Results in Chemistry

Open access

1.2
CiteScore

All issues

2023 — Volume 5

Volume 5
In progress (January 2023)

2022 — Volume 4

2021 — Volume 3

2020 — Volume 2

2019 — Volume 1

ISSN: 2211-7156

ScienceDirect

Results in Chemistry

Open access

1.2
CiteScore

Editorial board by country/region

42 editors and editorial board members in 18 countries/regions

1 China (6)
2 France (6)
3 United States of America (6)

See more editors by country/region

Editorial board

Editors

Lorena Betancor, PhD

Universidad ORT Uruguay, Department of Biotechnology, Montevideo, Uruguay

Biocatalysis, Enzyme technology, Bioconversions, Nanobiotechnology, Nanoparticles

View full biography

Joyanta Choudhury, PhD

Indian Institute of Science Education and Research Bhopal, Bhopal, India

N-heterocyclic carbene (NHC), CO2 hydrogenation/reduction, C-H activation, Water-soluble catalysts, Heterogenized molecular catalysts

View full biography

Thorfinnur Gunnlaugsson, PhD

Trinity College Dublin School of Chemistry, Dublin, Ireland

Supramolecular organic and inorganic chemistry, bio and medicinal chemistry

View full biography

Alvin Holder, PhD, FRSC, CChem

Old Dominion University, Department of Chemistry & Biochemistry, Norfolk, United States of America

Inorganic chemistry, Bioinorganic, Transition metal chemistry, and inorganic reaction mechanisms

View full biography

Jean-Philip Piquemal, PhD

Sorbonne University, Department of Chemistry, Paris, France

Quantum Chemistry and drug design, theoretical chemistry

View full biography

Mark Symes, PhD

University of Glasgow School of Chemistry, Glasgow, United Kingdom

Electrochemistry, Electrocatalysis, Energy conversion, Electrochemical engineering, Electrolysis,

View full biography

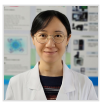
Yi-lun Ying, PhD

Nanjing University, Nanjing, China

Dynamic Bioanalysis at the Single Molecule Resolution; Electrochemical Big Data Analysis, Electrical-Optical Confinment; Nanopores.

View full biography

Associate Editor



Yuanfeng Li, PhD

The First Affiliated Hospital of Wenzhou Medical University, Wenzhou, China

Polymer chemistry, Nanomaterials, Colloids, Biomaterials, Functional hydrogels, Responsive materials, Controlled release, Biointerfaces

Associate Scientific Editor

Vikas Shingade, PhD

Elsevier B.V.

Synthetic chemistry, Molecular spectroscopy, Photochemistry and Photophysics, Medicinal chemistry, Supramolecular chemistry

Advisory Board

Ataf Altaf, PhD

University of Okara, OkÄ ra, Pakistan

Inorganic Chemistry, Materials Chemistry, Medicinal Chemistry, Organometallics, Catalysis

View full biography

Célia Bonnet, PhD

Centre for Molecular Biophysics, Orleans, France

Coordination chemistry, thermodynamics and chemical kinetics, potentiometry, photophysics, NMR of paramagnetic complexes

David Bryce, PhD

University of Ottawa, Department of Chemistry and Biomolecular Sciences, Ottawa, Ontario, Canada

Solid-state NMR spectroscopic and quantum chemical methods
, solid-state NMR, magnetic resonance, spectroscopy, halogen bonding, mechanochemistry, chalcogen bonding

View full biography

Fabrizio Carta, PhD

University of Florence, Firenze, Italy

Medicinal Chemistry, Metalloenzymes, Synthesis

View full biography

Rene Csuk, PhD

Martin Luther University Halle Wittenberg, Department of Chemistry, Halle, Germany

Bioorganic and medicinal chemistry

Krishna Damodaran, PhD

University of Iceland, Department of Chemistry, Reykjavik, Iceland

Supramolecular Chemistry, Inorganic chemistry and material properties

View full biography

Purnendu Dasgupta, PhD

The University of Texas at Arlington, Department of Chemistry and Biochemistry, Arlington, Texas, United States of America

Separation science, ion analysis, liquid chromatography, novel ion exchange polymers

View full biography

John Dawson, PhD

University of South Carolina, Department of Chemistry and Biochemistry, Columbia, South Carolina, United States of America

Bio-inorganic, bio-physical, and bio-organic chemistry, spectroscopy and mechanisms of action of dioxygen- and peroxide-activating heme iron enzymes and model systems, cytochrome P-450, halo- and dehalo-peroxidases, magnetic circular dichroism spectroscopy as a probe of heme iron coordination structure

View full biography

Timothy J. Donohoe, PhD

University of Oxford, Department of Chemistry, Oxford, United Kingdom

synthetic organic chemistry, asymmetric synthesis, natural products., ,

View full biography

Rob Elmes, PhD

Maynooth University, Department of Chemistry, Maynooth, Kildare, Ireland

Biomimetic materials as drug delivery vehicles, diagnostic tools, antitumor therapeutics and environmental sensors

View full biography

Ying Fang, PhD

Chinese Academy of Sciences Key Laboratory for Biomedical Effects of Nanomaterials and Nanosafety, Beijing, China

Biomaterials, Biosensors, and Bioelectronics.

Lucio Frydman, PhD

Weizmann Institute of Science Chemical and Biological Physics Department, Rehovot, Israel

Chemical analysis. NMR techniques applied to the resolution of chemical problems and to magnetic resonance imaging.

Frank de Groot, PhD

Utrecht University Organic Chemistry and Catalysis, Utrecht, Netherlands

X-ray spectroscopy (X-ray absorption, X-ray inelastic x-ray scattering), Heterogeneous Catalysis, Theoretical Chemistry, Solid State Physics

View full biography

Wei-Lun Hsu, PhD

The University of Tokyo, Bunkyo-Ku, Japan

Physical Chemistry; Analytical Chemistry; Micro/Nanofluidics; 2D Materials; Colloid and Interface Science

Marie Pierre Krafft, PhD

University of Strasbourg, Strasbourg, France

Fluorine Chemistry, Self-assembly, multicompartmented micro- and nano-scale objects, with applications in biomedical sciences

Liang Liu, PhD

Laboratory of Physical Chemistry and Microbiology for the Environment, Villers les Nancy, France

Electrodeposition, Electrochemical instrumentation, Scanning electrochemical microscopy, Corrosion, Electrochemical impedance spectroscopy

Terry Miller, PhD

The Ohio State University, Department of Chemistry and Biochemistry, Columbus, Ohio, United States of America

Physical Chemistry. Spectroscopic detection and characterization of reactive chemical intermediates, and their dynamics and reactions.

Thanh Binh Nguyen, PhD

Centre National de la Recherche Scientifique, Palaiseau, France

Elemental sulfur, redox catalyst, green chemistry, redox condensation

View full biography

Aline Nonat, PhD

Hubert Curien Pluridisciplinary Institute, Strasbourg, France

Design and synthesis of novel ligands for nuclear medical imaging

View full biography

East China Normal University School of Chemistry and Molecular Engineering, Shanghai, China

Functional assemblies, colloid self-assembly, DNA biomimetic networks, host-guest chemistry, stimuli-responsive materials

View full biography

Yixian Wang, PhD

California State University Los Angeles, Department of Chemistry and Biochemistry, Los Angeles, California, United States of America

Electrochemistry, Nanoscale imaging and sensing, Scanning ion conductance microscopy, Surface plasmon resonance microscopy, Plasmonic electrochemical microscopy

View full biography

Youjun Yang, PhD

East China University of Science and Technology School of Pharmacy, Shanghai, China

Fluorescent dyes, probes and labels for biological, medicinal and material applications

View full biography

All members of the Editorial Board have identified their affiliated institutions or organizations, along with the corresponding country or geographic region. Elsevier remains neutral with regard to any jurisdictional claims.

Results in Chemistry

Open access

Volume 4

January 2022

Previous vol/issue Next vol/issue

Results in Chemistry

Open access

optical properties of these coumarin derivatives (**4a-4d**), such as the influence of different solvent to the fluorescence intensity and absorption intensity, and the influence of different substituent groups and the concentration of the solution are investigated. The results show that the fluorescence intensity of the compounds are the largest in the DMF (N,N-dimethyllformamide). Specifically speaking, the absorption spectrum is at approximately 308 nm, the fluorescence spectrum is at nearly 435 nm in the DMF, the Stocks shift approaches127 nm. In our case the fluorescence intensity decreases with the increase of the concentration of the solution, which is called concentration quenching. Additionally, the affection of solvent was also confirmed by TD-DFT (Time-dependent density functional theory)calculations.

Research article *Open access*

Vanillin containing 9H-fluoren sulfone scaffolds: Synthesis, biological evaluation and molecular docking study

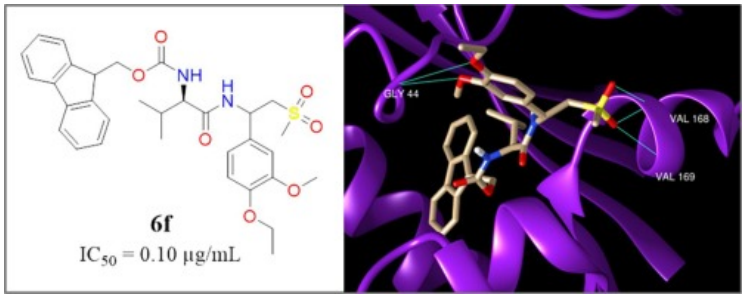
Hanuman Narode, Manoj Gayke, Rajesh S. Bhosale, Gyanchander Eppa, ... Jhillu Singh Yadav

Article 100269

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Base and metal free true recyclable medium for Knoevenagel condensation reaction in SDS-ionic liquid-aqueous miceller composite system

Sourav Chakraborty, Abhijit Rudra Paul, Swapan Majumdar

Article 100294

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Results in Chemistry

Open access

Research article *Open access*

Alkaloids and flavonoids exert protective effects against UVB-induced damage in a 3D skin model using human keratinocytes

