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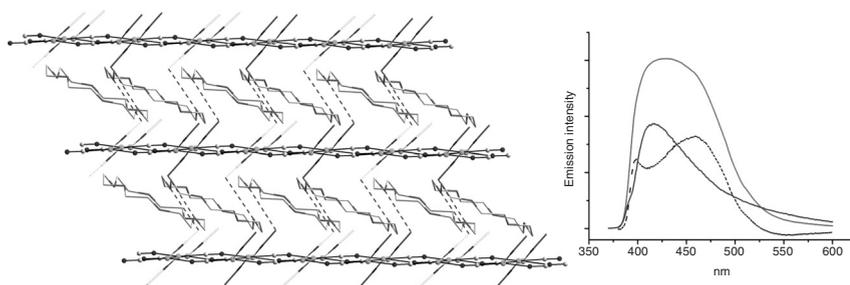
Rapid Communication

A Novel Copper Cyanide Complex with a Layered Structure

Xi Liu, Guo-Cong Guo

Aust. J. Chem. **2008**, *61*, 481–483.

Copper(I) cyanide complexes possess a remarkable diversity of structures and special luminescent properties. A novel copper cyanide complex $\text{Cu}(\text{CN})(\text{CH}_3\text{CN})\cdot 0.5(18\text{C}-6)$ with a rare layered structure has been synthesized and fully characterized that exhibits complex violet luminescence originating from different layers. This finding nicely confirms and extends earlier work on copper(I) cyanide complexes.



Full Papers

Synthesis and Cannabinoid Activity of a Variety of 2,3-Substituted 1-Benzo[*b*]thiophen Derivatives and 2,3-Substituted Benzofuran: Novel Agonists for the CB₁ Receptor

*Gerard P. Moloney, James A. Angus,
Alan D. Robertson, Martin J. Stoermer,
Michael Robinson, Lucy Lay,
Christine E. Wright, Ken McRae,
Arthur Christopoulos*

Aust. J. Chem. **2008**, *61*, 484–499.

This paper describes medicinal chemistry studies directed towards the investigation of a novel series of 1-benzo[*b*]thiophen and benzofuran compounds, which were designed and synthesized as selective CB₁ agonists. These studies enhance our understanding of the factors that influence binding at the CB₁ receptor. It is hoped that novel compounds of this type will have clinical utility in pain control and cerebral ischaemia following stroke or traumatic head injury.

A Novel Piezoelectric Immunosensor for CA125 Using a Hydroxyapatite/Chitosan Nanocomposite-Based Biomolecular Immobilization Method

*Yanjun Ding, Jia Liu, Xiaoyong Jin,
Guoli Shen, Ruqin Yu*

Aust. J. Chem. **2008**, *61*, 500–505.

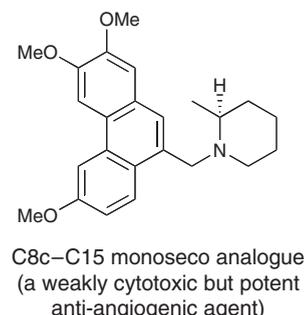
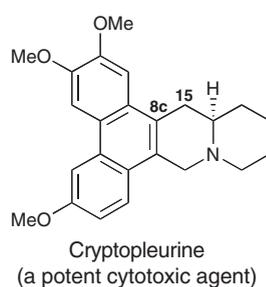
Ideal immobilization methods are the key target to pursue in current biosensor design. In this paper, a general design strategy for piezoelectric immunosensing platforms has been proposed on the basis of HA/CS nanocomposite and nanogold particle adsorption of antibodies. Such an interface design with the hybrid nanocomposite should be tailored as a new alternative used for biosensor design.

Synthesis and Biological Evaluation of Some Enantiomerically Pure C8c–C15 Monoseco Analogues of the Phenanthroquinolizidine-Type Alkaloids Cryptopleurine and Julandine

Magne O. Sydnes, Anna Bezos, Christopher Burns, Irma Kruszelnicki, Christopher R. Parish, Stephen Su, A. David Rae, Anthony C. Willis, Martin G. Banwell

Aust. J. Chem. **2008**, *61*, 506–520.

A series of enantiomerically pure C8c–C15 monoseco analogues of the alkaloids cryptopleurine and julandine have been prepared and tested for their cytotoxic and anti-angiogenic properties.

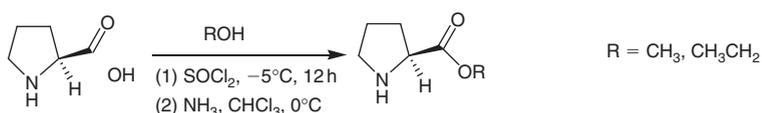


Synthesis and Properties of Novel Chiral Ionic Liquids from L-Proline

Hong-Shuai Gao, Zhi-Guo Hu, Jian-Ji Wang, Zhao-Fa Qiu, Feng-Qiu Fan

Aust. J. Chem. **2008**, *61*, 521–525.

In recent years, chiral ionic liquids (CILs) have become particularly attractive for their potential applications in chiral discrimination, including asymmetric synthesis and optical resolution of racemates. In this paper, 14 novel chiral room-temperature ionic liquids with chiral cations derived directly from natural L-proline have been synthesized for the first time, and they show chiral discrimination between the enantiomeric forms of Mosher's acid salt. L-Proline may find important applications in asymmetric organic reactions, and research into future applications of these new CILs is in progress.

