

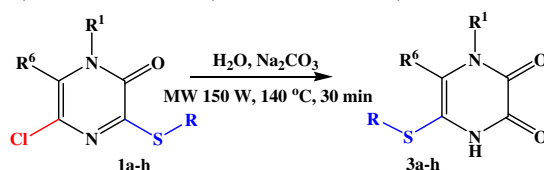
Tetrahedron Letters Vol. 49, No. 34, 2008

Contents

COMMUNICATIONS

Synthesis of 5-(phenylsulfanyl)-1,4-dihydropyrazine-2,3-diones via an unexpected microwave-assisted cascade reaction pp 4993–4996

Anuj Sharma, Vaibhav Pravinchandra Mehta, Kristof Van Hecke, Luc Van Meervelt, Erik Van der Eycken *

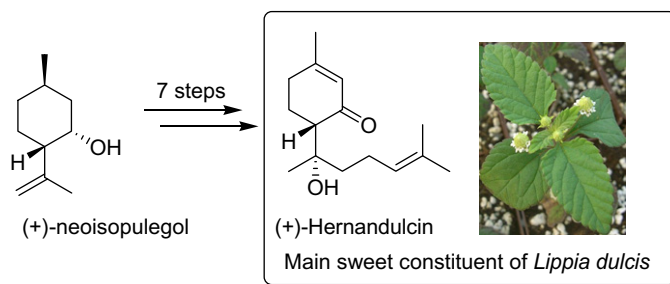


An unprecedented route for the synthesis of N-1 substituted 5-(phenylsulfanyl)-1,4-dihydropyrazine-2,3-diones is disclosed starting from 5-chloro-3-(phenylsulfanyl)pyrazin-2(1H)-ones. The method comprises treatment of various 5-chloro-3-(phenylsulfanyl)pyrazin-2(1H)-ones with Na₂CO₃ in water under microwave irradiation providing the respective 5-(phenylsulfanyl)-1,4-dihydropyrazine-2,3-diones in good yields, via hydrolysis of the thioether bond and subsequent nucleophilic displacement of the chlorine by the in situ generated thiophenol. The obtained compounds are excellent precursors for the diversity oriented synthesis of pharmacologically active α,β -dicarbonyl compounds.



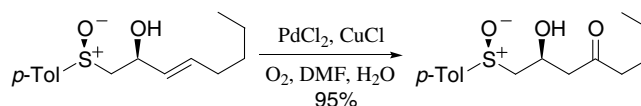
Enantiospecific synthesis of (+)-hernandulcin pp 4997–4998

Francesco G. Gatti



Wacker-type oxidative functionalization of β -substituted unsaturated sulfoxides pp 4999–5002

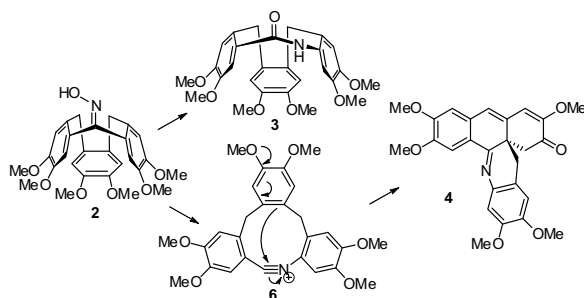
Sadagopan Raghavan *, V. Krishnaiah, Kailash Rathore



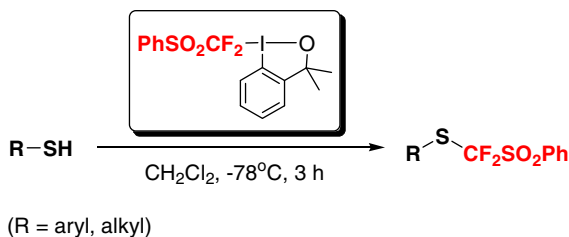
A mild and general method for the preparation of β -substituted- δ -ketosulfoxides by a Wacker type reaction is described.