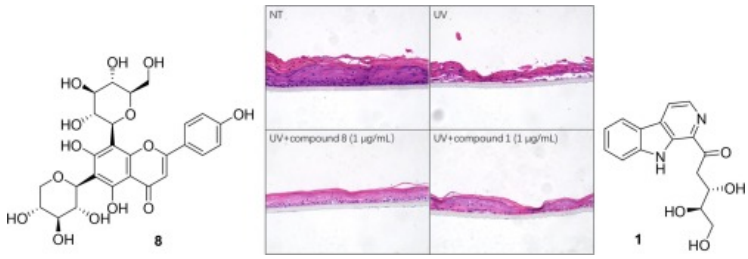
Yi-Fang Chen, Dong-Dong Zhang, Dong-Bao Hu, Xiao-Nian Li, ... Yue-Hu Wang

Article 100298

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Efficient synthesis of functionalized 2-iminothiazolines by ultrasonication under solvent-free conditions and access to 5-aryl-2-iminothiazolines

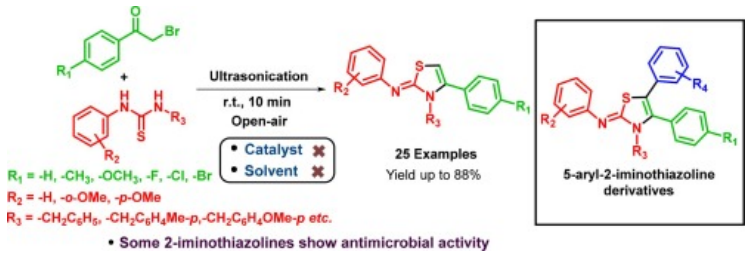
Chandan Bodhak, Subhro Mandal, Pia Dey, Samir Kumar Mukherjee, Animesh Pramanik

Article 100301

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



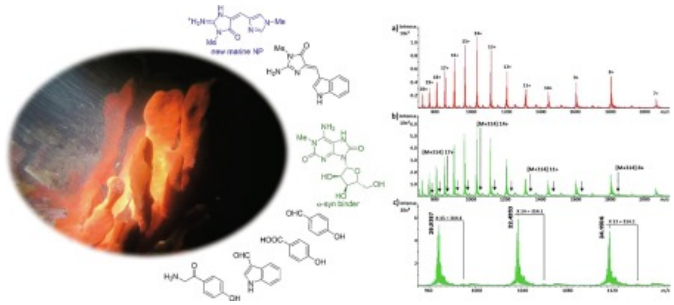
Research article *Open access*

Hesperine, a new imidazole alkaloid and α-synuclein binding activity of 1-methyl-1,2,7,8-tetrahydro-2,8-dioxoadenosine from the marine sponge *Clathria (Thalysias) cf. hesperia*

Results in Chemistry

Open access

Graphical abstract



Research article *Open access*

PEG-cored phosphorus dendrimers: Synthesis and functionalization

Hanna Dib, Jérémy Rebière, Cyrille Rebout, Omar Alami, ... Anne-Marie Caminade

Article 100304

View PDF Article preview

Abstract

Abstract

Dendrimers are macromolecular hyperbranched nano-structures, which properties are mainly driven by the type of their terminal functions. This paper reports the synthesis of dendritic structures built from difunctional polyethylene glycols (PEGs) used as core. Three different PEG lengths have been used: PEG_{300} (ca 6 CH_2CH_2-O units), PEG_{1000} (ca 22 CH_2CH_2-O units), and PEG_{2000} (ca 45 CH_2CH_2-O units). The first level of branching units is based on a dialdehyde of a dipiperazine triazine derivative. The second and third level of branching units are constituted of phosphorhydrazone linkages. The growing of the dendritic branches was found extremely slow with both PEG_{1000} and PEG_{2000} used as core, and was stopped early, whereas this problem was not observed with PEG_{300} used as core. These PEG-cored dendritic structures were finally functionalized on the surface with two types of nitrogen ligands.

Short communication *Open access*

Thermal decomposition behavior of MnO_2/Mg-Al layered double hydroxide after removal and recovery of acid gas

Tomohito Kameda, Tanya Kurutach, Yuriko Takahashi, Shogo Kumagai, ... Toshiaki Yoshioka

Article 100310

View PDF Article preview

Abstract

Abstract

Acidic gases such as HCl, SO_2, and NO_x are compounds that are generated through the incineration of waste products. Hence, an efficient method of removing such gases is highly desired. In this study, we present a novel method for treatment of acidic

Results in Chemistry

Open access

Research article *Open access*

Large acceleration under highly concentrated conditions: Synthesis of chalcones using a small amount of DMF or $[emim]N(CN)_2$

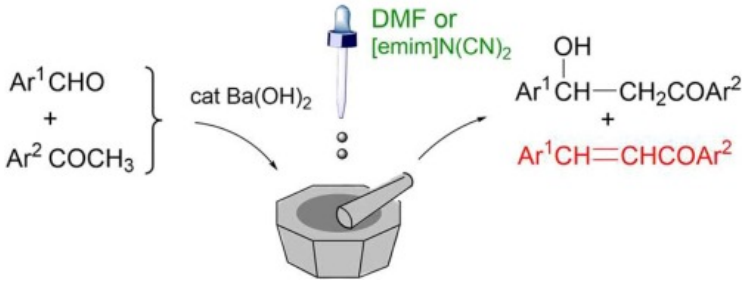
Kiyoshi Tanemura

Article 100316

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Medicinal significance of novel coumarin analogs: Recent studies

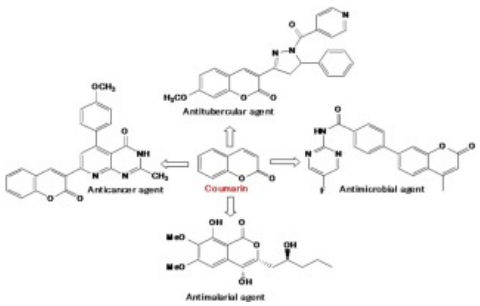
Sharanabasappa B. Patil

Article 100313

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



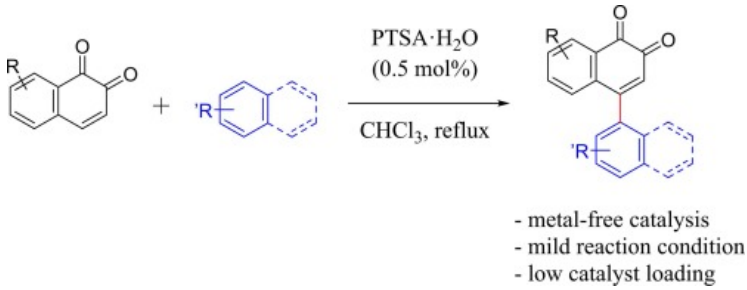
Research article *Open access*

Results in Chemistry

Open access

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Synthesis and properties of fluorene based small molecule acceptors containing aromatic malononitrile functionalities

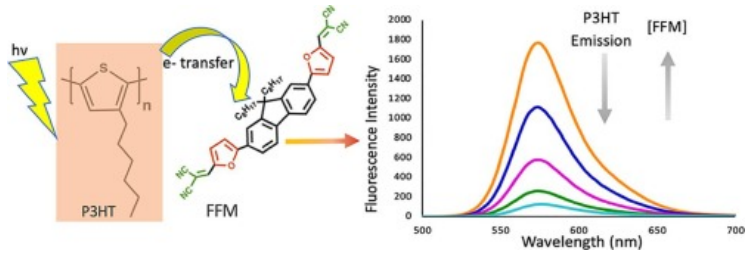
Sarah E. Brock, Dariia Yehorova, Brycelyn M. Boardman

Article 100320

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Synthesis of benzoyl esters of β-amyrin and lupeol and evaluation of their antibiofilm and antidiabetic activities

Alfred Ngenge Tamfu, Aristide Mfifen Munvera, Andreea Veronica Dediu Botezatu, Emmanuel Talla, ... Rodica Mihaela Dinica

Article 100322

View PDF Article preview

Abstract

Abstract

Results in Chemistry

Open access

antimicrobial activities. Biofilm inhibitory potential of the compounds on *S. aureus, E. coli* and *C. albicans* were performed at

Research article *Open access*

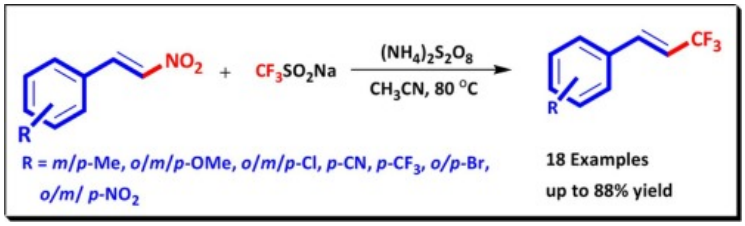
$(NH_4)_2S_2O_8$ mediated denitrative trifluoromethylation of β-nitrostyrenes: Synthesis of vinyltrifluoromethylated alkenes

Arvind Kumar Yadav
Article 100325

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

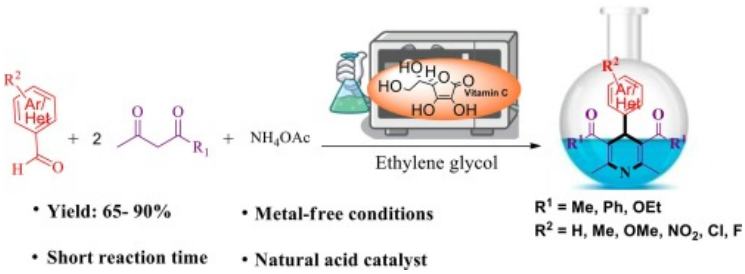
Vitamin C-Catalyzed Hantzsch reaction under microwave condition: A greener access to 1,4-Dihydropyridines

Devalina Ray, Ram Naresh Yadav, Bimal Krishna Banik
Article 100330

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Results in Chemistry

Open access

Abstract

Abstract

This work presented the microwave assisted synthesis of six new 2´-hydroxychalcones and their characterization based on FTIR, UV–Vis, ^{1}H NMR, and mass spectral analysis. Quantum chemical studies confirmed the structures of prepared chalcones. Antioxidant, *in vitro* antimicrobial and *in silico* antiviral studies have been performed to evaluate their biological performance. Results of molecular docking of prepared 2´-hydroxychalcones against SARS-CoV-2 (7BQY) main protease disclosed their inhibition which is comparable to standard, remdesivir and better than hydroxychloroquine (HCQ). ADMET prediction revealed them to be non-carcinogenic and relatively safe.

