

Graphical Abstracts/J. Fluorine Chem. 190 (2016) iv–vii

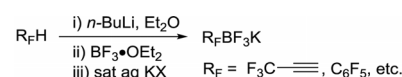
Preparation of potassium fluoroorganotrifluoroborates under non-etching conditions *via* a Li-K exchange

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- A non-etching preparation of potassium trifluoropropynyl- and fluoroaryltrifluoroborates.
- $\text{BF}_3\cdot\text{OEt}_2$ served as the fluoroboron source.
- Aqueous saturated potassium salt solutions, other than KHF_2 , were used as the potassium source.
- Facile Li-K exchange generates potassium organotrifluoroborates.

J. Fluorine Chem., 190 (2016) 7

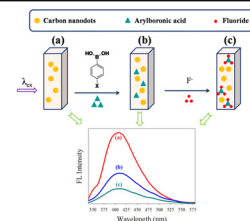


Carbon nanodots as fluorescent platforms for recognition of fluoride ion via the inner filter effect of simple arylboronic acids. Experimental and theoretical investigations

Zahra Mohammadpour^a, Afsaneh Safavi^a, Akbar Omidvar^a, Afshan Mohajeri^a, Nabiollah Mobaraki^a, Mojtaba Shamsipur^b^aDepartment of Chemistry, Faculty of Science, Shiraz University, Shiraz, 7194684795, Iran^bDepartment of Chemistry, Razi University, Kermanshah, Iran

- Design of a simple and selective water soluble nanosensor for assay of fluoride ion.
- Use of carbon nanodots as fluorescent sensors for F^- ion via IFE of arylboronic acids.
- Experimental and computational study of substituents on arylboronic acids on sensor response.
- Theoretical prediction of effect of fluoridation reaction on λ_{ex} of carbon dots via IFE.
- Fulfillment of EPA requirement for water safety by the minimum detectable value for F^- ion.

J. Fluorine Chem., 190 (2016) 12



A new strategy designed for fluoride sensing in aqueous media through the inner filter effect of arylboronic acids on fluorescent carbon nanodots.

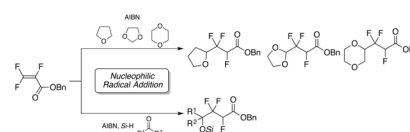
Radical reactivity of α,β,β -trifluoroacrylic ester: Facile approach to γ -silyloxy- α,β,β -trifluorobutyric acid derivatives involving regioselective nucleophilic radical addition reaction

Ken Tamamoto, Shigeyuki Yamada, Masao Higashi, Tsutomu Konno, Takashi Ishihara

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- A radical addition of cyclic ethers towards trifluoroacrylate proceeded smoothly.
- We succeeded in the radical coupling of trifluoroacrylate with carbonyl compounds.
- A variety of aldehydes and ketones could be successfully applied for the reaction.

J. Fluorine Chem., 190 (2016) 23



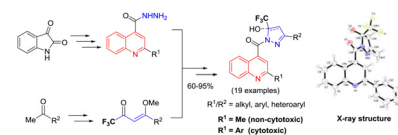
J. Fluorine Chem., 190 (2016) 31

Helio G. Bonacorso^a, Pablo A. Nogara^a, Fernanda D'A. Silva^b, Wilian C. Rosa^a,
Carson W. Wiethan^a, Nilo Zanatta^a, Marcos A.P. Martins^a, João B.T. Rocha^b

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● A convergent synthesis of new trifluoromethylated (1*H*-pyrazol-1-yl)(quinolin-4-yl) methanones (16 examples), is presented. ● High regioselective [3+2] cyclocondensation reactions are successful performed to obtain pyrazoles under green conditions. ● Significant cytotoxicity in human leukocytes only at high concentrations for (di-heteroaryl) methanones, is observed. ● Most of new (1*H*-pyrazol-1-yl)(quinolin-4-yl) methanones were in agreement with Lipinski's rule of five.

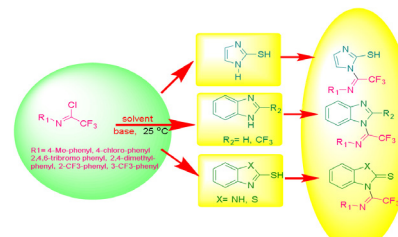


J. Fluorine Chem., 190 (2016) 41

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- New trifluoromethylated formamidines framework was prepared without using any catalyst.
- Simple procedure and purification.
- Catalyst free reactions with excellent yields.
- New bioactive trifluoromethylated benzimidazoles, imidazoles and benzothiazoles.



J. Fluorine Chem., 190 (2016) 48

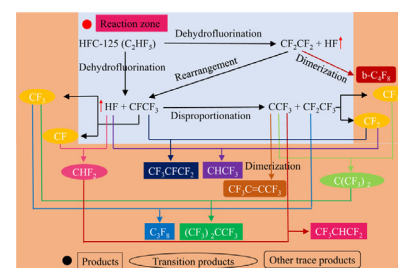
Wang Ting^{a,b}, Hu Ying-jie^{a,c}, Zhang Pin^a, Pan Ren-ming^a

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^bJiangsu Police Institute, Nanjing, 210031, Jiangsu, China

^cNanjing Xiaozhuang University, 211171, Nanjing, Jiangsu, China

- A combination of two-approach study for thermal decomposition of pentafluoroethane.
- A possible decomposition mechanism is proposed.
- The mechanism relies on stabilization changes of reaction energies and barriers.
- Strictly confirm gas products with different pyrolysis temperature.



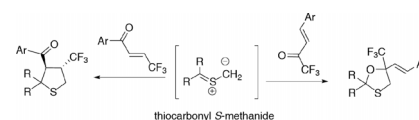
J. Fluorine Chem., 190 (2016) 56

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● Selected fluorinated enones were reacted with thiocarbonyl S-methanides. ● Type of the obtained [3+2]-cycloadduct depends on the location of the CF_3 unit. ● Tetrahydrothiophene derivatives were obtained from the $\text{CF}_3\text{CH}=\text{CH}$ enones. ● 1,3-Oxathiole derivatives were obtained from the $\text{CF}_3\text{C}=\text{O}$ enones.



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