Beckmann rearrangement of cyclotrimeratrylene (CTV) oxime: tandem Beckmann-electrophilic aromatic addition pp 5003–5005

Marlon R. Lutz Jr., Matthias Zeller, Daniel P. Becker *

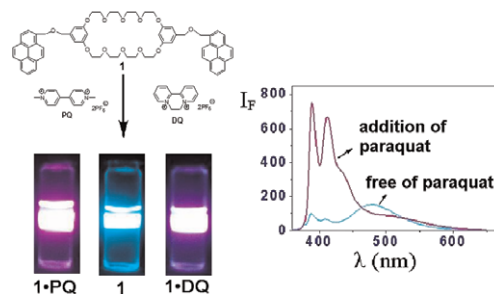
**Electrophilic (phenylsulfonyl)difluoromethylation of thiols with a hypervalent iodine(III)-CF₂SO₂Ph reagent** pp 5006–5008

Wei Zhang, Jieming Zhu, Jinbo Hu *

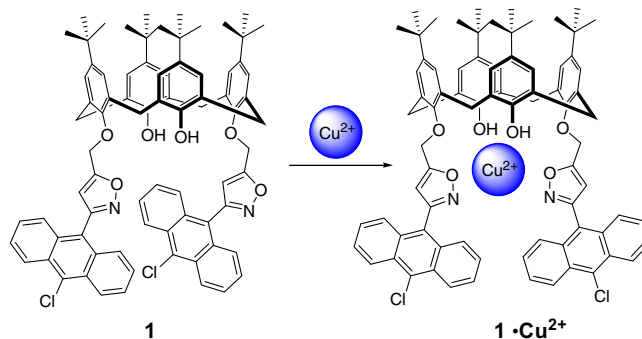
**A bis(*m*-phenylene)-32-crown-10-based fluorescence chemosensor for paraquat and diquat** pp 5009–5012

Jinqiang Zhang, Chunxi Zhai, Feng Wang, Chuanju Zhang, Shijun Li, Mingming Zhang, Ning Li, Feihe Huang *

A bis(*m*-phenylene)-32-crown-10-based host to which are covalently attached two pyrene groups as fluorescence chromophores was designed and synthesized. Its complexations with paraquat (PQ) and diquat (DQ) were studied by proton NMR, ESI mass spectrometry, and UV-vis spectroscopy. Its chemosensor behavior to PQ and DQ was revealed by fluorescence emission spectroscopy. This new host can function as a fluorescence chemosensor for PQ and DQ due to the inhibition of photoinduced electron transfer between the bis(*m*-phenylene)-32-crown-10 moiety and the pyrene groups by the addition of PQ (or DQ).

**Highly selective fluorescent sensing of Cu²⁺ ion by an arylisoxazole modified calix[4]arene** pp 5013–5016

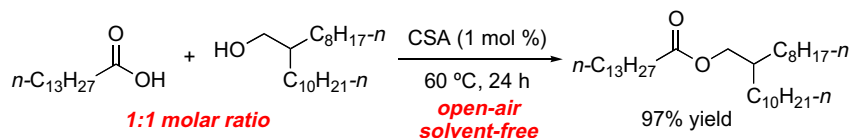
Kai-Chi Chang, Li-Yang Luo, Eric Wei-Guang Diao, Wen-Sheng Chung *



Open-air and solvent-free ester condensation catalyzed by sulfonic acids

pp 5017–5020

Akira Sakakura, Yoshiki Koshikari, Kazuaki Ishihara *

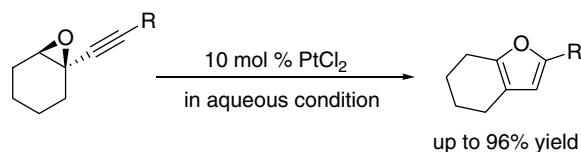


Under open-air and solvent-free conditions, catalytic amounts of sulfonic acids efficiently promote ester condensation between an equimolar mixture of carboxylic acids and alcohols. Since the present protocol does not require solvents under open-air conditions, a large amount of esters can be synthesized in a rather small apparatus.

**Synthesis of substituted furans by platinum-catalyzed cyclization of propargylic oxiranes in aqueous media**

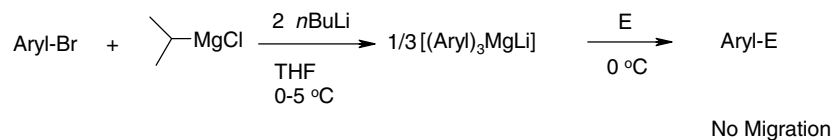
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Masahiro Yoshida *, Mohammad Al-Amin, Kennosuke Matsuda, Koza Shishido