Research article *Open access*

Highly stereoselective multigram scale synthesis of (3*S*,4*S*)-Statine and (3*S*,4*S*)-*N*-Benzylstatine

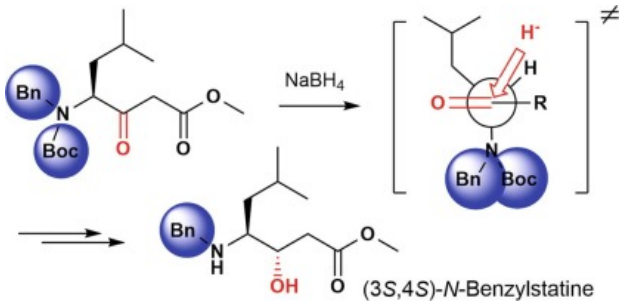
Khoubaib Ben Haj Salah, Francesco Terzani, Marine Pietri, Chiara Zanato, ... Julien Pytkowicz

Article 100333

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Regioselective ketalization (dioxane vs dioxolane) study of internal diastereomeric 1,2,3-triol systems obtained from D-pentoses

Chiranjeevi Donthulachitti, Yelukala Ramakrishna, Ravikumar Shekunti, Chandra Kiran Neella

Article 100341

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Results in Chemistry

Open access

Research article *Open access*

An isatin aldol adduct as a precursor to *α,α'*-difunctionalized methyl vinyl ketones

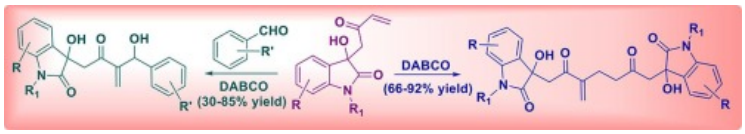
Ajit Kumar Jha, Deeksha, Heena Inani, Srinivasan Easwar

Article 100339

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Triarylboranes bearing a benzimidazole or quinoline ring attached to the boron atom: Synthesis, π-conjugation, and fluorescence

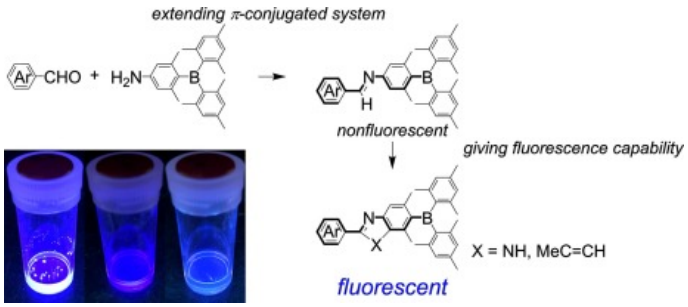
Junro Yoshino, Shusei Kawaguchi, Shinya Takata, Naoto Hayashi

Article 100342

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

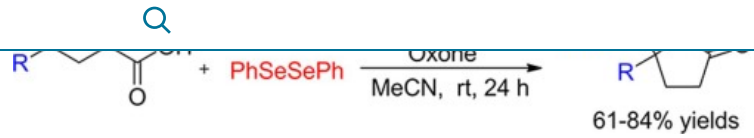
Synthesis of selenated γ-lactones via Oxone-promoted selenylation and cyclization of alkenoic acids with diselenides

Kyeong Seop Kim, Nayeon Maeng, Dae Young Kim

Article 100349

Results in Chemistry

Open access



Research article *Open access*

The synthesis of 4-arylphenalenones revisited

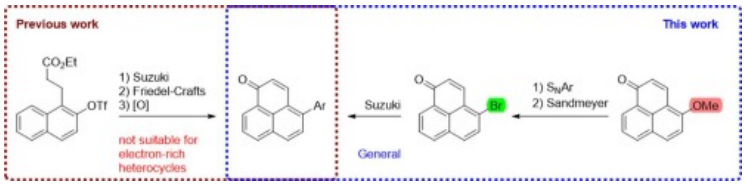
Catalina Hoyos, Marisol Cano, Julián Barrera, Felipe Otálvaro

Article 100348

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Citric acid mediated simple and stereoselective synthesis of *o*-linked glycosides by Ferrier rearrangement

P.I. Ramesh, Mohamad Saif Ali, Subhash Ghosh, Madhu Babu Tatina

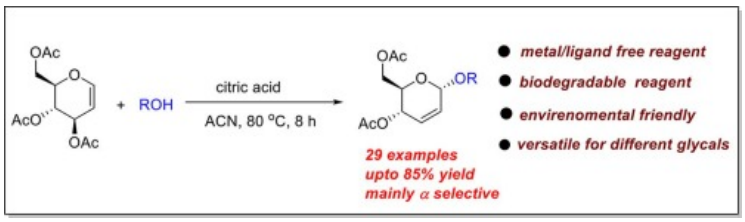
Article 100347

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Citric acid is versatile reagent for many glycals with good yield and selectivity well suited for the synthesis of pseudodisaccharides.



Research article *Open access*

Results in Chemistry

Open access

Abstract

Abstract

Coagulation factor Xa (FXa), a serine endopeptidase is a common coagulation factor activated as a result of the initiation of both intrinsic and extrinsic blood coagulation pathways. Hence, FXa has been regarded as an important pharmaceutical target for the treatment of thrombotic disorders. In this study, we reported the design and synthesis of pyrazolyl piperidine analogs **4(a–h)** as a new class of anticoagulant drug candidates. Among the synthesized analogs **4(a–h)**, compound **4a** consisting of the 4-chlorophenyl substitution displayed the highest *in vitro* FXa inhibition activity with an IC_{50} value of 13.4 nM. The PT and aPTT assay indicated that compound **4a** showed good anticoagulation activity compared to Heparin. Furthermore, docking studies suggested that the synthesized analogs displayed binding modes similar to the cocrystallized Rivaroxaban ligand. In addition, *in-silico* ADMET and DFT studies were carried out for all the designed compounds. Together, our study suggests that the compound (**4a**) displayed anti-coagulant activity through the inhibition of FXa

Review article *Open access*

Preparation of glycerol derivatives by entered of glycerol in different chemical organic reactions: A review

Fatima Alashek, Mohammad Keshe, Ghader Alhassan

Article 100359

View PDF Article preview

Abstract

Abstract

Glycerol is now used in a large variety of applications because the unique structure, and renewability feature, and chemical and physical properties, and because it is physiologically innocuous.

The use of glycerol for advanced organic syntheses and the conversion of glycerol into value-added chemicals is now emerging as a fascinating challenge. such as Oxidation, Esterification, Chlorination, Dehydration, Hydrogenolysis, Polymerization, Etherification**,** glycerol is nowadays considered one of the most relevant platform chemicals.

Short communication *Open access*

Microwave assisted one pot synthesis of 2-alkyl amino benzimidazoles, 2-alkyl amino benzoxazoles and 2-alkyl amino benzthiazoles by using various carbodiimides

Thirupathi Rapolu, Polkam Naveen, K.V.P. Pavan Kumar, Krishnakanth Reddy Leleti, Raghubabu korapolu

Article 100351

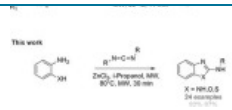
View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Results in Chemistry

Open access



Research article *Open access*

An efficient triple cascade process for synthesis of novel disperse dyes from lawsone: A modification of natural colorant

Paresh N. Patel, Nilam C. Patel, Dipen H. Desai

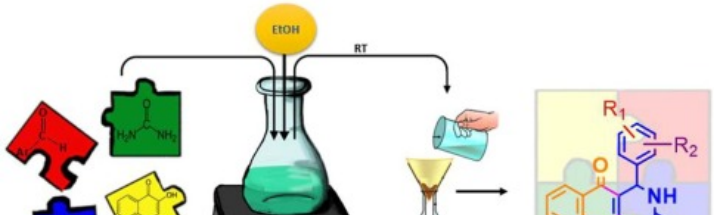
Article 100362

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

The present studies highlight the novel approach of triple cascade reaction for the synthesis of dihydropyrimidone in a very effective way. Various novel dihydropyrimidone derivatives are synthesis by this process. Structures of all these derivatives are established by various spectroscopic techniques.



Research article *Open access*

In situ detection of an unstable *C,N*-Au(III) chelate by ^{15}N NMR methods

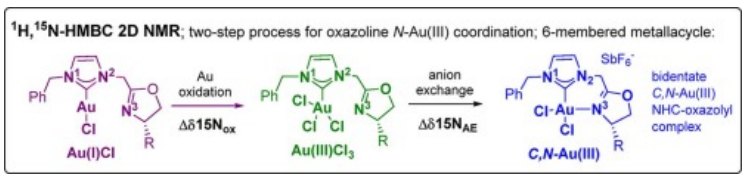
Jostein Lund, Helgi Freyr Jónsson, Anne Fiksdahl

Article 100360

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



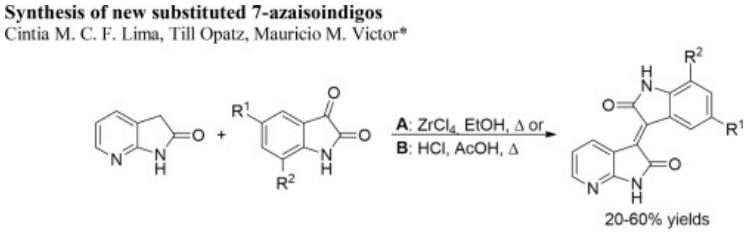
Research article *Open access*

Results in Chemistry

Open access

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Asymmetric silane reduction of ketones and β-Keto esters catalyzed by a chiral azolium/iridium system in the presence of a base in methanol at room temperature

Toshiya Matsuki, Hiro Teramoto, Ryo Ichihara, Kazuo Inui, Satoshi Sakaguchi
Article 100364

View PDF Article preview

Abstract

Abstract

Asymmetric silane reduction of ketones catalyzed by a system comprising a chiral azolium salt **1** and $[Ir(cod)_2]BF_4$ (**2**) in the presence of a base in methanol was achieved at room temperature within 2 h. Implementing a "pre-mixing" experimental procedure improved the efficiency of the catalytic reaction. Specifically, after treating a mixture of **1** and **2** with $(EtO)_2MeSiH$ (**3a**) in THF, the ketone substrate was allowed to react in the presence of K_2CO_3 in methanol at room temperature to afford the corresponding optically active alcohol in high yield and enantioselectivity. The reaction parameters were fully evaluated. The presence of **3a** in the pre-mixing step and that of a base in the reduction step were found to be essential for success. The developed method was applied to the stereoselective reduction of β-keto esters. Additionally, an iridium species derived from the reaction of **1** with $[IrCl(cod)]_2$ and $AgBF_4$ was investigated.

