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Temperature-dependent six-photon upconversion fluorescence of Er^{3+}

Kezhi Zheng, Dan Zhao, Daisheng Zhang, Ning Liu, Weiping Qin

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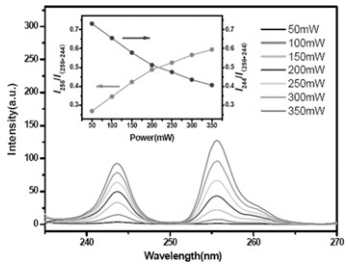
Under 980 nm excitation, 256 and 244 nm UC emissions were observed in β-$NaYF_4$:Yb^{3+}/Er^{3+} microcrystals and assigned to six-photon processes. These two emissions exhibited temperature dependent characteristic, which is attributed to the multiphonon relaxation process of $^2I_{11/2} \rightarrow {}^4D_{7/2}$.



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Synthesis and characterization of a new fluorinated macroinitiator and its diblock copolymer by AGET ATRP

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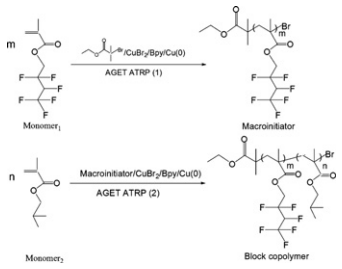
The fluorinated macroinitiator of poly 2,2,3,4,4,4-hexafluorobutyl methacrylate–Br (PHFMA–Br) was firstly prepared via activator generated by electron transfer atom transfer radical polymerization (AGET ATRP), then its diblock copolymer of poly 2,2,3,4,4,4-hexafluorobutyl methacrylate-block-poly(iso-butyl methacrylate) (PHFMA-b-PiBMA) was successfully synthesized using the fluorinated macroinitiator by a second step AGET ATRP.



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DFT and ab initio theoretical study for the CF_3S + CO reaction

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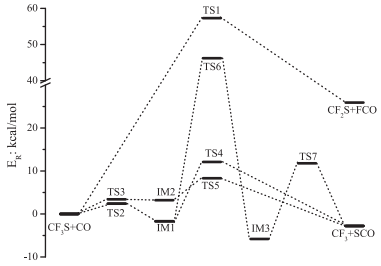

doi:10.1016/S0022-1139(10)00296-4

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Effect of acid on morphology of calcite during acid enhanced defluoridation

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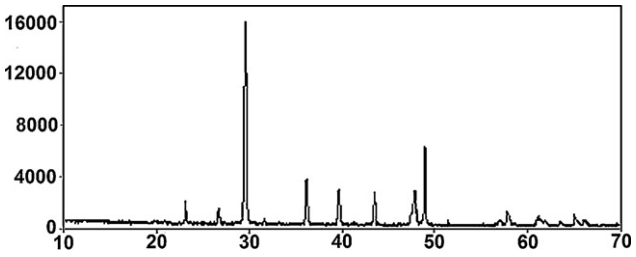
Different techniques, viz., XRD, FTIR, TGA-DSC, SEM-EDS and XPS have been used for analysis of crushed limestone used in fixed bed column for acid enhanced defluoridation with acetic acid and citric acid. The used limestone remains fit for reuse in the fluoride removal.



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N-(4-(di-*tert*-butyl[^{18}F]fluorosilyl)benzyl)-2-hydroxy-N,N-dimethylethylammonium bromide ([^{18}F]SiFAN^{+}Br^{-}): A novel lead compound for the development of hydrophilic SiFA-based prosthetic groups for ^{18}F-labeling

Alexey P. Kostikov[a], Liuba Iovkova[b], Joshua Chin[a], Esther Schirrmacher[a], Björn Wängler[c], Carmen Wängler[c], Klaus Jurkschat[b], Gonzalo Cosa[d], Ralf Schirrmacher[a]

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[b]*Lehrstuhl für Anorganische Chemie, Technische Universität Dortmund, Germany*
[c]*Department of Nuclear Medicine, Ludwig-Maximillians-University, Munich, Germany*
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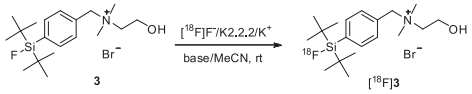
The first charged SiFA molecule (SiFAN^{+}Br^{-}, 3) serving as a lead compound in the development of SiFA-based prosthetic groups of reduced lipophilicity for biomolecule labeling is introduced. Mild conditions for the synthesis of [^{18}F]SiFAN^{+}Br^{-} and an easy purification procedure using simple C-18 solid phase cartridge have been developed.