**A practical non-cryogenic process for the selective functionalization of bromoaryls**

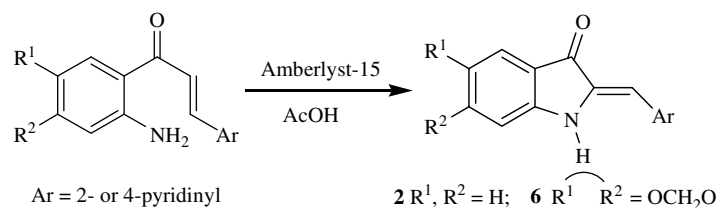
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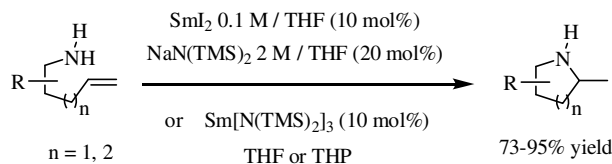
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Rodrigo Abonia *, Paola Cuervo, Juan Castillo, Braulio Insuasty, Jairo Quiroga, Manuel Noguerras, Justo Cobo



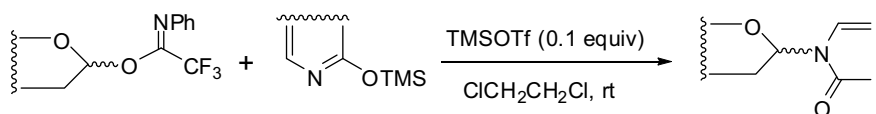
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Coralie Quinet, Ali Ates, István E. Markó *



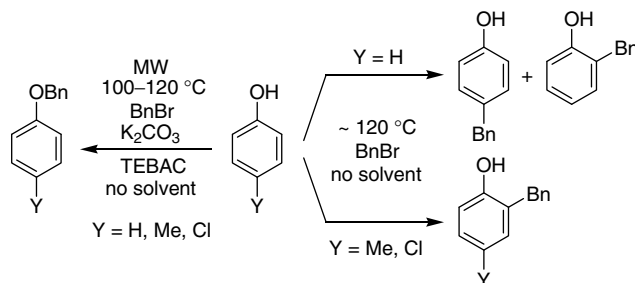
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Jinxi Liao, Jiansong Sun *, Biao Yu *



Chemoselectivity in the microwave-assisted solvent-free solid–liquid phase benzylation of phenols: O- versus C-alkylation pp 5039–5042

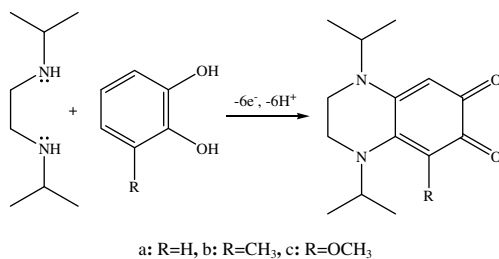
György Keglevich *, Erika Bálint, Éva Karsai, Alajos Grün, Mária Bálint, István Greiner



The reaction conditions determine whether the benzylation of phenol derivatives follows an O- or C-selective protocol.

Chemical and electrochemical procedures for the synthesis of diisopropyltetrahydroquinoxalinedione derivatives pp 5043–5046

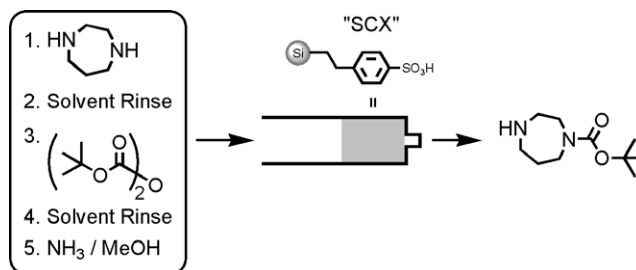
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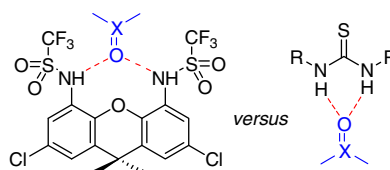
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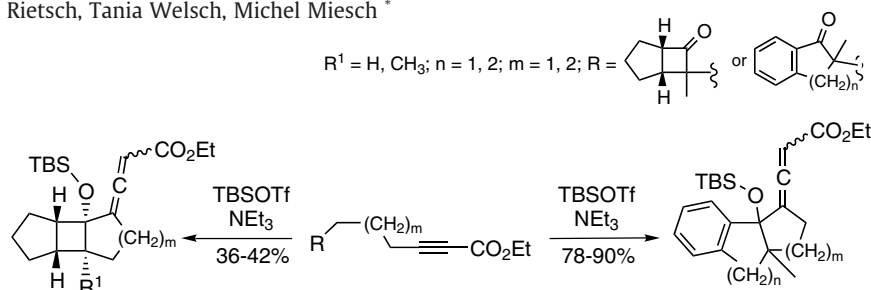
Francisco M. Muñiz, Victoria Alcázar Montero, Ángel L. Fuentes de Arriba, Luis Simón, César Raposo, Joaquín R. Morán *