Research article *Open access*

Thermophysical properties of hexapropyl and hexabutyl phosphoramides in *n*-dodecane

G. Jegan, Satyabrata Mishra, B. Sreenivasulu, Puspalatha Rajesh, ... N. Sivaraman
Article 100346

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Results in Chemistry

Open access

Research article *Open access*

Synthesis of N-(2′S)-methylbutanoyl-2-methylbutylamide (Frianol), sex pheromone of sugarcane rhizome borer *Migdolus fryanus*, from renewable sources

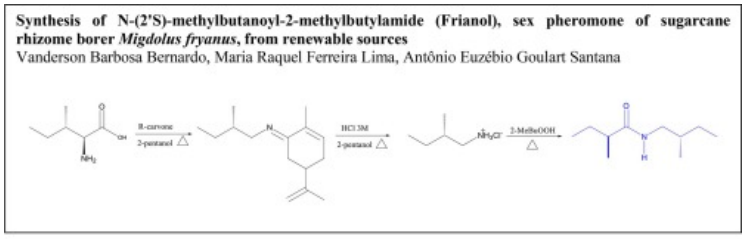
Vanderson Barbosa Bernardo, Maria Raquel Ferreira Lima, Antônio Euzébio Goulart Santana

Article 100368

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Fonts or abstract dimensions should not be changed or altered.

Research article *Open access*

A new finding in the old Knoevenagel condensation reaction

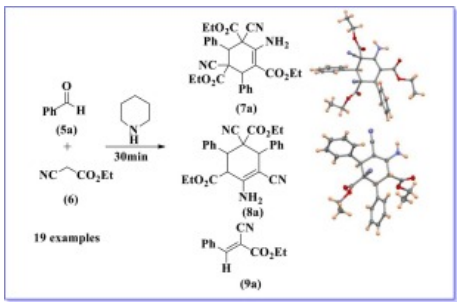
Attimogee Shivamurthy Harisha, Kuppuswamy Nagarajan, S.Saravanan, Venkat Manohar, ... Tayur Narasingarow Guru Row

Article 100376

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



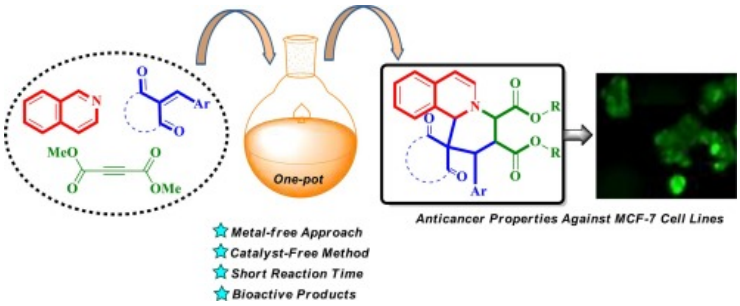
Research article *Open access*

Results in Chemistry

Open access

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Photophysical properties regulation and applications of BODIPY-based derivatives with electron donor-acceptor system

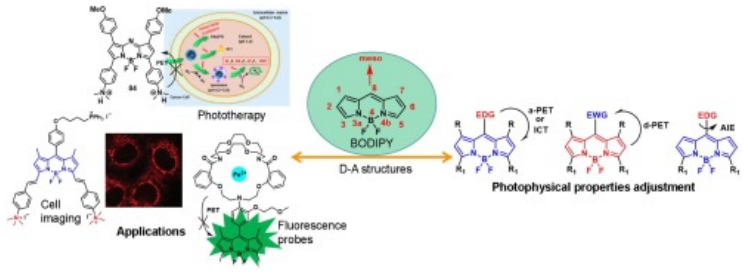
Fang-Zhou Li, Zhiwei Wu, Changwei Lin, Qiang Wang, Gui-Chao Kuang

Article 100384

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

An approach for preparing 3,3-disubstituted oxindole from acyclic tetrasubstituted aldehyde: Total synthesis of (-)-coerulescine & (-)-coixspirolactam A

M. Shahnawaz Ali, Mizzanoor Rahaman, Jawad Bin Belayet, Sharif A. Asad, M. Mahmun Hossain

Article 100389

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Results in Chemistry

Open access

Research article *Open access*

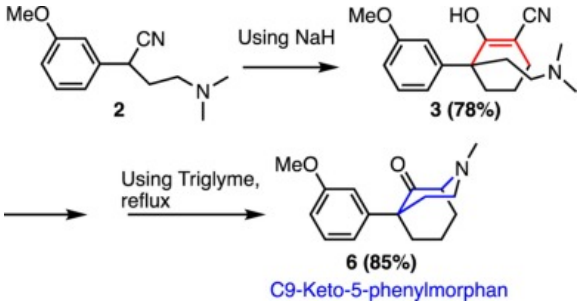
Optimized synthesis of enantiomeric C9-keto-5-phenylmorphans, essential intermediates for novel MOR agonists and antagonists

Agnieszka Sulima, Jason A. Deck, Muneaki Kurimura, Arthur E. Jacobson, Kenner C. Rice
Article 100390

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Short communication *Open access*

Radical character quenches luminescence in the all-hydrocarbon radical benzoBDPA

Adrian R. Birge, Matthew J. Piper, Karl J. Painter, Graham T. Sazama
Article 100393

View PDF Article preview

Abstract

Abstract

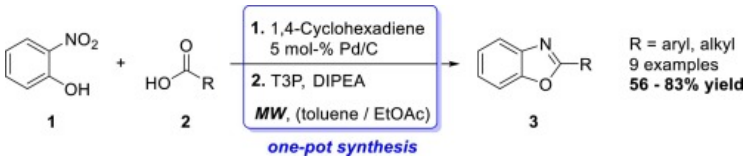
We have synthesized and characterized a benzannulated analog, bBDPA, of the well-known stable radical bis(diphenylene)phenylallyl (BDPA). Benzannulation gives rise to fluorescence in the closed-shell precursor molecule bBDPAH, but luminescence is quenched in the radical species. We detail the synthesis, characterization by absorption, emission, and EPR spectroscopy, and examine the molecular orbital landscape dictating the properties of the radical. We find that benzannulation alters the energy of the radical's frontier molecular orbitals differently than in luminescent radicals brought about by incorporation of heteroatoms into their frameworks.

Research article *Open access*

Results in Chemistry

Open access

Graphical abstract



Open access

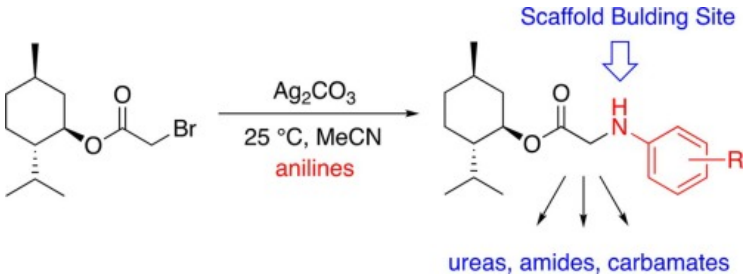
Synthesis of aniline-based menthol glycinates and derivatives

Joseph E. Mathews, Jacob C. Hood, Douglas A. Klumpp

Article 100400

View PDF Article preview

Graphical abstract



Research article *Open access*

Highly efficient method for the synthesis of substituted benzimidazoles using sodium metabisulfite adsorbed on silica gel

Manoj Kumar, Sushil K. Pandey, Neha Chaudhary, Anand Mishra, Deepshikha Gupta

Article 100403

View PDF Article preview

Graphical abstract

Results in Chemistry

Open access

The first total synthesis of lorneic acid J and an alternative synthesis to lorneic acid A

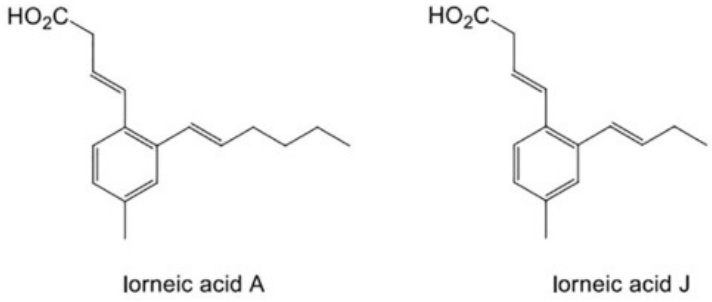
Brandon Sarrels, Wisam Morrar, Claudia G. Lucero

Article 100408

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

A clickable folic acid-rhamnose conjugate for selective binding to cancer cells

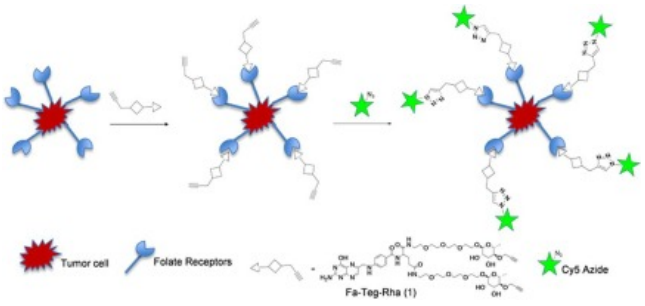
Shubham Parashar, Vatika Gupta, Rakesh Bhatnagar, Amina Kausar

