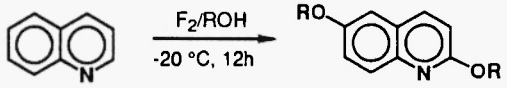
Graphical Abstracts

Heterocycl. Commun. **4** (1998) 493-496

AN UNUSUAL 2,6-DIALKOXYLATION OF QUINOLINE BY THE REACTION WITH ELEMENTAL FLUORINE AND ALCOHOL

Alesia N. Parker and Lucjan Strekowski*
Department of Chemistry, Georgia State University, Alanta, Georgia 30303, USA



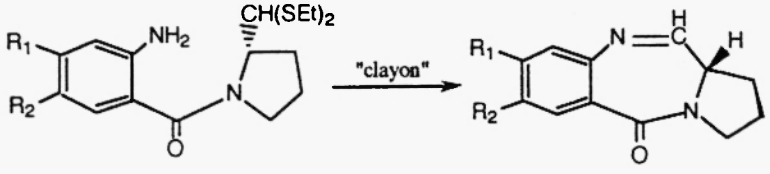
R = Me, Et

Heterocycl. Commun. **4** (1998) 497-500

A FACILE AND EFFICIENT SYNTHESIS OF PYRROLO [2,1-*C*][1,4]BENZODIAZEPINE ANTITUMOR ANTIBIOTICS: AN IMPROVED DEPROTECTIVE CYCLIZATION METHOD BY "CLAYON"

B. S. P. Reddy, Yalamati Damayanthi and J. William Lown*
Department of Chemistry, University of Alberta, Edmonton, AB, Canada, T6G 2G2

Preparation of pyrrolo[2,1-*c*][1,4]benzodiazepine (PBD) imines via ethanethiol deprotective cyclization by using a mild and efficient clay supported ammonium nitrate catalyst is described.

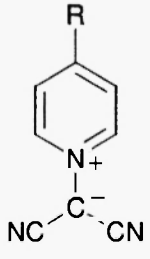


Heterocycl. Commun. **4** (1998) 501-506

X-RAY ANALYSES AND MOLECULAR ORBITAL CALCULATIONS OF PYRIDINIUM DICYANOMETHYLIDES

Kiyoshi Matsumoto,* Hideki Katsura, Akiriho Okada, Takane Uchida †
and Akikazu Kakehi † †
Graduate School of Human and Environmental Studies, Kyoto University, Kyoto 606-8501 Japan,
† Faculty of Education, Fukui University, Fukui 910-8507
† † Faculty of Engineering, Shinshu University, Nagano 380-8533 Japan

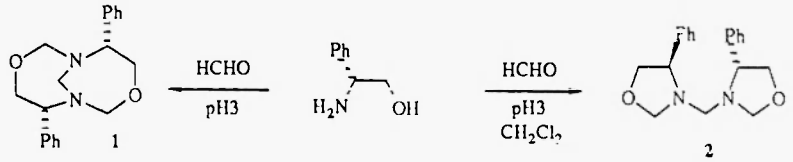
Abstract: Comparative studies have been described between X-ray analyses and molecular orbital calculations of p-substituted (H, Me, and Ac) pyridinium dicyanomethylides. Generally, ab initio calculations represent the geometry more well than semi-empirical methods.



Heterocycl. Commun. **4** (1998) 507-508

PRODUCT TUNING IN THE PHENYLGLYCINOL-FORMALDEHYDE CONDENSATION REACTION

Valerie Monnier, David J. Aitken*, Francine Libot, Henri-Philippe Husson
Laboratoire de Chimie Therapeutique associe au CNRS, Faculte des Sciences Pharmaceutiques et Biologiques,
Universite Rene Descartes (Paris V), 4 avenue de l'Observatoire, 75270 Paris cedex 06, France



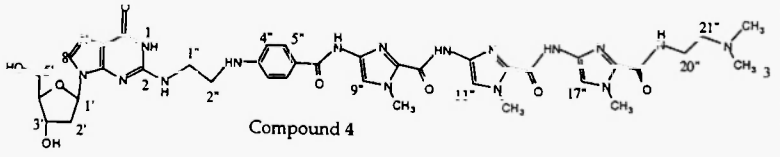
Either adduct, 1 or 2, can be accessed by simple modification of the reaction conditions.