Intramolecular alkyngyous Mukaiyama aldol type reaction mediated by TBSOTf/NEt₃

pp 5053–5055

Laurence Miesch, Vincent Rietsch, Tania Welsch, Michel Miesch *

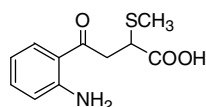


The treatment of propargylic esters tethered to bicyclo[3.2.0]heptanone, 2-methylindanone, 2-methyltetralone, or 2-methylsuberone led to fused tricyclic allenolates by an intramolecular alkyngyous Mukaiyama aldol type reaction promoted by TBSOTf/NEt₃ dual activation.

First total synthesis of the antifungal antibiotic thiobutacin

pp 5056–5058

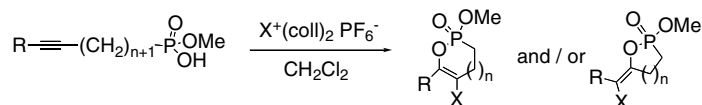
Narayan Chakor *, Sabrina Dallavalle, Loana Musso, Maddalena Moretti



Preparation of halo enol phosphones by reaction of acetylenic phosphonate monoesters with (bis-collidine)halo hexafluorophosphate

pp 5059–5062

Virginie André, Sylvie Robin, Gérard Rousseau *

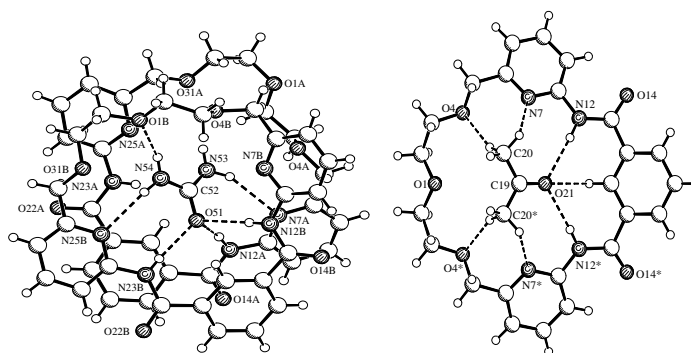


A pyridine-based macrocyclic host for urea and acetone

pp 5063–5066

Kumares Ghosh *, Suman Adhikari, Roland Fröhlich

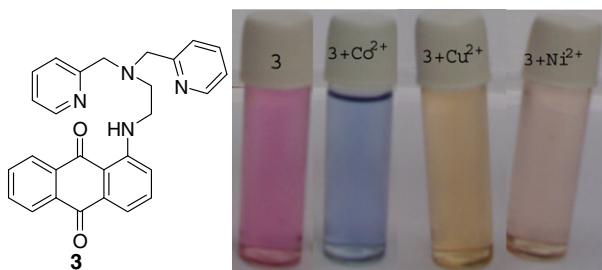
A pyridine-based macrocycle with a polyether chain has been designed and synthesized. The macrocycle shows strong binding for acetone involving both conventional and unconventional hydrogen bonds. The acetone in the cavity is exchangeable in CHCl_3 by urea. This has been studied thoroughly by ^1H NMR, ^{13}C NMR, mass and X-ray analyses.



A differential receptor for selective and quantitative multi-ion analysis for Co^{2+} and $\text{Ni}^{2+}/\text{Cu}^{2+}$

pp 5067–5069

Navneet Kaur, Subodh Kumar *



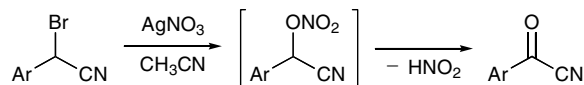
The differential responses of chromogenic sensor **3** with Co^{2+} (λ_{max} 620 nm), Ni^{2+} (λ_{max} 380 nm, 460 nm) and Cu^{2+} (λ_{max} 460 nm) at pH 4.0 allow the selective and quantitative estimation of Co^{2+} and Ni^{2+} or Co^{2+} and Cu^{2+} from their mixtures.