Article 100409

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



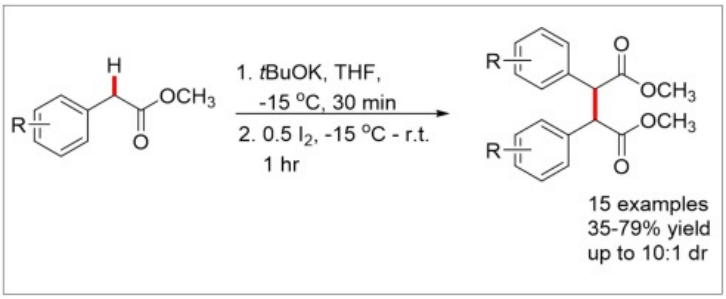
Research article *Open access*

Iodine-promoted oxidative homocoupling of methyl 2-arylacetates under equilibrium conditions using potassium *tert*-butoxide as a base

Ahmed Y. Nuriye, Joseph Barr

Results in Chemistry

Open access



Research article *Open access*

One pot three components solvent free synthesis of 4-substituted phenyl-2-(sulfanyl/oxo) pyrimidine-5-carboxylate derivatives

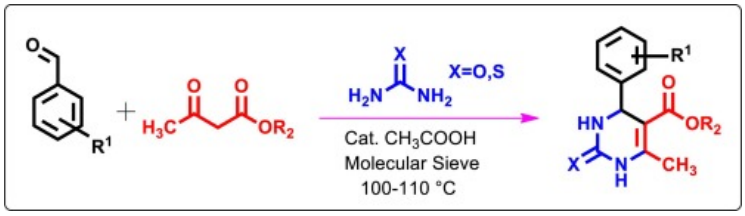
Sourav Handique, Priyanka Sharma

Article 100411

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Synthesis of phenol derivatives from cyclopentenones with arynes as key intermediates

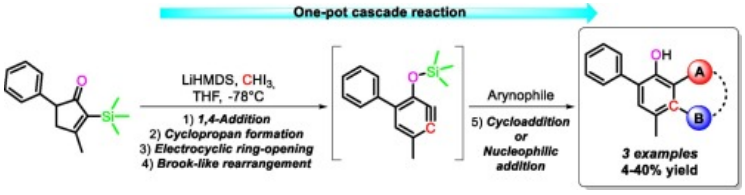
Dario Telese, Markus Staudt, Lennart Bunch

Article 100412

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Results in Chemistry

Open access

Article 100417

View PDF Article preview

Abstract

Abstract

A facile method for the reduction of carboxylic acid group of Bezafibrate, an approved drug, is described. The selective reduction of carboxylic acid group to corresponding alcohol was carried out by activation of the carboxylic acid moiety via mixed anhydride followed by the addition of stoichiometric amount of $NaBH_4$ and methanol to obtain the first alcohol variant of Bezafibrate. The reaction was completed in 5–10 min in excellent yield and purity. The new alcohol derivative was characterized by spectroscopic methods. This is the first report on this new molecule.

Research article *Open access*

First total synthesis of 7-thia-(-)-muricatacin

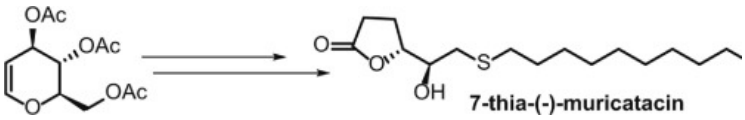
Uxía Gómez Bouzó, Irene Sánchez-Sanz, Maria González, Generosa Gómez, Yagamare Fall

Article 100431

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Oxa-Michael/Ugi-Smiles cascade reaction with α,β-unsaturated aldehydes

Aubrey Thessing, Robert Ayres, Joshua Jones, Haleigh Bauer, ... Sarah B. Luesse

Article 100416

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Results in Chemistry

Open access

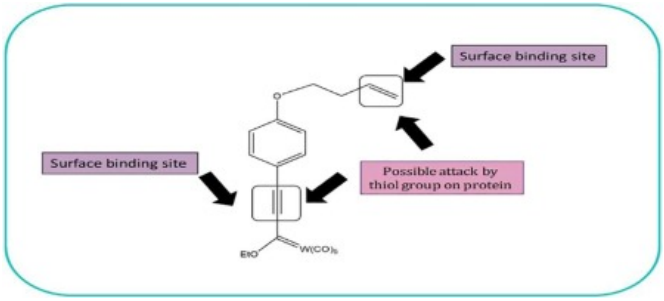
Design of a novel Fischer carbene complex which can facilitate thiol mediated site-specific protein immobilization

Namrata Ray
Article 100419

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

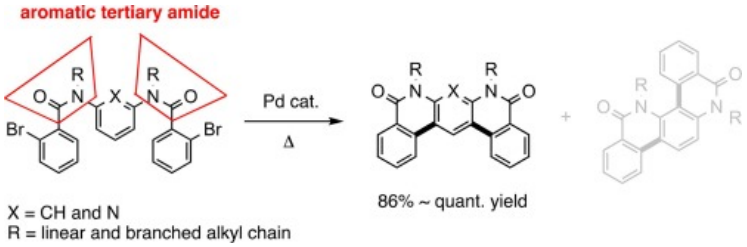
Palladium-Catalyzed intramolecular direct arylation of aromatic tertiary amide compounds revisited

Koji Takagi, Asuka Maeda, Ryotaro Tsunekawa
Article 100432

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Pharmacological and quantum chemical studies of 2-aminobenzo[d]thiazol-3-ium 4-chlorobenzenesulphonate: Synthesis, spectral, thermal analysis and structural elucidation

C. Sudhakar, M. Saravanabhavan, K.S. Ramesh, V.N. Badavath, ... M. Sekar
Article 100442

Results in Chemistry

Open access

and grown as single crystals by slow solvent evaporation method at room temperature. Single crystal X-ray diffraction results revels that 2ABT4CBS crystallized into a monoclinic crystal system with space group $P_{21/c}$. The molecular structure and functional groups were analyzed by spectral studies such as ^{1}H and ^{13}C NMR, UV–Visible and FT-IR. Thermal stability of the compound was determined by TG and DTA analysis. DFT was used in the calculation of the frontier molecular orbital (FMO), Mulliken load distribution and thermodynamic properties by employing B3LYP/6-31G (d,p) and HF/6-31G levels of theory. The results of the DNA binding demonstrate that the synthesized compound 2ABT4CBS interacts with CT-DNA in a considerable way. The antioxidant capabilities of 2ABT4CBS were also analyzed against DPPH radical and excellent radical scavenging abilities were identified. Molecular docking studies with PDB: 1BNA clearly suggested that synthesized compound

Research article *Open access*

3-Phenylpropanal and citral in the multicomponent synthesis of novel thiopyrano[2,3-*d*]thiazoles

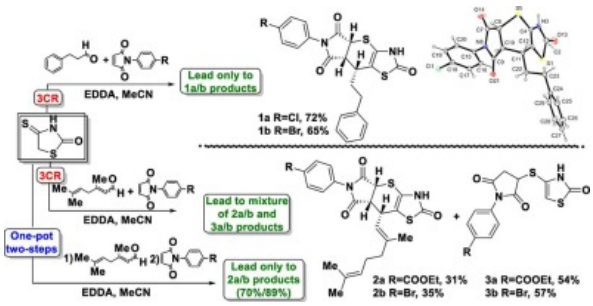
Andrii Lozynskyi, Andriy Karkhut, Svyatoslav Polovkovych, Olexandr Karpenko, ... Roman Lesyk

Article 100464

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Stability of cannabidiol (CBD) in solvents and formulations: A GC–MS approach

Chiara Franco, Stefano Protti, Alessio Porta, Federica Pollastro, ... Daniele Merli

Article 100465

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Results in Chemistry

Open access

Research article *Open access*

A simple and effective Lewis acid assisted synthesis of indole-3-sulfonyl carbamates and sulfonamides using Burgess reagent

Sivalenka Vijayasaradhi, Ravula Srinivas, Uppara Ramesh, Koraboina Chandra Prakash, Kota Sathish

Article 100467

View PDF Article preview

Abstract

Abstract

Indole-3-sulfonyl carbamate served as a key intermediate for the synthesis of a HPK1 inhibitor, bearing a primary sulfonamide group. A simple and efficient synthesis of this key indole-3-sufonyl carbamate was developed using the readily available Burgess reagent and Lewis acids. A systematic evaluation of a variety of Lewis acids with Burgess reagent to optimize the synthetic yield of indole-3-sulfonyl carbamate is reported in this paper.

Review article *Open access*

A minireview on diketopyrrolopyrrole chemistry: Historical perspective and recent developments

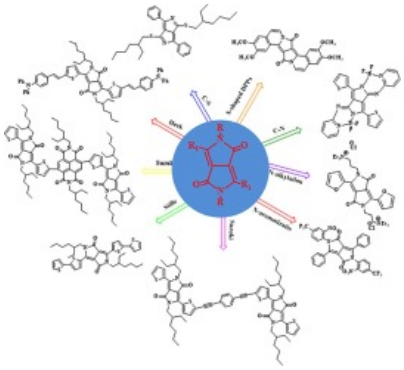
Salman A.L. Shaikh, Shailesh S. Birajdar, Sumit D. Ambore, Avinash L Puyad, ... Sheshanath V. Bhosale

Article 100473

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Silica gel-assisted synthesis of benzo[*b*]thiophenes from *o*-(alkylsulfanyl)(ethynyl)benzenes

Kozo Toyota, Hiroki Tanaka, Taisei Hanagasaki

Article 100487

Results in Chemistry

Open access

under thermal conditions. Tertiary alkyl-substituted sulfanyl derivatives gave good results. Methylsulfanyl-substituted precursors also afforded benzo[*b*]thiophenes at higher temperature. Effect of modified silica gel was evaluated and the mechanism of this method was discussed. This method was also applied to preparation of 2-substituted thieno[3,2-*b*]thiophenes, which gave moderate yields.

