

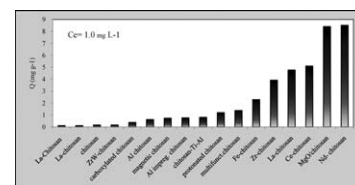
Graphical Abstracts/J. Fluorine Chem. 132 (2011) 227–230

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Fluoride removal from water by chitosan derivatives and composites: A review

Patricia Miretzky^a, Alicia Fernandez Cirelli^b^aCentro de Geociencias, Universidad Nacional Autónoma de México, Campus Juriquilla, Boulevard Juriquilla 3001, Queretaro 76230, Mexico^bCentro de Estudios Transdisciplinarios del Agua, Facultad de Ciencias Veterinarias, Universidad de Buenos Aires, Chorroarín 280, Buenos Aires 1427, Argentina

Some of the adsorbents reported in this paper presented high adsorption capacity at high F⁻ equilibrium concentration in water, but, in water treatment, the final concentration of F⁻ in the water solution must be below 1.0 mg L⁻¹. So it is desirable that the adsorbent presents high adsorption capacity at low fluoride equilibrium concentrations. The pictogram shows that the best F⁻ adsorbents were Nd–chitosan and MgO–chitosan followed by rare earth metal–chitosan derivatives because they presented higher adsorption capacity at the equilibrium F⁻ concentration of 1 mg L⁻¹.



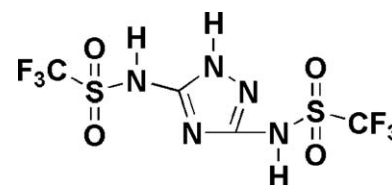
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Trifluoromethanesulfonamide derivatives of azoles

Sonali Garg, Jean'ne M. Shreeve

Department of Chemistry, University of Idaho, Moscow, ID 83844-2343 USA

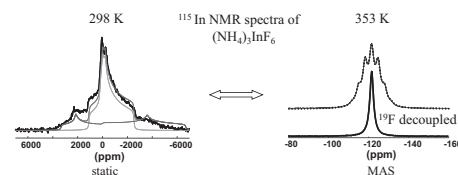
High melting and thermally stable 3,5-bis(trifluoromethanesulfonylamino)-1H-1,2,4-triazole and other amino 1,2,4-triazole and 5-amino tetrazole derivatives form readily when the azole is reacted with trifluoromethanesulfonyl fluoride in the presence of triethylamine.



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¹¹⁵In and ¹⁹F MAS NMR study of (NH₄)₃InF₆ phasesG. Scholz^a, T. Krahl^b, M. Ahrens^a, C. Martineau^c, J.Y. Buzaré^c, C. Jäger^b, E. Kemnitz^a^aHumboldt-Universität zu Berlin, Institut für Chemie, Brook-Taylor-Str. 2, D-12489 Berlin, Germany^bBundesanstalt für Materialprüfung und -forschung, Richard-Willstätter-Straße 11, D-12489 Berlin, Germany^cLaboratoire de Physique de l'Etat Condensé (UMR CNRS 6087), Institut de Recherche en Ingénierie Moléculaire et Matériaux Fonctionnels (FR CNRS 2575), Université du Maine, Avenue O. Messiaen, 72085 Le Mans Cedex 9, France

The room and high temperature phases of (NH₄)₃InF₆ are characterized using ¹⁹F and ¹¹⁵In as probe nuclei.



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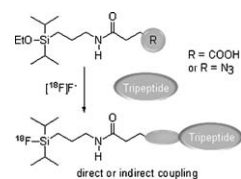
Synthesis and hydrolytic stability of novel 3-¹⁸F-fluoroethoxybis(1-methylethyl)silyl]propanamine-based prosthetic groups

Eva Balentova^a, Charlotte Collet^a, Sandrine Lamandé-Langle^a,
Françoise Chrétien^a, David Thonon^b, Joël Aerts^b, Christian Lemaire^b, André Luxen^b,
Yves Chapleur^a

^aUMR 7565, Nancy Université-CNRS, Groupe SUCRES, BP 70239, F-54506 Vandoeuvre-lès-Nancy, France

^bCentre de Recherches du Cyclotron, Université de Liège, Sart-Tilman B30, B-4000 Liège, Belgium

Silicon based prosthetic groups were synthesized and coupled to a tripeptide through an amide bond formation or a Huisgen cycloaddition. ¹⁸F-Labeling of these precursors gave the radiolabelled peptide.



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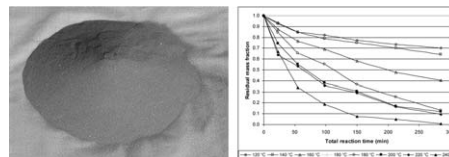
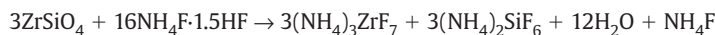
Reaction kinetics of the microwave enhanced digestion of zircon with ammonium acid fluoride

J.T. Nel^a, W. du Plessis^a, T.N. Nhlabathi^a, C.J. Pretorius^a, A.A. Jansen^a, P.L. Crouse^b

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^bThe Department of Chemical Engineering, University of Pretoria, Pretoria 0002, South Africa

Zircon beach sand is a notoriously inert mineral. Extraction of the zircon values requires aggressive conditions, e.g. by molten alkali leaching, plasma dissociation or mechanical activation followed by leaching, etc. Here results pertaining to the microwave digestion of the material are presented, demonstrating an alternative route to beneficiation.



