

## Graphical Abstracts/J. Fluorine Chem. 129 (2008) 139–141

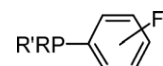
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### Fluoroarylphosphines as ligands

Ciara L. Pollock<sup>a</sup>, Graham C. Saunders<sup>a</sup>, E.C.M. Sarah Smyth<sup>a</sup>, Vladimir I. Sorokin<sup>b</sup>

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Fluoroarylphosphines, the electronic and steric properties and chemical properties of which have been known for 30 years, have been increasingly used in recent years as ligands for homogeneous catalysis and in the synthesis of elaborate multidentate ligands.

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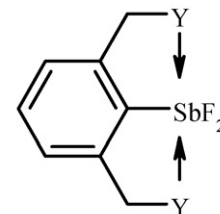
### The synthesis of organoantimony(III) difluorides containing Y,C,Y pincer type ligands using organotin(IV) fluorinating agents

Libor Dostál<sup>a</sup>, Roman Jambor<sup>a</sup>, Aleš Růžička<sup>a</sup>, Robert Jirásko<sup>b</sup>, Ivana Císařová<sup>c</sup>, Jaroslav Holeček<sup>a</sup>

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Y = MeO, *t*-BuO, Me<sub>2</sub>N

The organoantimony(III) difluorides containing Y,C,Y-chelating ligands ([2,6-(YCH<sub>2</sub>)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>]SbF<sub>2</sub>; Y = MeO, *t*-BuO or Me<sub>2</sub>N) were prepared from the parent dichlorides using two equivalents of organotin(IV) fluorinating agents.

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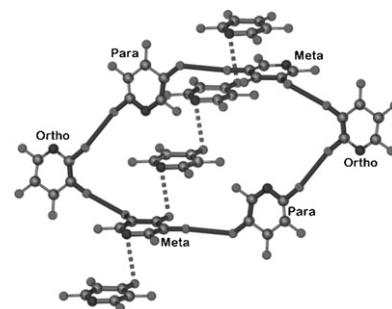
### Interpenetrated structure and compressibility studies in pressure frozen pentafluoropyridine crystals at 0.3 and 1.1 GPa

Anna Olejniczak<sup>a</sup>, Andrzej Katrusiak<sup>a</sup>, Ashwani Vijj<sup>b</sup>

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Subjecting Q3 pentafluoropyridine (C<sub>5</sub>F<sub>5</sub>N) to high-pressures inside a DAC (diamond-anvil cell) at room temperature results in the formation of molecular crystals with F...F and N...F contacts commensurate with sums of van der Waals radii of these atoms; the strongest of these interactions arrange the molecules into interpenetrating hexamers and double ribbons.



## Reactions of poly(hexafluoropropylene oxide) perfluoroisopropyl ketone with various amines

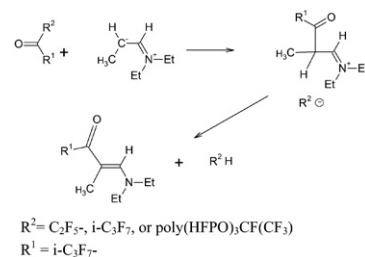
Jon L. Howell<sup>b</sup>, Chadron M. Friesen<sup>a</sup>, Krista L. Laugesen<sup>a</sup>, Alice E. van der Ende<sup>a</sup>

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The reaction of poly(hexafluoropropylene oxide) perfluoroisopropyl ketone, perfluoroethyl perfluoroisopropyl, or bis-perfluoroisopropyl ketone with various amines has been studied and the products identified by mass spectroscopy. A comparison of the reactivity of the ketones with different amines is made. The reaction of diethyl amine with all three ketones leads to two unexpected products and the mechanism of their formation is considered.

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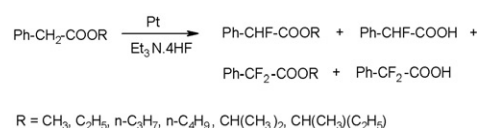


## The effect of substituents and operating conditions on the electrochemical fluorination of alkyl phenylacetates in Et<sub>3</sub>N·4HF medium

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Under optimum galvanostatic experimental conditions alkyl phenylacetates undergo selective electrochemical fluorination to give monofluoro derivative with selectivity upto 87%. Difluoro derivatives and fluorinated phenylacetic acids are the other predominant side products.