A new convenient synthesis of aroyl cyanides via the formation of cyanohydrin nitrate intermediates

pp 5070–5072

Takuya Sueda *, Masashi Shoji, Kiyoharu Nishide

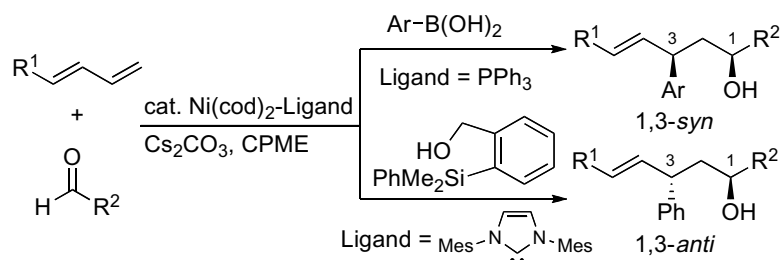


The treatment of α -bromoarylacetonitriles with AgNO_3 generates cyanohydrin nitrate intermediates, which easily eliminate nitrous acid with the formation of carbonyl bond to afford aroyl cyanides in high yields.

Nickel(0)-catalyzed diastereoselective three-component coupling of 1,3-dienes, aldehydes, and organometallic reagents: influence of organometallic reagents on diastereoselectivity

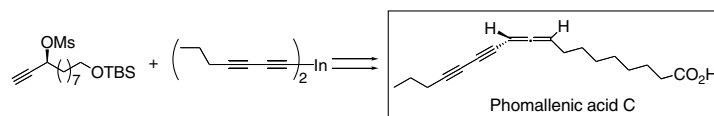
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Nozomi Saito, Tetsuro Yamazaki, Yoshihiro Sato *

**Enantioselective synthesis of phomallenic acid C, an inhibitor of FAS II pathway**

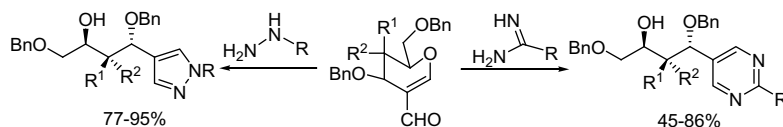
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Ken Ishigami *, Tomoko Kato, Kazuaki Akasaka, Hidenori Watanabe

**An improved synthesis of pyrimidine- and pyrazole-based acyclo-C-nucleosides as carbohybrids**

pp 5080–5083

Ram Sagar, Moon-Ju Kim, Seung Bum Park *

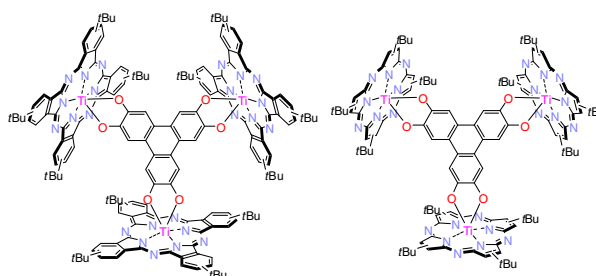


An improved synthesis of pyrimidine- and pyrazole-based acyclo-C-nucleoside as carbohybrids starting from 2-C-formyl glycals is presented.

**Solid-phase synthesis of phthalocyanine and tetraazaporphyrin triangular prisms**

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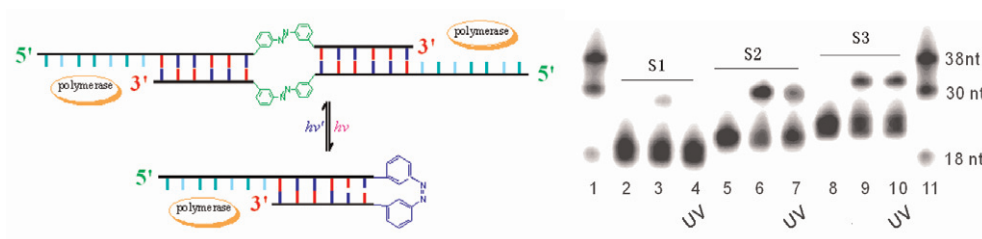
Atsuya Muranaka, Kengo Yoshida, Yusuke Akagi, Hiroshi Naka, Masanobu Uchiyama, Yoshinori Kondo, Nagao Kobayashi *