Heterocycl. Commun. **4** (1998) 509-514

SYNTHESIS OF A DEOXYGUANOSINE-2-AMINO ADDUCT OF A TRIIMIDAZOLE-CONTAINING TALLIMUSTINE ANALOG

Cyrstal Kaenzig, Richard Hubbard, Mingzhu Zhang,[a] Constance M. Harris,[a] Thomas M. Harris,[a] and Moses Lee*, Department of Chemistry, Furman University, Greenville, SC 29613, and [a]Department of Chemistry, Vanderbilt University, Nashville, TN 37235

A covalent adduct, compound **4**, of a triimidazole-containing analog of tallimustine with the 2-amino group of deoxyguanosine was prepared and characterized.

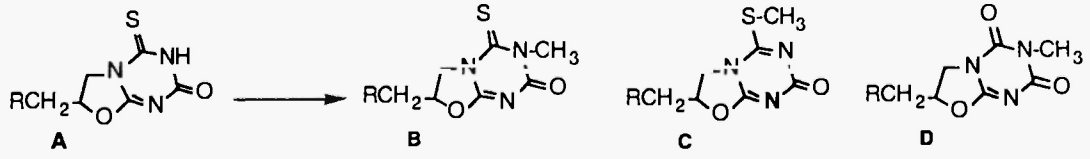


Compound 4

Heterocycl. Commun. **4** (1998) 515-518

INVESTIGATION OF THE REACTIVITY OF 2,3,6,7-TETRAHYDRO-7-PHENOXYMETHYL-4*H*-OXAZOLO[3,2-a]TRIAZIN-2-ONE-4-THIONE

Isabelle Forfar[a], Guy Bourgeois[b] and Christian Jarry[a]
[a]Laboratoire de Chimie physique - Universite Victor Segalen Bordeaux 2 - 33076 Bordeaux
[b]CESAMO - Universite Bordeaux I - 351, cours de la Liberation - 33405 Talence Cedex - France

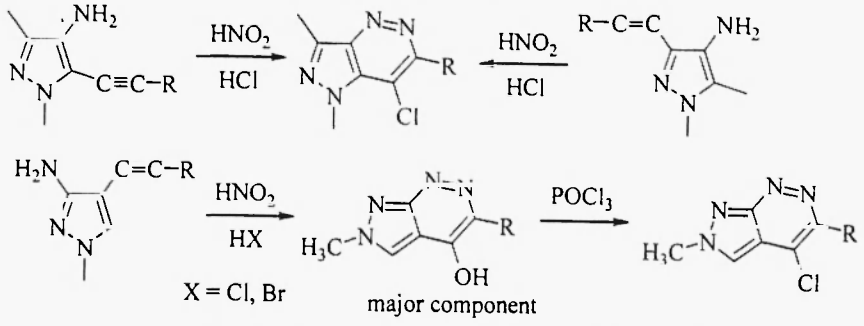


Reactivity and in particularly methylation of **A** with diazomethane (or DMFDMA) led to different methylated compounds identified by mass and nmr spectrometries.

Heterocycl. Commun. **4** (1998) 519-524

New Findings in the Richter Reaction in Series of Vicinal Alkynylpyrazolyldiazonium Salts.

Eugene V. Tretyakov, and Sergei F. Vasilevsky*. Institute of Chemical Kinetics and Combustion, Siberian Branch of the Russian Academy of Sciences, 630090, Novosibirsk, Russian Federation.

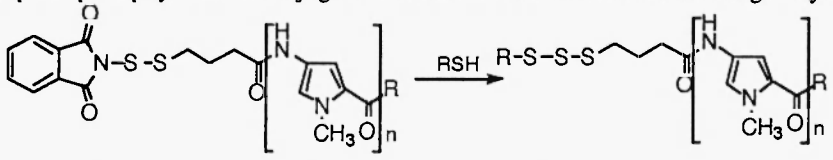


Heterocycl. Commun. **4** (1998) 525-528

Practical Route to Introduce Lexitropsins Possessing a Natural Trisulfide Linker; Synthesis of *N*-(Lexitropsin-thiosulfenyl)-phthalimide

Hirokazu Iida and J. William Lown*
Department of Chemistry, University of Alberta, Edmonton, Alberta, Canada, T6G2G2

Synthesis of practical reagent which may be used to introduce a lexitropsin moiety possessing a trisulfide linker is described. As an application, the lexitropsin trisulfide was employed with podophyllotoxin to give a lexitropsin- podophyllotoxin conjugate connected with a trisulfide linker in good yield.

