chimie de la Matière Condensée de Bordeaux, UPR 9048-CNRS, 87 Avenue du Docteur Schweitzer, 33608 Pessac, France<sup>b</sup>Humboldt-University Berlin, Institute of Chemistry, Brook-Taylor-Str. 2, D-12489 Berlin, Germany

For the first time, an Al–O–F phase (fluorinated transition alumina with  $Al_{2-x/3}O_{3-x}F_x$  composition) with hexagonal structure/crystallites shape was synthesized via decomposition of  $\alpha$ -AlF<sub>3</sub> under air.



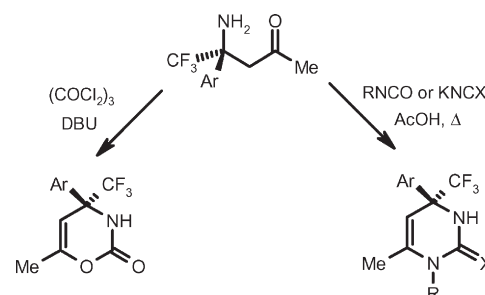
J. Fluorine Chem., 129 (2008) 1180

### Optically active 4-amino-4-aryl-5,5,5-trifluoropentan-2-ones: Versatile reagents for synthesis of chiral 4-trifluoromethyl-3,4-dihydroazin-2-ones

Volodymyr A. Sukach, Nataliya M. Golovach, Nina V. Melnichenko, Ivan F. Tsybal, Mykhaylo V. Vovk

Institute of Organic Chemistry, National Academy of Sciences of Ukraine, Murmans'ka 5, Kyiv 02094, Ukraine

Synthesis of chiral 3,4-dihydropyrimidin-2(1H)-(thi)ones and 3,4-dihydro-1,3-oxazin-2-ones from enantiomerically enriched 4-amino-4-aryl-5,5,5-trifluoropentan-2-ones is described.

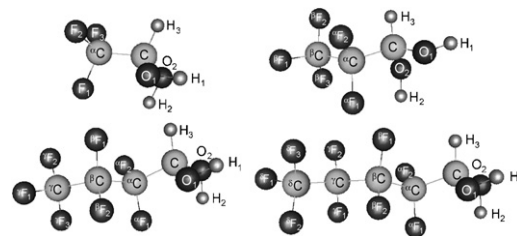


J. Fluorine Chem., 129 (2008) 1187

### Molecular structure and IR absorption spectra of perfluorinated aldehyde hydrates ( $n-C_xF_{2x+1}CH(OH)_2$ , $x = 1-4$ )

N. Kanno<sup>a</sup>, K. Tonokura<sup>a</sup>, M.D. Hurley<sup>b</sup>, T.J. Wallington<sup>b</sup><sup>a</sup>Environmental Science Center, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033, Japan<sup>b</sup>Ford Motor Company, Mail Drop RIC-2122, Dearborn, MI 48121-2053, USA

Structures and IR absorption spectra of the conformational isomers of perfluorinated aldehyde hydrates,  $n-C_xF_{2x+1}CH(OH)_2$ , ( $x = 1-4$ ) have been calculated using density functional theory (DFT) and compared to experimental FT-IR measurements. The experimental spectra are well described by composite spectra of the thermal equilibrium mixture of different conformational isomers of  $n-C_xF_{2x+1}CH(OH)_2$  calculated by DFT.

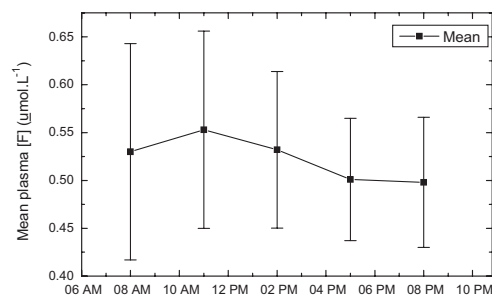


J. Fluorine Chem., 129 (2008) 1193

### Daily variations in human plasma fluoride concentrations

Vanessa E.S. Cardoso<sup>a</sup>, Gary M. Whitford<sup>b</sup>, Hiroshi Aoyama<sup>c</sup>, Marilia A.R. Buzalaf<sup>d</sup><sup>a</sup>Institute of Chemistry, University of São Paulo, Av. Prof. Lineu Prestes, 748, CEP 05508-900, São Paulo-SP, Brazil<sup>b</sup>Department of Oral Biology, School of Dentistry, Medical College of Georgia, Augusta, 30912-1129, GA, USA<sup>c</sup>Department of Biochemistry, University of Campinas, R Monteiro Lobato, 255, CEP 13083-862, Campinas-SP, Brazil<sup>d</sup>Department of Biological Sciences, Bauru Dental School, University of São Paulo, Al. Octávio Pinheiro Brisolla, 9-75, CEP 17012-901, Bauru-SP, Brazil

Mean Plasma fluoride concentration ( $\mu\text{mol L}^{-1}$ ) as a function of the time of blood collection during the 5 days of the study.

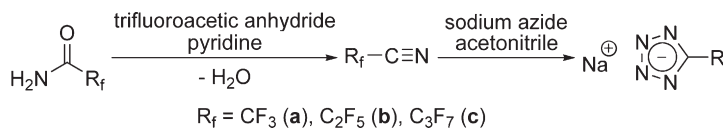


## Synthesis and characterization of perfluorinated nitriles and the corresponding sodium 5-perfluoroalkyltetrazolate salts

Margaret-J. Crawford, Thomas M. Klapötke, Hendrik Radies

Department of Chemistry and Biochemistry, Ludwig-Maximilian University of Munich, Butenandtstr. 5-13 (D), D-81377 Munich, Germany

Trifluoroacetonitrile (**1a**), pentafluoropropionitrile (**1b**) and heptafluorobutyronitrile (**1c**) were synthesized from readily available starting materials under mild reaction conditions. Furthermore, sodium 5-trifluoromethyltetrazolate (**2a**), sodium 5-pentafluoroethyltetrazolate (**2b**) and sodium 5-heptafluoropropyltetrazolate (**2c**) were synthesized and characterized. The crystal structure of **2a** as monohydrate was determined.



## Skeletal transformations of perfluorinated 2,2-diethyl- and 2-ethyl-2-phenyl-benzocyclobutenones under the action of antimony pentafluoride

Yaroslav V. Zonov, Tatyana V. Mezhenkova, Victor M. Karpov, Vyacheslav E. Platonov

N.N. Vorozhtsov Novosibirsk Institute of Organic Chemistry, Novosibirsk 630090, Russia