Research article *Open access*

Reduction of aldehydes and ketones by a stoichiometric amount of $NaBH_4$ using a small amount of MeOH or EtOH

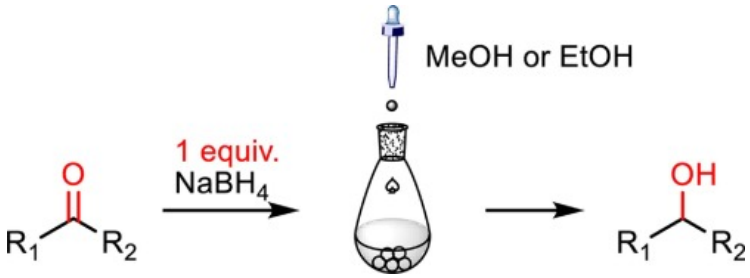
Kiyoshi Tanemura

Article 100486

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Incredible colorimetric sensing behavior of pyrazole-based imine chemosensor towards copper (II) ion detection: synthesis, characterization and theoretical investigations

Malini Nelson, Harikrishnan Muniyasamy, Pavithra Ongi, Sankar Balakrishnan, ... Rajesh Jegathalaprathaban

Article 100501

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Results in Chemistry

Open access

Abdolhamid Bamoniri, Nahid Yaghmaeiyan
Article 100505

View PDF Article preview

Abstract

Abstract

Kaolin sulfonic acid nanoparticles (Nano-kaolin-SO_3H) as a recoverable solid catalyst was prepared by reaction of kaolin nanoparticles with chlorosulfonic acid. After characterization of kaolin-SO_3H nanoparticles by ATR, XRD, TEM, XRF, FESEM, EDS, EDS mapping, BET and TGA techniques, this solid acid used to synthesize highly substituted pyrazoles *via* condensation of hydrazine derivatives with various β-diketones. The reaction was proceeded in a short time, simple work-up, easy purification technique, high yields, solvent free conditions and above all environmentally benign.

Research article *Open access*

KI-H_2O_2 promoted intramolecular oxidative C—H Functionalization: Synthesis of Benzo[*d*]thiazol-2-amines

Manish M. Katiya, Madhuri M. Sontakke, Madhukar G. Dhonde
Article 100512

View PDF Article preview

Abstract

Abstract

This work reported a novel, efficient and green technique for the synthesis of *N*-substituted benzothiazoles using KI/H_2O_2 in DCM via intramolecular oxidative C—H functionalization was carried out. The simple isolation, mild reaction conditions, easy purification without column with good yields, rendering the methodology accessible herein highly eco-friendly compare to existing method.

Research article *Open access*

A synthetic methodology for the preparation of a water-soluble quaternized amino phosphine oxide ligand

Ioannis D. Kostas, Georgia Antonopoulou, Polydoros-Chrysovalantis Ioannou, Eleftherios Ferentinos, Panayotis Kyritsis
Article 100525

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Results in Chemistry

Open access

Short communication *Open access*

Synthesis of advanced Maillard products: 2-formylpyrrole alkaloids

Brooks E. Maki, Xinyi Lily Feng, Maria R. Mosiychuk, Noah B. Davis

Article 100526

View PDF Article preview

Abstract

Abstract

A biologically-inspired method to access 2-formylpyrrole structures is reported using an Achmatowicz reaction and condensation sequence. This robust synthetic process has been used to access a variety of 2-formylpyrrole structures related to naturally isolated and bioactive compounds. Several families of pyrrole-based natural products have recently been isolated, and these structurally related compounds have been shown to demonstrate interesting bioactive properties. Synthesis targets include the natural products sinopyrine C and pyrrolezanthine.

Research article *Open access*

Evaluation of an approach for the synthesis of *C*2 alkylated gramines

Khorshada Jahan, Tye Seideman, Shahnawaz Ali, Mizzanoor Rahaman, M. Mahmun Hossain

Article 100535

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Research article *Open access*

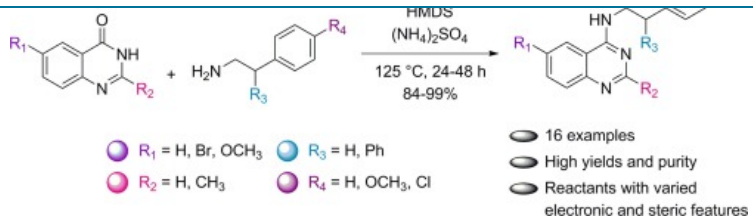
Synthesis of *N*-phenethylquinazolin-4-amines *via* silylation-amination mediated by hexamethyldisilazane

Guilherme Arraché Gonçalves, Flávio Castro do Nascimento, Sidnei Moura e Silva, Cristiano Valim Bizarro, ... Pablo Machado

Article 100539

Results in Chemistry

Open access



Research article *Open access*

Synthesis and biological evaluation of mannosyl triazoles and varying the nature of substituents on the terminal phthalimido moiety in the aglycone backbone

Hussein Al-Mughaid, Younis Jaradat, Maha Khazaaleh
Article 100548

View PDF Article preview

Abstract

Abstract

In the present study, a facile synthesis of six monovalent α-D-mannoside ligands terminated with phthalimido moiety by Cu(I) catalyzed azide-alkyne cycloaddition reaction (CuAAC) has been achieved. All synthesized ligands were tested for their inhibitory activities against *E. coli* FimH adhesion using hemagglutination inhibition (HAI) assay and showed inhibitory activity in the range of HAI = 4.8–23.5 μM comparing with 2-azidoethyl α-D-mannopyranoside **17** as the standard ligand (HAI = 135 μM). Among them, ligand **21** (R = NO_2), displayed the best activity (HAI = 4.8 μM) which was approximately 28 times more potent than the reference ligand **17**. Thus confirming the beneficial effect of lipophilic interactions between the aromatic aglycone and the tyrosine gate of FimH. We feel that our lead ligand will be a good platform for identification of more potent FimH inhibitors.

Research article *Open access*

"Click" synthesis of amphiphilic carbohydrate-alkyl triazole derivatives

Mario Daniel Contin, M. Leticia Bravi Costantino, Norma B. D'Accorso
Article 100558

View PDF Article preview

Abstract

Abstract

1,4-disubstituted 1*H*-1,2,3-triazole with a hydrophobic and hydrophilic moiety were synthesized by using Cu(I) catalyzed alkyne-azide 1,3-dipolar cycloaddition reaction. The hydrophilic moiety was D-galactopiranosyl or L-galactitoyl while an alkyl chain of eight to sixteen carbons corresponds to the hydrophobic portion. All compounds were characterized by NMR and mass spectrometry. Partition coefficient was experimentally determinate by HPLC ranging from 0.7 to 4.5. Compounds with the

Results in Chemistry

Open access

Fatemeh Sadegh, Hossein Tavakol
Article 100592

View PDF Article preview

Abstract

Abstract

An efficient technique for producing the $Ag/CoFe_2O_4$ noble trimetallic aerogel is provided. The advantages of this approach are fast preparation, short gelation time, avoiding the use of surfactants, and preparation at room temperature. The $Ag/CoFe_2O_4$ aerogel was characterized by common analysis methods including FESEM, VSM, EDX mapping, TEM, BET, and XRD. The resulting aerogel exhibits outstanding catalytic activity, and durability in reducing different nitroarenes. The reactions were carried out using hydrazine hydrate as a reducing agent, a 0.03 g catalyst, and ethanol as the solvent at reflux conditions. Under these conditions, 13 derivatives of nitroarenes were successfully reduced to aniline derivatives in 4 h in 70–95 % yield. This reaction had some advantages such as no use of toxic organic solvents, mild reaction conditions, easy separation of the products without any tedious separation techniques, and a recyclable catalyst. The catalyst showed high recyclability in which only 8 % decrease was observed after five runs

Research article *Open access*

A green protocol for one-pot synthesis of 3,4-dihydropyrano[*c*]chromenes and biscoumarins by employing WEB as an internal base

Vikrant Kumbhar, Sagar Gaiki, Rutik Raskar, Avinash Kumbhar, Bhushan Khairnar
Article 100589

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Research article *Open access*

Selective silver (I)-catalyzed four-component gram-scale synthesis of novel 1,4-disubstituted 1,2,3-triazole-sulfonamides under heterogeneous catalysis and microwave irradiation in water

Ayoub El Mahmoudi, Hind El Masaoudi, Hamza Tachallait, Aicha Talha, ... Khalid Bougrin

Results in Chemistry

Open access

The Ag_3PO_4-MEA catalyst was successfully prepared and proved to be an efficient and selective catalyst of the multicomponent synthesis of a new library of 1,4-disubstituted 1,2,3-triazole-sulfonamides **5a-n**. This new methodology cleanly proceeded in water under microwave activation using *N*-propargyl saccharin, NaN_3 or $SO_2(N_3)_2$, substituted benzyl chloride or protected sugar and non-conjugated primary amines, using Ag(I) in a method-comparison study to Cu(I) as conventional Sharpless catalyst. The proposed strategy allows a simple, rapid and scalable route to 1,2,3-triazoles sulfonamides derivatives **5** through *in-situ* ring-opening of saccharin system with primary amine. All compounds have been fully characterized by NMR, mass spectrometry and X-ray crystallography analysis. The catalyst has been prepared *via* a green Sol-Gel methodology and fully analyzed by X-ray Diffraction (XRD), Fourier Transform Infrared (FTIR) Spectroscopy and Scanning Electron Microscopy (SEM) coupled to Energy Dispersive X-ray Spectroscopy (EDX), and Brunauer-Emmett-Teller (BET) method. The catalyst is

Research article *Open access*

Cationic carbohydrate-based surfactants derived from renewable resources: Trends in synthetic methods

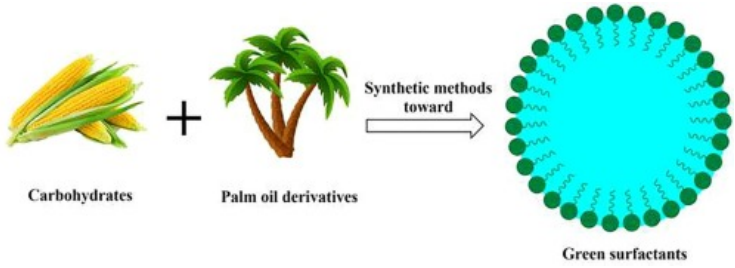
Abbas Abdulameer Salman

Article 100602

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Review article *Open access*