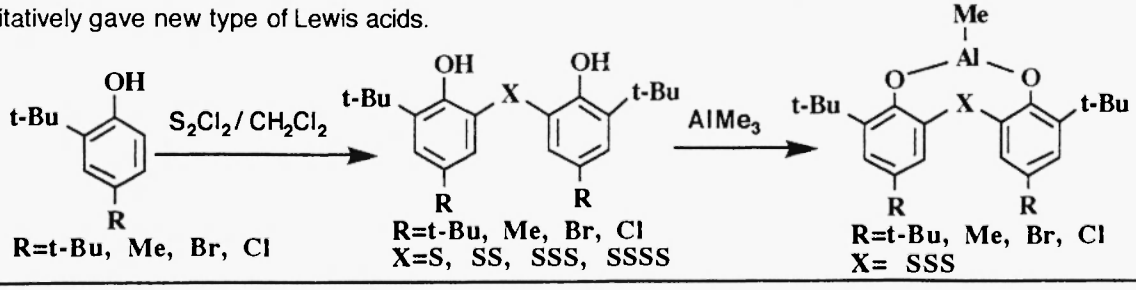


Heterocycl. Commun. **4** (1998) 529-534

SYNTHESIS OF MONO- AND POLYSULFUR-BRIDGED BISPHENOLS AND THEIR APPLICATION TO NEW TYPE LEWIS ACIDS

Yoshihiro Ohba*, Kazuaki Ito, and Tomomi Nagasawa, Department of Materials Science and Engineering, Faculty of Engineering, Yamagata University, Yonezawa 992-8510, Japan

Several bisphenols which contain sulfur (s) as bridge moiety were synthesized by the reaction of sulfur monochloride with phenols and the reaction of the trisulfur-bridged bisphenols with trimethylaluminium quantitatively gave new type of Lewis acids.

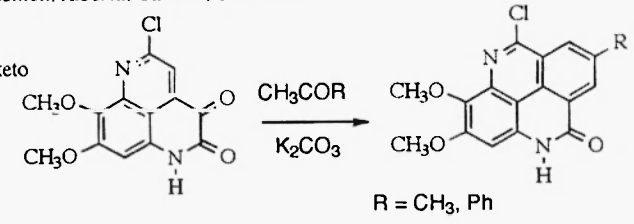


Heterocycl. Commun. **4** (1998) 535-545

REACTIONS OF 1*H*-2,3-DIKETOPYRIDO[4,3,2-*de*] QUINOLINE WITH ACETONE AND ACETOPHENONE: A NOVEL SYNTHESIS OF THE ISOQUINOLINO[6,5,4,3-*cde*]QUINOLINE NUCLEUS

Qizhu Ding and J. William Lown*
Department of Chemistry, University of Alberta, Edmonton, Alberta, Canada, T6G 2G2

The isoquinolino[6,5,4,3,2-*cde*]quinoline nucleus were synthesized by the novel reaction of 1*H*-2,3-diketo [4,3,2-*de*]quinoline with acetone or acetophenone.

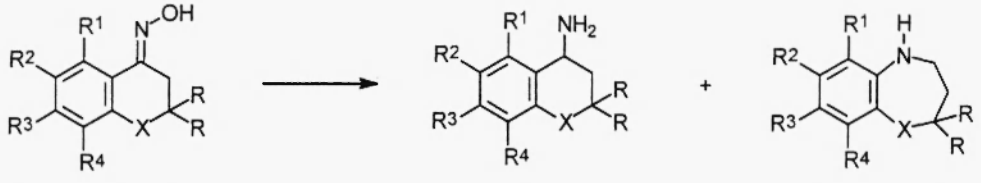


R = CH_3, Ph

Heterocycl. Commun. **4** (1998) 547-552

EXPEDIENT SYNTHESIS OF 4-AMINOCHROMANS AND 4-AMINOTHIOCHROMANS

Peter Sebők[a], Albert Levai[b] and Tibor Timar*[,a]
[a]Department of Chemical Research, ICN Hungary Co. Ltd., Tiszavasvári, Hungary, H-4440
[b]Department of Organic Chemistry, Lajos Kossuth University, Debrecen, Hungary, H-4010



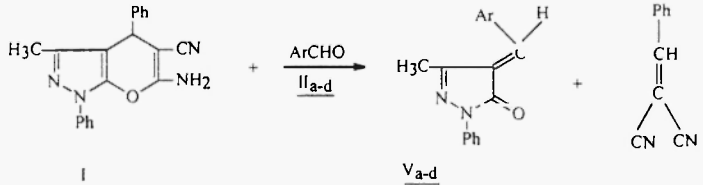
The reduction of 4-chromanone and 4-thiochromanone oximes is investigated and the Raney-Ni/H_2 proved to be useful for selective production of 4-aminochromans and 4-aminothiochromans.