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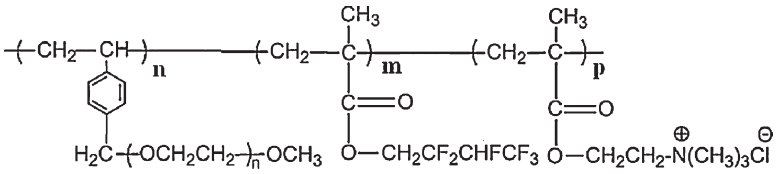
Study on the interaction between a fluorine-containing amphiphilic cationic copolymer and nucleic acid by resonance light scattering technique

Ling Li, Quan Pan, Sheng Dong Xiong, Zu Shun Xu, Gong Wu Song

Ministry of Education, Key Laboratory for the Synthesis and Application of Organic Function Molecules, Hubei University, Wuhan City, Hubei Province 430062, People's Republic of China



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Synthesis of trifluoromethylated heterocycles using partially fluorinated epoxides

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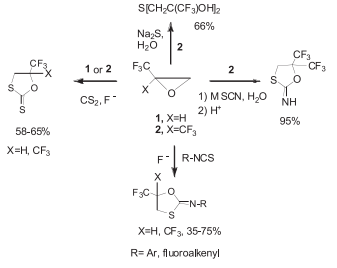

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A new fluorinated anion for room-temperature ionic liquids

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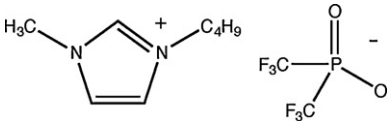

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Removal of fluoride ions using cuttlefish bones

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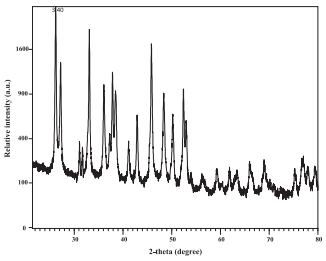
[b]*Laboratoire d'Automatique et de Génie des Procédés, Université de Lyon 1, Villeurbanne, France*

This work investigates the possibility of eliminating, by adsorption, the excess of fluoride in overloaded water using cuttlefish bone. The optimal conditions for the use of cuttlefish bone were determined on synthetic sodium fluoride solutions. The effectiveness of the adsorption process on the cuttlefish bone on natural waters loaded with fluoride was verified. Following regeneration, the adsorbent can be used for further removal of fluoride.



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Thermal rearrangement of substituted difluoro(methylene)cyclopropane

Xiao-Chun Hang[a], Wei-Peng Gu[a], Qing-Yun Chen[a], Ji-Chang Xiao[a], Wei-Guo Xu[b], Shubin Liu[c]

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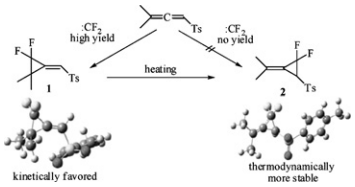
[b]*Zhejiang Chemical Industry Research Institute, 387 Tianmushan Road, Hangzhou, Zhejiang 310023, China*
[c]*Research Computing Center, University of North Carolina, Chapel Hill, NC 27599-3420, USA*



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Measurement of pH by NMR spectroscopy in concentrated aqueous fluoride buffers

James B. Gerken

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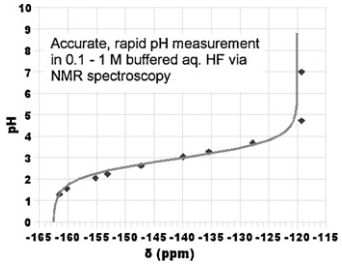

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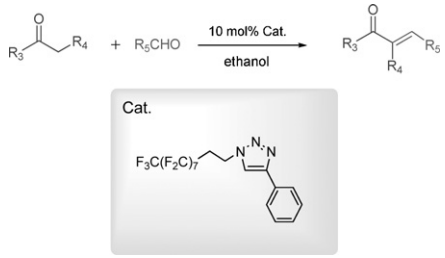
A recyclable fluoroalkylated 1,4-disubstituted [1,2,3]-triazole organocatalyst for aldol condensation of aldehydes and ketones

Yi-Wei Zhu, Wen-Bin Yi, Chun Cai

School of Chemical Engineering, Nanjing University of Science and Technology, 200 Xiao Ling Wei Street, Nanjing, Jiangsuang 210094, People's Republic of China



Fluoroalkylated 1,4-disubstituted [1,2,3]-triazole catalyzed aldol condensation of different ketones with different aldehydes to give various α,β-unsaturated ketones in good yields.