A review on biological and medicinal impact of heterocyclic compounds

Emranul Kabir, Monir Uzzaman

Article 100606

View PDF Article preview

Abstract

Abstract

Heterocyclic compounds have gained a lot of attention because of their numerous significant medical and biological uses. Research interest on heterocyclic compounds is rapidly increasing due to the extensive synthetic study and functional utility. Th are found in more than 90% of novel drugs, and span the gap between biology and chemistry, where so much scientific discover

Results in Chemistry

Open access

Research article *Open access*

Synthesis of novel pyridazino[1,6-*a*]indole-2,4(1*H*,3*H*)-dione and pyridazino[1,6-*a*]indol-2(1*H*)-one *via* intramolecular electrophilic aromatic substitution

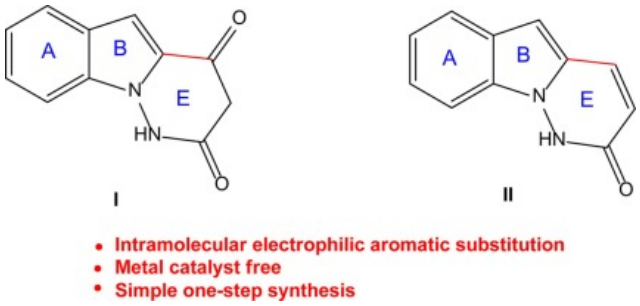
Katarzyna Ozdarska, Maud Petremant, Kai-Chen Wu, Erika Bourguet

Article 100612

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Design, synthesis and biological evaluation of novel substituted indazole-1,2,3-triazolyl-1,3,4-oxadiazoles: Antimicrobial activity evaluation and docking study

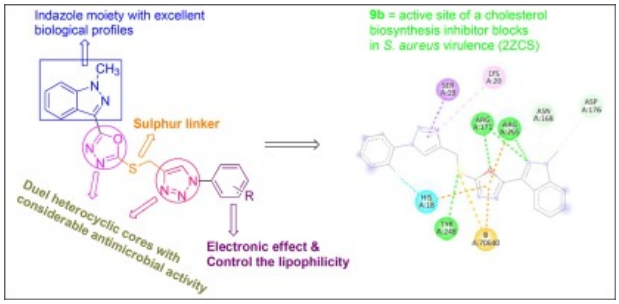
Ananda Kumar Dunga, Tejeswara Rao Allaka, Yugandhar Kethavarapu, Sunil Kumar Nechipadappu, ... Pilli V.V.N. Kishore

Article 100605

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Results in Chemistry

Open access

Abstract Graphical abstract

Graphical abstract

Research article *Open access*

Microwave-assisted synthesis of (6-((1-(4-aminophenyl)-1*H*-1,2,3-triazol-4-yl)methoxy)substituted benzofuran-2-yl)(phenyl)methanones, evaluation of *in vitro* anticancer, antimicrobial activities and molecular docking on COVID-19

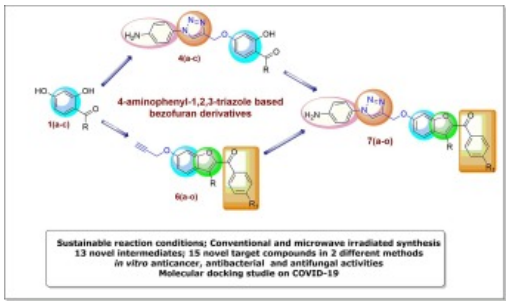
Ravinder Dharavath, M. Sarasija, K.N. Prathima, M. Ram Reddy, ... D. Ashok

Article 100628

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Sulfated polyborate as Bronsted acid catalyst for Knoevenagel condensation

Prerna Ganwir, Priyanka Bandivadekar, Ganesh Chaturbhuj

Article 100632

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Results in Chemistry

Open access

20 examples

Research article *Open access*

One-pot synthesis of novel 2-oxo(*2H*)-spiro[benzofuran-3,3′-pyrrolines] *via* 1,4-dipolar cycloaddition reaction

Mohammed M. Al-Mahadeen, Jalal A. Zahra, Mustafa M. El-Abadelah, Areej M. Jaber, Monther A. Khanfar

Article 100643

View PDF Article preview

Abstract

Abstract

An efficient synthesis of novel spiro[2-oxobenzofuran-3,3′-pyrrolines] is achieved *via* a three-component 1,4-dipolar cycloaddition reaction at rt involving benzofuran-2,3-diones, dimethyl acetylenedicarboxylate along with imidazo[1,5-*a*]pyridine, or imidazo[1,5-*a*]quinoline or imidazo[5,1-*a*]isoquinoline. The expected isomeric benzofuro[3,2-*f*]oxazepines (kinetic control cycloadducts) were, however, not detected. Structures of the title spiro products are evidenced from HRMS and NMR spectral data and further confirmed by single-crystal X-ray crystallography.

Research article *Open access*

Coumarin – benzimidazole hybrids: A review on diverse synthetic strategies

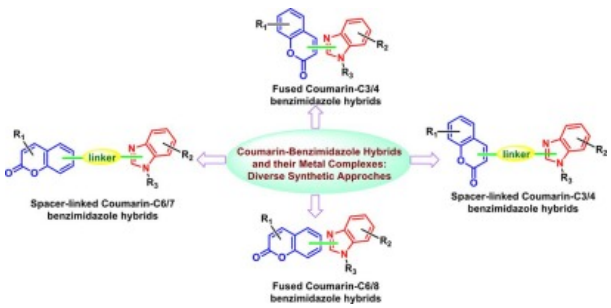
C.G. Arya, Munugala Chandrakanth, K. Fabitha, Neethu Mariam Thomas, ... Janardhan Banothu

Article 100631

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



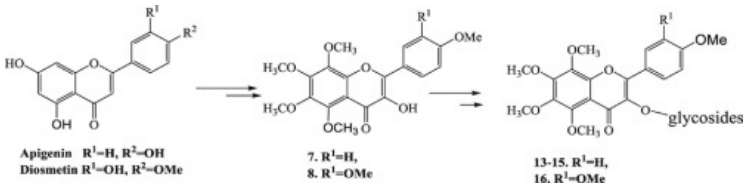
Research article *Open access*

The syntheses of polymethoxy flavonoid glycosides from apigenin and diosmetin and their cytotoxic activities on two human cancer cell lines

Results in Chemistry

Open access

Graphical abstract



Short communication *Open access*

Synthesis and biological evaluation of aryl 1,2,4-oxadiazole incorporated (2-(oxazol)-1H-imidazoles as anticancer agents

Suresh Bairi, Veerachamy Alagarsamy, Shyam Sunder Rachamalla, Laxminarayana Eppakayala

Article 100649

View PDF Article preview

Abstract

Abstract

A new series of 1,2,4-oxadiazole incorporated (2-(oxazol)-1H-imidazole derivatives **9a-j** have been developed and synthesized. Further, the newly prepared compounds (**9a-j)** compounds were evaluated for their preliminary anticancer properties against four human cancer cell lines like prostate cancer (PC3&DU-145), lung cancer (A549), and breast cancer (MCF-7) by using of MTT method and etoposide used as a positive reference. The obtained results indicated that most of the tested compounds displayed excellent to moderate activity. Among all derivatives, six compounds **9a, 9b, 9c, 9d, 9e,** and **9f** exhibited more potent anticancer activity than etoposide.

Research article *Open access*

Efficient synthesis of a novel euchromatic histone methyl transferase 2 (G9a) inhibitor

Davide Gornati, Roberta Sinisi, Stefania Bertuolo, Marilenia De Matteo, Romano Di Fabio

Article 100654

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Results in Chemistry

Open access

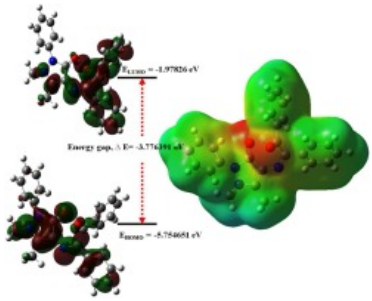
dihydro-3H-pyrazol-3-one

S. Anila Raj, V.G. Vidya, V. Preethi, V.G. Viju Kumar
Article 100665

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Colorimetric detection of Cu^{2+} by amino phenol based chemosensor

D.Y. Patil, N.B. Khadke, A.A. Patil, A.V. Borhade
Article 100658

View PDF Article preview

Abstract

Abstract

A colorimetric chemosensor, based on 2-amino phenol Schiff base has been successfully synthesized by simple condensation reaction of 2-amino quinoline 3-carbaldehyde and 2-amino phenol. Synthesized Schiff base ligand 2-(2-aminoquinolin-3-yl methyleneamino) phenol (SBL) was characterised by various spectroscopic techniques. SBL displayed highly selective and sensitive Colorimetric enhancement to Cu^{2+} ion over 13 competing ions in ethanol–water (99:1/v:v) solution. UV titration experiment showed that SBL exclusively reacted with Cu^{2+} and the stoichiometric ratio is 1:1. The detection limit of SBL-Cu^{2+} was estimated to be 4.3 nM and 8.2×10^{-8} M, respectively.

Research article *Open access*

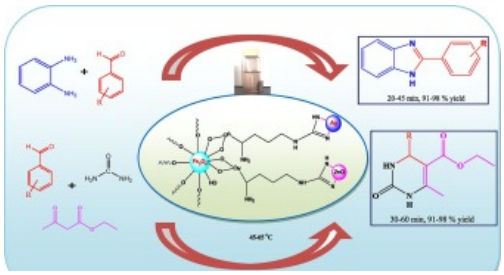
Highly efficient magnetically separable Zn-Ag@L-arginine Fe_3O_4 catalyst for synthesis of 2-aryl-substituted benzimidazoles and multicomponent synthesis of pyrimidines

Padmakar A. Kulkarni, Sandeep S. Kahandal, Nitin A. Mirgane, Ashis Kumar Satpati, Suresh S. Shendage
Article 100655

Results in Chemistry

Open access

and multicomponent synthesis of pyrimidines.