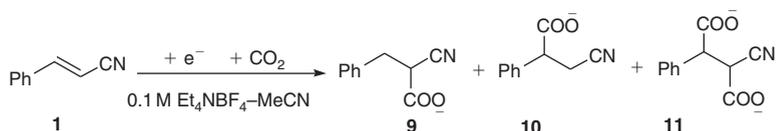


Electrochemical Reduction of Cinnamitrile in the Presence of Carbon Dioxide: Synthesis of Cyano- and Phenyl-Substituted Propionic Acids

Huan Wang, Mei-Yu Lin, Kai Zhang, Su-Jiao Li, Jia-Xing Lu

Aust. J. Chem. **2008**, *61*, 526–530.

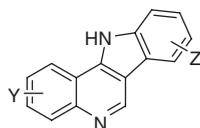
Electrochemical reduction of cinnamitrile has been carried out using MeCN as solvent in the absence and presence of CO₂. Cyano- and phenyl-substituted propionic acids can be easily obtained by controlled-potential electrocarboxylation of cinnamitrile under an atmospheric pressure of CO₂. Under the optimized condition, 84.8% of global carboxylic yield has been achieved.



Synthesis and Antineoplastic Activity of Quinoline Derivatives

Qiang Zhou, Jing Hou, Huamin Li, Li Cui, Han Jia, Bing Gong, Lan He

Aust. J. Chem. **2008**, *61*, 531–536.



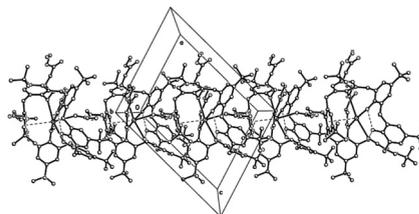
To elucidate the structure–activity relationship of compounds that contain the quinoline substructure, based on their cytotoxic activity against the growth of various cancer cell lines, a series of new quinoline unit-containing compounds that possess substituted groups has been synthesized (see Fig.). Human ovarian cancer cell lines (A2780) were found to be highly susceptible to the examined compounds.

Synthesis and Structure of the Potassium Salt with Monodeprotonated 1,2,3-Tri(ethoxycarbonylpropyl)-*p*-*t*-butylcalix[6]arene

Ze-Bao Zheng, Ren-Tao Wu, Ji-Kun Li, Yi-Feng Sun

Aust. J. Chem. **2008**, *61*, 537–540.

A potassium salt with monodeprotonated 1,2,3-tri(ethoxycarbonylpropyl)-*p*-*t*-butylcalix[6]arene has been prepared. X-ray crystallographic analysis shows that this compound adopts double partial cone conformation. The molecules are connected into infinite chains *via* intermolecular $K^+ \cdots O$ interactions.

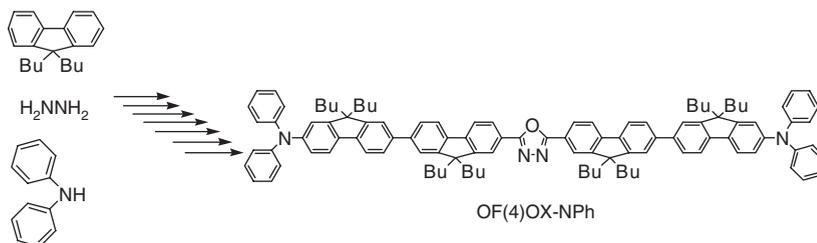


Synthesis and Structure–Property Relationships of Symmetric Ambipolar Quaterfluorene-Containing Oxadiazole as a Central Core and Diphenylamine as End-capping Moieties

Fan Yang, Xiao Ling Zhang, Mo Jun Xiong, Zi Jian Cao, Ping Fang Xia, Zhong Hui Li

Aust. J. Chem. **2008**, *61*, 541–546.

The symmetric ambipolar quaterfluorene OF(4)OX-NPh with hole-transporting and electron-transporting moieties has been prepared in a facile reaction using Suzuki cross-coupling as a key reaction. This novel ambipolar quaterfluorene has high thermal and electrochemical stabilities and is expected to possess potential application as a double charge-transfer and light-emitting material in the field of single-layer organic emitting diodes.

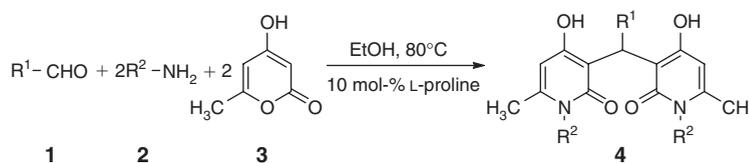


A Novel and Efficient Synthesis of 3,3'-Benzylidenebis(4-hydroxy-6-methylpyridin-2(1H)-one) Derivatives Through a Multi-Component Reaction Catalyzed by L-Proline

Chun-Ling Shi, Da-Qing Shi, Sung Hong Kim, Zhi-Bin Huang, Min Ji

Aust. J. Chem. **2008**, *61*, 547–551.

A novel, efficient, and green synthetic method is reported for a series of new 3,3'-benzylidenebis(4-hydroxy-6-methylpyridin-2(1H)-one) derivatives that utilizes a simple three-component reaction (aldehyde **1**, aniline **2**, and 6-methyl-4-hydroxypyran-2-one **3**) catalyzed by L-proline. Such *N*-substituted pyridinone derivatives are well known for their variety of physiological activities.



Short Communication

Uncatalyzed Synthesis of β -Enamino Ketones in PEG–Water

Babasaheb P. Bandgar, Sachin A. Patil, Balaji L. Korbad, Sunita B. Bandgar, Baliram S. Hote

Aust. J. Chem. **2008**, *61*, 552–555.

The first uncatalyzed synthesis of β -enamino ketones in PEG-600 is reported. The products are easy to purify without the use of column chromatography, and yields of products are moderate to excellent. The procedure is environmentally benign.

