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The stereoselective synthesis of (*Z*)-HFC=CFZnI and stereospecific preparation of (*E*)-1,2-difluorostyrenes from (*Z*)-HFC=CFZnI *via* an unusual $Pd(PPh_3)_4$–Cu(I)Br co-catalysis approach or (*Z*)-HFC=$CFSnBu_3$

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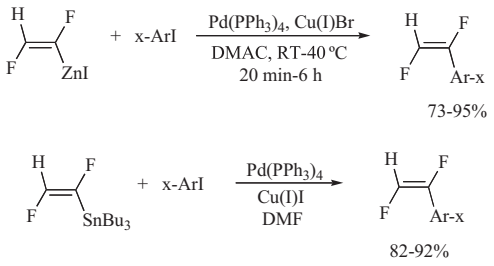

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Extreme modulation properties of aromatic fluorine

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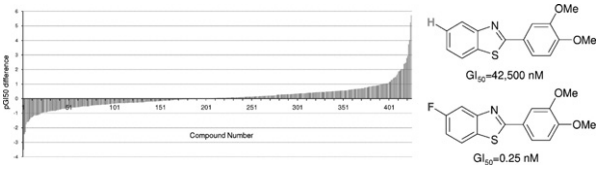
Aromatic fluorine is a unique modulator of biological properties of organic compounds. In some rare cases, introduction of aromatic fluorine improved biological activity more than 100,000 times and even higher.



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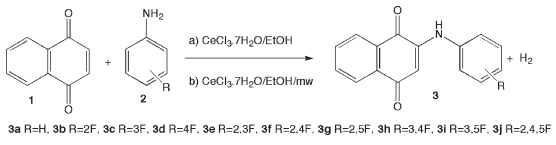
Synthesis, spectral and electrochemical characterization of novel 2-(fluoroanilino)-1,4-naphthoquinones

Elisa Leyva[a], Lluvia I. López[b], Silvia E. Loredo-Carrillo[a], Margarita Rodríguez-Kessler[a], Antonio Montes-Rojas[a]



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[b]*Facultad de Ciencias Químicas, Universidad Autónoma de Coahuila, Blvd. V, Carranza e Ing. José Cárdenas s/n, Col. República, C.P. 25250, Saltillo, Coahuila, Mexico*

Novel 2-(fluoroanilino)-1,4-naphthoquinones were prepared reacting the corresponding fluoroaniline and 1,4-naphthoquinone in the presence of a Lewis acid catalyst with strong oxidation properties such as $CeCl_3 \cdot 7H_2O$. This preparation was also investigated under microwave irradiation. All 1,4-naphthoquinone derivatives were characterized by UV–Vis, IR, ^1H and ^{19}F NMR, MS and cyclic voltammetry.

doi:10.1016/S0022-1139(11)00016-9

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A facile synthesis of α-aminophosphonates catalyzed by ytterbium perfluorooctanoate under solvent-free conditions

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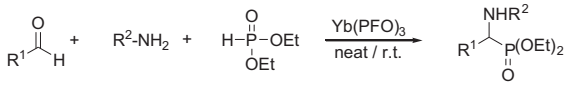

An efficient and one-pot protocol for the synthesis of α-aminophosphonates promoting by ytterbium perfluorooctanoate [$Yb(PFO)_3$] under solvent-free conditions is described.

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Products formed at intermediate stages of electrochemical perfluorination of propionyl and n-butyryl chlorides. Further evidence in support of NiF_3 mediated free radical pathway

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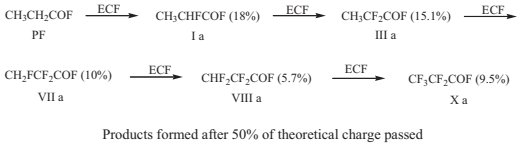

The partially fluorinated HF soluble intermediates formed during the electrochemical perfluorination of propionyl chloride (PC) and n-butyryl chloride (n-BC) were analyzed after passing 0%, 25%, 50%, 75% and 100% of theoretical charge required for the fluorination of PC and n-BC. Free radical mechanism appears to be the major pathway as indicated by formation of large number of partially fluorinated compounds at every stage of electrochemical fluorination. For both PC and n-BC this mechanism also explains radical coupling, C–C bond cleavage and carbon chain isomerization.