Research article *Open access*

Synthesis, characterization, DFT studies and molecular docking investigation of 2-oxo-ethyl piperidine pentanamide-derived sulfonamides as anti-diabetic agents

Fredrick C. Asogwa, Ekoh C. Ogechi, H. Louis, Ugwu D. Izuchukwu, ... Okoro U. Chris

Article 100672

View PDF Article preview

Abstract

Abstract

The present study is focused on the synthesis, characterization, DFT Studies, and *in silico* biological evaluation of novel benzenesulfonamides as antidiabetic agents. The compounds were synthesized and characterized experimentally using the NMR, FT-IR and HRMS while the molecular electronic structure properties were investigated using DFT-based theoretical methods at the M06-2X/6–311++G (d, p) level of theory. The results of the calculated vibrational energies were in perfect agreement with those of the experimental frequencies for different functional groups. The natural bond orbital (NBO) analysis was also carried out to study the intramolecular charge transfer interactions and energies of stabilization. Molecular docking simulation showed that the compounds; 3-Methyl-2-(4-methylphenylsulfonamido)-*N*-(2-oxo-2(piperidin-1-yl) ethyl) pentanamide (MMOPEP), 3-Methyl-*N*-(2-oxo-2-(piperidin-1-yl)ethyl))-2-(phenylsulfonamido)pentanamide (MOPEPP) and, 2-Methyl-2-(4-nitrophenylsulfonamido)-*N*-(2-oxo-2-(piperidin-1-yl)ethyl)pentanamide (MNOPEP) fitted tightly to the amino

Research article *Open access*

Allylic arylative isomerisation of Morita-Baylis-Hillman adduct of isatin derivatives with arenes using $FeCl_3$ and K-10 clay

Sivaprakasam Sivaraman, Selvaraj Aruljothi, Vadivel Vaithiyanathan

Article 100677

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Results in Chemistry

Open access

Research article *Open access*

Design, synthesis and evaluation of new alkylated pyrimidine derivatives as antibacterial agents

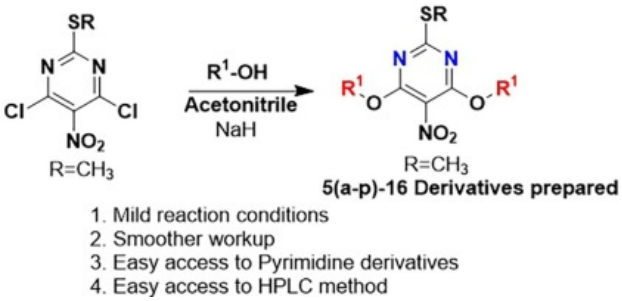
K.N. Hari, Boja Poojary, G. Chandrasehar

Article 100676

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

2-aminophenol as a leading reactant for the one pot synthetic strategies towards benzoxazole derivatives: A systematic review

Jyoti Sharma, Praveena Mishra, Juli Bhadoria

Article 100670

View PDF Article preview

Abstract

Abstract

Nitrogen containing heterocyclic compounds such as benzoxazole derivatives have been found to be pharmacologically active and are being employed as starting material for several drug discovery researches. Synthetic strategies invention to produce such beneficial moieties is on focus of synthetic organic chemists, as a result various efficient protocols have been developed since past decades to synthesize different medicinally useful benzoxazole derivatives. In this review, we attempt to organize recent synthetic strategies explored by chemists to produce benzoxazole derivatives by the reaction of 2-aminophenol with various reactants in different reaction conditions such as solvents, catalysts, temperature etc. Therefore, the updated synthetic information present in this review may be helpful to the researchers to develop better synthetic protocols for novel medicinally active derivatives.

Inorganic Chemistry

Results in Chemistry

Open access

Abstract Graphical abstract

Graphical abstract

Research article *Open access*

Synthesis of AuNPs decorated multi-valent Cu-Ni oxide nanoplates for electrochemical oxidation of methanol

Han Sun, Haiping Huang, Chao Hu, Yu Yan, ... Jing-Lin Chen

Article 100306

View PDF Article preview

Abstract

Abstract

Cu-Ni oxide nanocomposite was synthesized via solvothermal method with nickel (II) nitrate and copper nitrate as Ni and Cu resource respectively. AuNPs/oxide nanocomposite was obtained by dispersing the oxide into the pre-synthesized Au colloid. Transmission electron microscope (TEM) shows that the synthesized oxides are nanoplate morphology. Interplanar distance from the high resolution TEM (HRTEM) image shows that the Ni and Cu in the oxide are multivalent state. X-ray diffraction (XRD) and X-ray photoelectron spectroscopy (XPS) characterization further proves that the Ni and Cu are multivalent state, and the Au is Au^0 form in the nanocomposte. EDS-mapping images confirm large numbers of AuNPs are uniformly absorbed onto the ultra-thin multivalent Cu-Ni oxide nanoplate. The electrochemical properties of multivalent oxide (m-v oxide) with or without AuNPs decoration are investigated in 0.1 M potassium chloride electrolyte with 2.0 mM Ferri/Ferro-Cyanide. When employed for the electrochemical catalysis in methanol oxidation reaction (MOR), the AuNPs/m-v oxide exhibits better

Research article *Open access*

Structures, spectral and photodynamic properties of two nitrosylruthenium (II) isomer complexes containing 8-quinolinolate and L-proline ligands

Chenyang Liu, Yu Wang, Ai Wang, Feng Su, Hongfei Wang

Article 100318

View PDF Article preview

Abstract Graphical abstract

Results in Chemistry

Open access

Research article *Open access*

AIE or AIE(P)E-active transition metal complexes for highly sensitive detection of nitroaromatic explosives

Arumugam Ramdass, Veerasamy Sathish, Pounraj Thanasekaran

Article 100337

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

This review focuses on the development of AIE or AIE(P)E-active transition metal complexes for the sensitive and selective detection of nitroexplosives.

Research article *Open access*

Investigation of phosphine donor properties to vanadium(V) nitrides

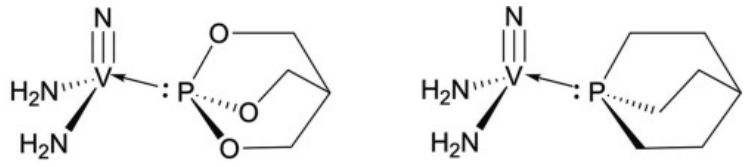
Linqing Mo, Hannah I. Barr, Aaron L. Odom

Article 100344

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



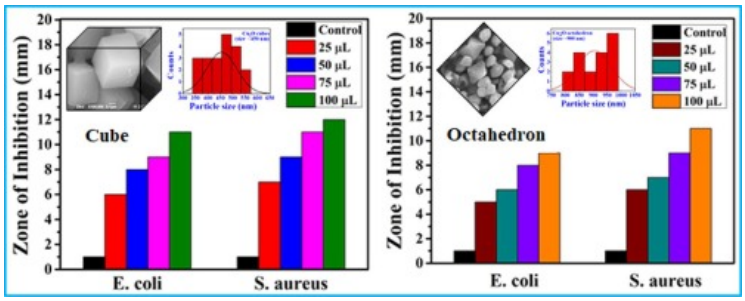
Research article *Open access*

Investigation on crystal facet-dependent antibacterial activity of Cu_2O crystals – A structural, morphological, and spectroscopy studies

Results in Chemistry

Open access

Graphical abstract



Research article *Open access*

Machine learnt patterns in rhodium-catalysed asymmetric Michael addition using chiral diene ligands

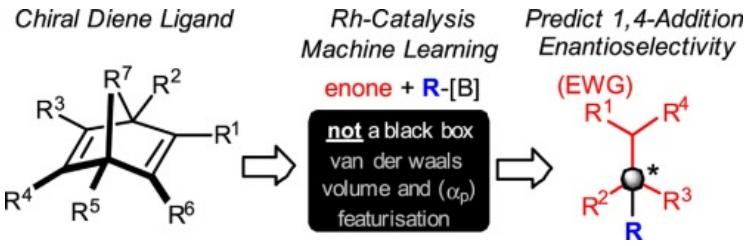
Benjamin Owen, Katherine Wheelhouse, Grazziela Figueredo, Ender Özcan, Simon Woodward

Article 100379

View PDF Article preview

Abstract Graphical abstract

Graphical abstract



Research article *Open access*

Hybrid polyphenolic Network/SPIONs aggregates with potential synergistic effects in MRI applications

A. Lazzarini, R. Colaiezzi, A. Galante, M. Passacantando, ... M. Crucianelli

Article 100387

View PDF Article preview

Abstract Graphical abstract

Graphical abstract

Results in Chemistry

Open access

NIR-emission from Yb(III)- and Nd(III)-based complexes in the solid state sensitized by a ligand system absorbing in a broad UV and visible spectral window

Enrico Cavalli, Silvia Ruggieri, Silvia Mizzoni, Chiara Nardon, ... Fabio Piccinelli

Article 100388

View PDF Article preview

Abstract

Abstract

In this contribution, we present the synthesis, characterization and spectroscopic investigation of the heteroleptic (*R,R*)-Yb**L1**(tta) and (*R,R*)-Nd**L1**(tta) complexes (with *tta* = 2-thenoyltrifluoroacetonate and **L1** = N,N′-bis(2-(8-hydroxyquinolinate)methylidene)-1,2-(R,R or S,S)-cyclohexanediamine) in the solid state. The *f-f* metal-centered NIR luminescence emission of Nd(III) and Yb(III) is efficiently sensitized by both chromophoric ligands in a very broad range of wavelengths [from 250 to 600 nm, in the case of Nd(III) and from 250 to 650 nm, for Yb(III)]. A possible energy transfer mechanism is proposed: for (*R,R*)-Nd**L1**(tta) complex a classical Ligand-to-Metal Energy Transfer (LMET) mechanism (*antenna effect*) is suggested, whilst in the case of the (*R,R*)-Yb**L1**(tta) complex, the presence of a ligand-to-metal charge transfer (LMCT) state determines the sensitization of Yb(III) luminescence. We propose that this level is populated by the singlet and triplet excited states belonging to $\pi \rightarrow \pi^*$ and $n \rightarrow \pi^*$ transitions of both ligands and it can transfer the excitation

Page 1 of 5

Previous vol/issue Next vol/issue

ISSN: 2211-7156

Results in Chemistry

Open access