Heterocycl. Commun. **4** (1998) 553-556

Reactions with 6-amino-5-cyano-3-methyl-1,4-diphenyl-1H,4H-pyrano[2,3-c] pyrazole- A novel synthesis of 4-arylidene-3-methyl-1-phenyl-2-pyrazolin-5-one derivatives

Aly H. Atta[a)*], Hamada H. Abdel-Razik[a)] and Ragab F. Fandy[b)]
a) Chemistry Department, Faculty of Education at Suez, Suez Canal University, Suez, Egypt.
b) Chemistry Department, Faculty of Science at Qena, South Valley University, Qena, Egypt.

Treating of I with aromatic aldehydes II$_{a-d}$ yielding the corresponding arylidene derivatives V$_{a-d}$.



I Va-d

a) Ar=C_6H_5, b) Ar = C_6H_4 - CH_3(p)
c) Ar = C_6H_5-OCH_3(p), d) Ar =

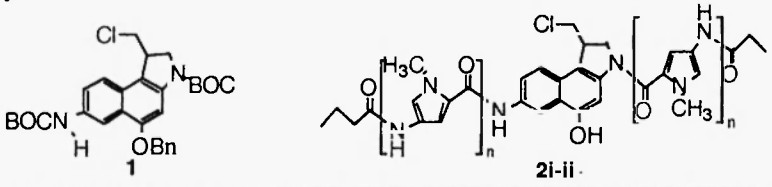
Heterocycl. Commun. 4 (1998) 557-560

Synthesis of Bis-Lexitropsin-1,2,9,9a-tetrahydrocyclopropa[c]benz[e]indole-4-one (CBI) Conjugates

Guofeng Jia, Hirokazu Iida and J. William Lown*

Department of Chemistry, University of Alberta, Edmonton, AB, Canada, T6G 2G2

A practical 12-step synthesis of the bis-functional (chloromethyl)hydroxybenzoindole **1**, a prodrug form of CBI, is described. The first examples of bis-lexitropsin-CBI precursor conjugates **2i-ii** were thereby synthesized.



1 **2i-ii**

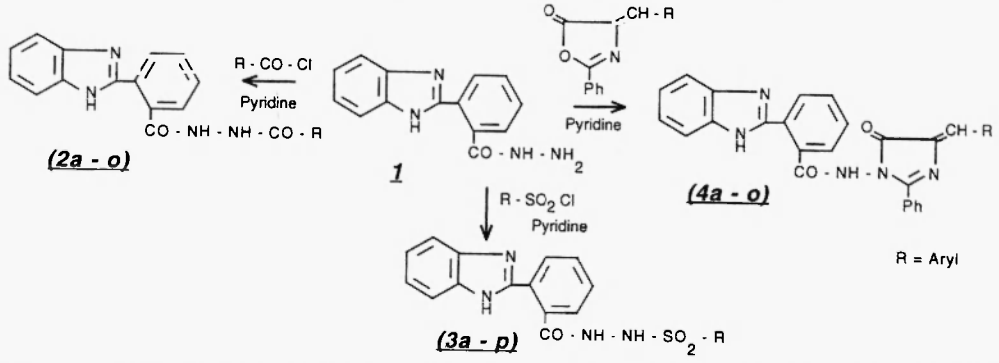
Heterocycl. Commun. 4 (1998) 561-566

SYNTHESIS OF SOME ARYLAMIDES, SULPHONAMIDES AND 5-OXO-IMIDAZOLINES AS NOVEL BIOACTIVE COMPOUNDS DERIVED FROM BENZIMDAZOLE.

Preeti R. Kagthara, Niraj S. Shah, Rajeev K. Doshi and H. H. Parekh *

Department of Chemistry, Saurashtra University,Kalawad Road, Rajkot 360 005. INDIA.

A Route for the synthesis of arylamides, sulphonamides, and 5-oxo-imidazolines are reported from *1*. The compounds were screened ***invitro*** for their antimicrobial and antitubercular activity.