A thermostable azo-linker for reversible photoregulation of DNA replication

pp 5087–5089

Qi Wang, Long Yi, Liangliang Liu, Chuanzheng Zhou, Zhen Xi *



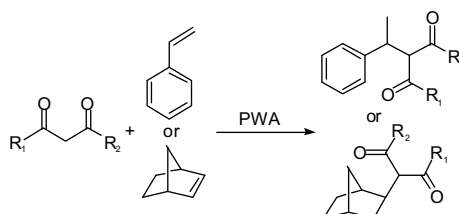
Reversible photoregulation for DNA replication was achieved through incorporation of a thermostable azobenzene linker to regulate formation and disassociation of a hairpin structure.



Solvent-free hydroalkylation of olefins with 1,3-diketones catalyzed by phosphotungstic acid

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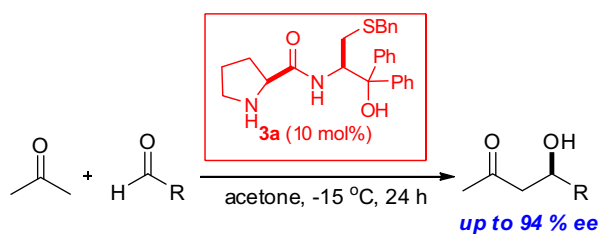
Guan-Wu Wang *, Ye-Bing Shen, Xue-Liang Wu, Lei Wang *



Organocatalytic asymmetric aldol reactions mediated by a cysteine-derived prolinamide

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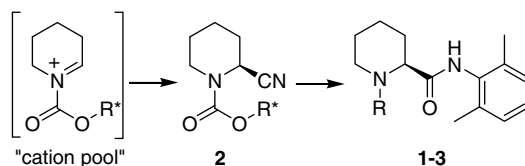
Ricardo S. Schwab, Fábio Z. Galetto, Juliano B. Azeredo, Antonio L. Braga, Diogo S. Lüttke *, Márcio W. Paixão *



Enantioselective total syntheses of ropivacaine and its analogues

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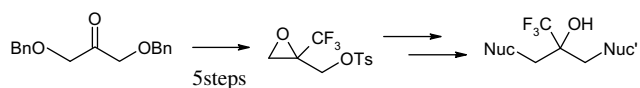
Nagula Shankaraiah, Ronaldo Aloise Pilli *, Leonardo S. Santos *



An alternative asymmetric synthesis of ropivacaine and analogues employing the 'cation pool' strategy and host/guest supramolecular co-catalysis approach is presented. In this study, chiral auxiliaries, several soft nucleophiles as well as one-pot conditions for anodic oxidation, followed by nucleophilic addition, have been applied.

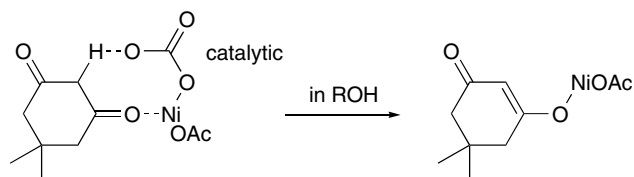
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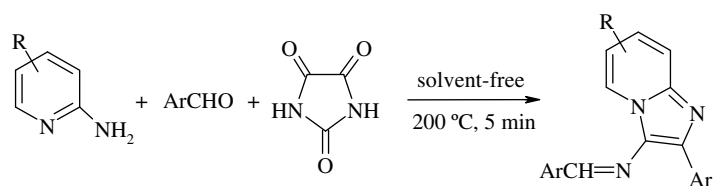
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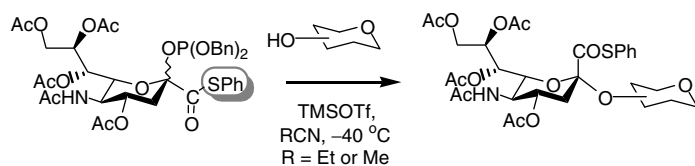
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Mehdi Adib^{*}, Esmail Sheibani, Long-Guan Zhu, Peiman Mirzaei



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Shinya Hanashima, Shoji Akai, Ken-ichi Sato^{*}



α -Selective sialylation reactions using novel sialic acid building blocks carrying thioester type auxiliary was described.



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*Corresponding author

+ Supplementary data available via ScienceDirectAvailable online at www.sciencedirect.com

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