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## Understanding the influence of hydrocarbon insulators in fluorinated amines: Reactivity of poly(hexafluoropropylene oxide) amine containing methylene spacers

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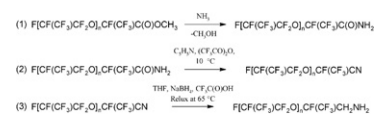
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Although reactions involving hydrocarbon amines have been thoroughly investigated, very little is currently known about reactions of corresponding fluorinated amines containing a methylene spacer group. Furthermore, such reactions involving the poly(hexafluoropropylene oxide) (herein, polyHFPO) amine have been completely unexplored. The addition of acyl, sulfonyl and alkyl halides, isocyanates, aldehydes, anhydrides and esters to polyHFPO amine has been accomplished. The results of these reactions, including reaction mechanisms, yields, byproducts, etc. are discussed.

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## Enhanced ultraviolet up-conversion emissions of Tm<sup>3+</sup>/Yb<sup>3+</sup> codoped YF<sub>3</sub> nanocrystals

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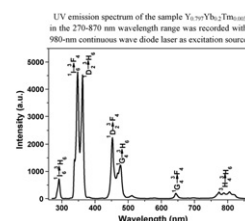
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<sup>b</sup>Key Laboratory of Excited State Processes, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, Changchun 130033, China

<sup>c</sup>Graduate School of Chinese Academy of Sciences, Beijing 100049, China

Tm<sup>3+</sup>/Yb<sup>3+</sup> codoped rod-like YF<sub>3</sub> nanocrystals were synthesized through hydrothermal method. After annealing, the nanocrystals emitted bright blue and intense ultraviolet (UV) light under 980-nm excitation. Enhanced UV emissions were studied. A mechanism of energy transfer-cross relaxation-energy transfer (ET-CR-ET) was proposed and elucidated based on a rate-equation model.

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## Syntheses and evaluation of fluorinated benzothiazole anilines as potential tracers for $\beta$ -amyloid plaques in Alzheimer's disease

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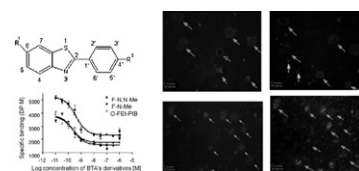
<sup>a</sup>Research Center of Radiopharmaceuticals, Shanghai Institute of Applied Physics, Chinese Academy of Sciences, Shanghai 201800, China

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Syntheses and evaluation of three fluorinated PIB (named F-N,N-Me, F-N-Me and O-FEt-PIB) were reported. The suitable biological characters showed these tracers might be potential to be developed as probes for detecting  $\beta$ -amyloid plaques in Alzheimer's disease.

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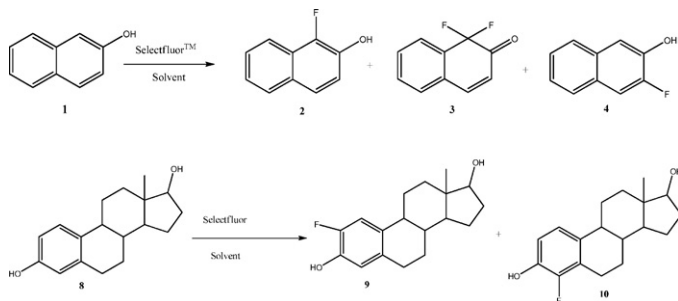


## Fluorination of activated aromatic systems with Selectfluor<sup>TM</sup> F-TEDA-BF<sub>4</sub> in ionic liquids

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Selectfluor<sup>TM</sup> was shown to be soluble in ionic liquid, thus allowing the 'green' electrophilic fluorination of activated aromatic systems compounds in high chemoselectivity and yields.



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## Electron affinity and redox potential of tetrafluoro-*p*-benzoquinone: A theoretical study

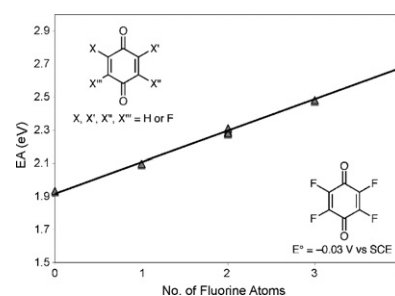
Mansoor Namazian<sup>a</sup>, Samira Siahrostami<sup>b</sup>, Michelle L. Coote<sup>a</sup>

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<sup>b</sup>Department of Chemistry, Yazd University, P.O. Box 89195-741, Yazd, Iran

The effect of fluorination on the electron affinity and standard reduction potential of benzoquinone is studied.

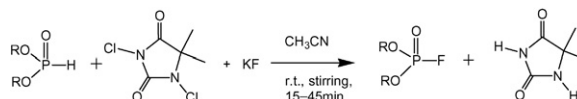
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## Dichlorodimethylhydantoin-KF as an efficient reagent for one pot synthesis of dialkylfluorophosphates from dialkylphosphites

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