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The effect of column and eluent fluorination on the retention and separation of non-fluorinated amino acids and proteins by HPLC

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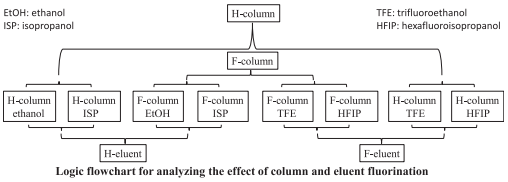

Logic flowchart for analyzing the effect of column and eluent fluorination

Fluorocarbon column and fluorocarbon eluents are compared side-by-side with their hydrocarbon counterparts to extract the effect of column and eluent fluorination on analyte retention and separation. Statistical analyses of retention time data revealed that optimal retention and separation is achieved when the fluorocarbon column is paired with ethanol.

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Synthesis of a novel functional polymer immobilized platinum complex and its application in the catalytic hydrosilylation of 3,3,3-trifluoropropene with triethoxysilane

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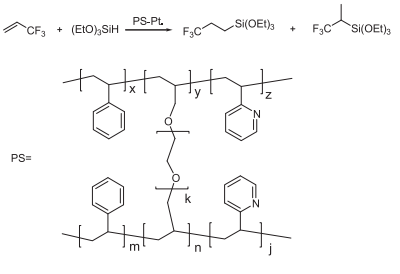

The novel polymer synthesized immobilized platinum and applied in the catalytic hydrosilylation of 3,3,3-trifluoropropene with triethoxysilane. The catalysts show the excellent activity and the high selectivity of β-adduct.

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Stereospecific preparation of (1*E*,3*E*,5*E*)-3.4-difluoro-1,6-diphenylhexatriene and (2*E*,4*E*,6*E*)-diethyl-4,5-difluoroocta-2,4,6-trienedioate

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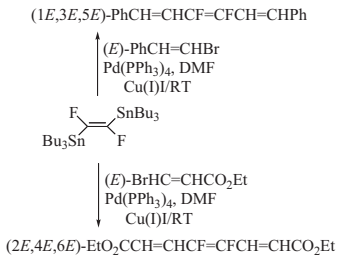
Department of Chemistry, University of Iowa, Iowa City, IA 52242, USA



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Synthesis and biological evaluation of new 3-trifluoromethylpyrazolesulfonyl-urea and thiourea derivatives as antidiabetic and antimicrobial agents

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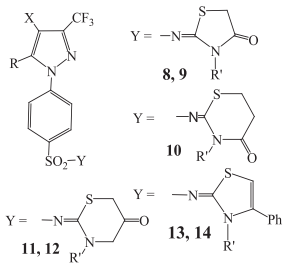
Fluorinated pyrazoles were prepared as hypoglycemic and antibacterial agents by condensation and subsequent cyclization of the thiourea derivatives of 3-trifluoromethylpyrazoles with ethyl bromoacetate, ethyl β-bromopropionate, 1,3-dichloroacetone and α-bromoacetophenone to give compounds **2**–**18**.



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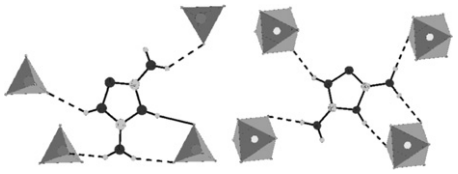
Synthesis, crystal structure, IR-spectral data and some properties of 3,5-diamino-1,2,4-triazolium tetrafluoroborate and hexafluorosilicate



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3,5-Diamino-1,2,4-triazolium tetrafluoroborate $(LH)BF_4$ and hexafluorosilicate $(LH)_2SiF_6$ have been isolated and characterized by single-crystal X-ray structure determination, IR spectroscopy, mass spectrometry, TGA, solubility data, potentiometry.

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Unusual β,β′-coupling and β-alkylation of methyl 2,3,3-trifluoropropenoate by lithium diorganocuprates

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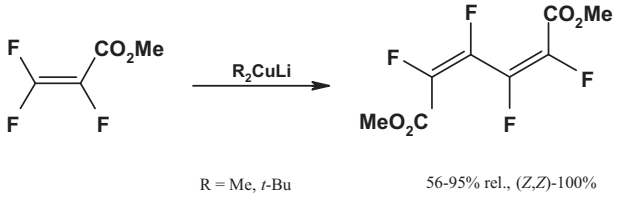

Lithium dimethyl- or di(*tert*-butyl)cuprate afforded the product of unusual coupling, while dibutyl- or diphenylcuprate gave the product of β-fluorine substitution in the substrate.