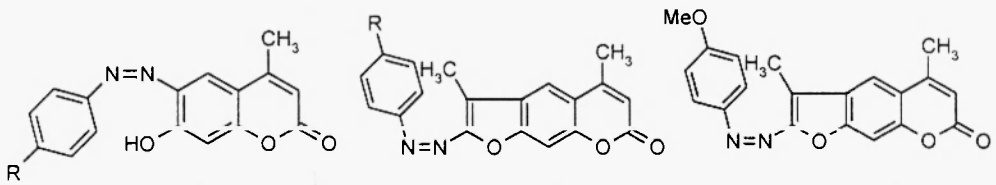


Heterocycl. Commun. 4 (1998) 567-574

A REGIOSELECTIVE SYNTHESIS OF 6-ARYLAZO-7-HYDROXYCOUMARINS AND 5'-ARYLAZOPSORALENS.

R.V. Rozhkov, A.V. Vasilyev, V.F. Traven*, D.I.Mendeleev University of Chemical Technology of Russia, Moscow 125190, Russia; E.A. Carberry, Southwest State University, Marshall, MN 56258.

The pyrone ring opening step has been used for regioselective synthesis of 6-arylazo-7-hydroxycoumarins **4** and 5'-arylazopsoralens **8** and **11**.

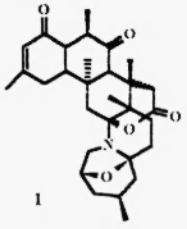


4 **8** **11**

Heterocycl. Commun. **4** (1998) 575-580

CHEMICAL REDUCTION OF ZOANTHAMINE AND EVALUATION OF ANTIBACTERIAL ACTIVITY

Y.Venkateswarlu, N.Srinivasa Reddy, P.Ramesh, P.Srinivasa Reddy and Kaiser Jamil
Natural Products Laboratory, Organic Division-I, Biology Division,
Indian Institute of Chemical Technology, Hyderabad 500 007, India.



1

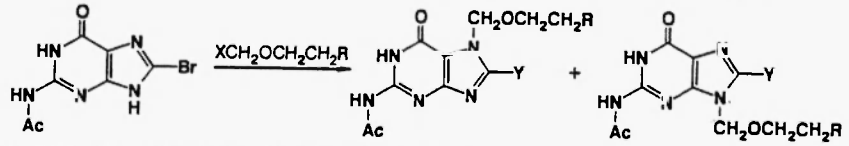
Zoanhtamine 1 when treated with H_2/Pd in EtOH yielded dihydrozoanthamine 2 and on treatment with NaBH4 in dry dichloromethane yielded deoxyzoanthamine 3 and deoxytetrahydrozoanthamine 4. The structures of 2, 3 and 4 were determined on the basis of spectral studies. Compounds 1, 2, 3 and 4 were tested for their antimicrobial activity.

Heterocycl. Commun. **4** (1998) 581-588

PURINE NUCLEOSIDE ANALOGUES. 10. A NEW SYNTHETIC ROUTE TO 8-SUBSTITUTED-7(9)-ALKOXYALKYLGUANINES

Marina Madre[a], Regina Zhuk[a], Natella Panchenko[a], Jan Geenevasen[b], Alida van den Burg[b], and Gerrit-Jan Koomen[b]
[a]Latvian Institute of Organic Synthesis, 21 Aizkraukles Str., LV-1006 Riga, Latvia
[b]Laboratory of Organic Chemistry, University of Amsterdam, Nieuwe Achtergracht 129, 1018 WS Amsterdam, the Netherlands

8-Substituted –7(9)-alkoxyalkylguanines have been synthesized by direct alkoxyalkylation of 8-bromo-N^2-acetylguanine.



Heterocycl. Commun. **4** (1998) 589-594

AN ELEGANT SYNTHESIS OF SOME NEW POTENTIAL BIOLOGICALLY ACTIVE PYRIDO [3,2-b] [1,4] BENZOTHIAZINE DERIVATIVES AND THEIR NUCLEOSIDES BY PHASE TRANSFER CATALYSIS

Hemlata Agrawal, Ashok K. Yadav and Lalit Prakash*
Department of Chemistry, University of Rajasthan, Jaipur - 302004 (India)

10*H*-Substituted pyido[3,2-b] [1,4] benzothiazine their 10 acetyl and 5-oxide derivatives have been synthesized from zinc mercaptide of substituted 2-aminobenzothiol. The nucleosides viz., 10 (2,3,5-tri-O-benzoyl-β-D-ribofuranosyl) of substituted pyrido [3,2-b] [1,4] benzothiazine have been prepared by using phase transfer catalysis (PTC).