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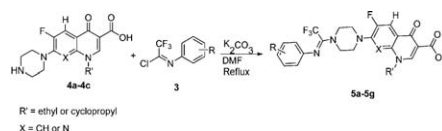
Synthesis of N-aryl-2,2,2-trifluoroacetimidoyl piperazinylquinolone derivatives and their antibacterial evaluations

Ali Darehkordi^a, Mahmood Javanmiri^{ab}, Somayeh Ghazi^{ab}, Shokrollah Assar^b

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^bDepartment of Microbiolog, Immunology and Biology, Rafsanjan University of Medical Sciences, Rafsanjan, Iran

N-substituted trifluoroacetimidoyl chlorides were used for synthesis of new piperazinylquinolone derivatives. These reactions provided N-aryl-2,2,2-trifluoroacetimidoyl piperazinylquinolone derivatives **5a–5g** in good yields. Two selected compounds were evaluated for their antibacterial activities. These compounds displayed good antibacterial activities.



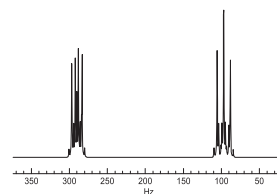
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Determination of the second-order ¹H NMR parameters for the aromatic protons in 4-fluoroaniline and application to the analysis of the ¹H NMR spectra for the aromatic protons in N⁴-(4'-fluorophenyl)succinamic acid and in N⁴-(4'-fluorophenyl)-3,3-difluorosuccinamic acid

John M. Risley, John P. Kastanis, Amber M. Young

Department of Chemistry, The University of North Carolina at Charlotte, 9201 University City Blvd., Charlotte, NC 28223-0001, United States

Optimized simulation of a ¹H NMR second-order, AA'BB'X, spectrum for the aromatic protons in a *para*-fluoroanilide using WINDNMR-Pro.



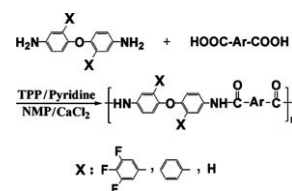
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New fluorinated aromatic poly(ether-amide)s derived from 2,2'-bis(3,4,5-trifluorophenyl)-4,4'-diaminodiphenyl ether and various dicarboxylic acids

Hossein Behniafar, Mohsen Sedaghatdoost

School of Chemistry, Damghan University, 36715-364, Damghan, Iran

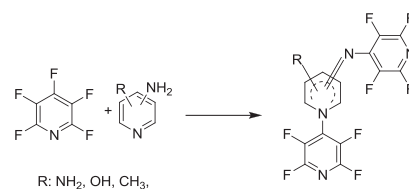
Good organo-solubility, moderate T_g values and excellent thermo-stability make the resulting all-aromatic fluoropoly(ether-amide)s promising as high performance polymeric materials.

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Synthesis and structural study of bis-perfluoropyridyl bridged by 1,4 and 1,2 dihydropyridine

Reza Ranjbar-Karimi^a, Mahtab Mashak-Shoshtari^a, Somayeh Hashemi-Uderji^a, Reza Kia^{bc}^a*Department of Chemistry, Faculty of Science, Vali-e-Asr University, 77176 Rafsanjan, Islamic Republic of Iran*^b*Department of Chemistry, Science and Research Branch, Islamic Azad University, Tehran, Islamic Republic of Iran*^c*X-ray Crystallography Lab., Plasma Physics Research Center, Science and Research Branch, Islamic Azad University, Tehran, Islamic Republic of Iran*

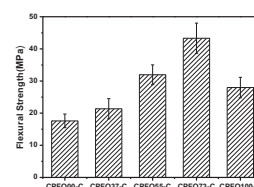
Reaction of pentafluoropyridine with aminopyridine derivatives in the presence of sodium bicarbonate and also in concentrated acetonitrile solution to maximize intermolecular reaction at reflux gave a single product, bis-perfluoropyridyl bridged by 1,4 and 1,2 dihydropyridine, in good yield.

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Synergistic effects induced by oxy-fluorination of carbon preforms to improve the mechanical and thermal properties of carbon-carbon composites

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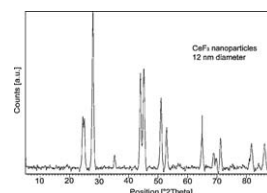
Oxy-fluorination of carbon preforms with various $F_2:O_2$ mixture gas ratios improved flexural strength of the C/C composites, suggesting the interfacial adhesion between carbon matrix and carbon preform also improved.

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Simple one-step preparation of cerium trifluoride nanoparticles

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Nanoparticles of CeF_3 were prepared by simple one pot reaction of 1-butyl-3-methylimidazolium hexafluorophosphate with CeO_2 and by reaction of 1-butyl-3-methylimidazolium chloride and KPF_6 with CeO_2 . Prepared nanoparticles were analyzed by XRD and SEM analysis. Average diameter of prepared nanoparticles resulting from Sherrer formula is 12 nm. Nanoparticles did not form ordered agglomerates and could be used in the form of separate nanoparticles which desired in some applications. Size of CeF_3 nanoparticles is independent on size of CeO_2 .



Corrigendum to “Thermal rearrangement of substituted difluoro(methylene)cyclopropane” [J. Fluorine Chem. 132 (2011) 63–67]

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^aKey Laboratory of Organofluorine Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, 345 Lingling Road 200032, China

^bZhejiang Chemical Industry Research Institute, 387 Tianmushan Road, Hangzhou, Zhejiang 310023, China

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