Graphical Abstracts

Heterocycl. Commun. 3 (1997) 489-492

SYNTHESIS OF A FURANO[4,3,2-*de*]QUINOLINE NUCLEUS: A DERIVATIVE OF THE DISCORHABDIN ALKALOIDS

Qizhu Ding, Rulin Zhao and J. William Lown*
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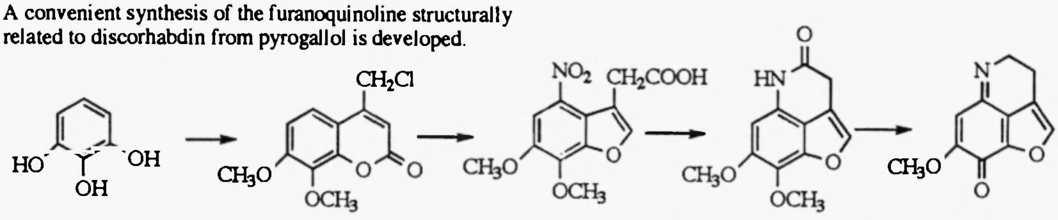
A convenient synthesis of the furanoquinoline structurally related to discorhabdin from pyrogallol is developed.



Heterocycl. Commun. 3 (1997) 493-498

SYNTHESIS OF STERICALLY ENCUMBERED 2,9-DIARYL SUBSTITUTED PHENANTHROLINES. KEY BUILDING BLOCKS FOR THE PREPARATION OF MIXED (BIS-HETEROLEPTIC) PHENANTHROLINE COPPER(I) COMPLEXES.

Michael Schmittel[a,]*, Ulrich Lüning,[b] Markus Meder,[a] Andrea Ganz,[a] Christoph Michel,[a] Markus Herderich,[c]
[a]Institut für Organische Chemie der Universität Würzburg, Germany; [b]Institut für Organische Chemie der Universität Kiel, Germany; [c]Lehrstuhl für Lebensmittelchemie der Universität Würzburg, Germany.

Heterocycl. Commun. 3 (1997) 499-502

Correlation of ^{13}C- and ^{15}N-NMR Chemical Shifts with Calculated Partial Charges in Pyridinium Bis(methoxycarbonyl)methylides

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Kyoto 606, Japan
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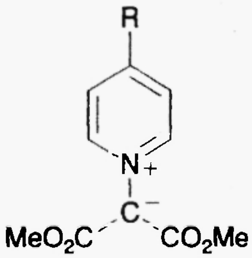
Pretty good linear correlations between the ^{13}C and ^{15}N chemical shifts and partial charges of the ylidic carbon and the nitrogen nuclei in some *p*-substituted pyridinium bis(methoxycarbonyl)methylides were obtained using semiempirical molecular orbital calculations (AM1, PM3, and INDO).

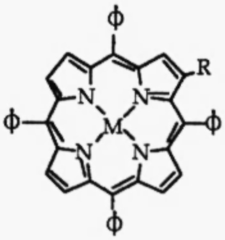


Heterocycl. Commun. **3** (1997) 503-506

A NEW APPROACH TO THE SYNTHESIS OF UNSATURATED β-SUBSTITUTED-*meso*-TETRAPHENYLPORPHYRINS

Kerstin Lüdtke[¥], Cristina M. A. Alonso, Maria G. P. M. S. Neves, Artur M. S. Silva, Jose A. S. Cavaleiro* and Hermann K. Hombrecher*[•]
Department of Chemistry, University of Aveiro, 3810 Aveiro, Portugal; [•]Institut für Chemie der Medizinischen Universität zu Lübeck, Ratzeburger Allee 160, 23538 Lübeck, Germany

Porphyrins 3-6,8 and 9 have been prepared from reactions of nickel (II) complexes of β-diazonium-*meso*-tetraphenylporphyrin salts with α,β-unsaturated carbonyl compounds, in the presence of palladium acetate.



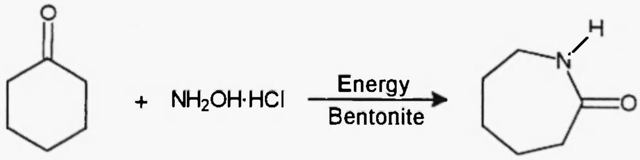
1 M=2H, R=H
2 M=Cu or Ni, $R=NH_2$
3 M=Ni, $R=CH=CHCO_2Me$
4 M=Ni, $R=CH(OH)CH_2CO_2Me$
5 M=Ni, R=CH=CHCHO
6 M=Ni, $R=CH_2CH_2CHO$
8 M=Ni, $R=CH=CHCOCH_3$
9 M=Ni, $R=CH_2CH_2COCH_3$

Heterocycl. Commun. **3** (1997) 507-508

COMPARATIVE STUDY OF ε-CAPROLACTAM SYNTHESIS USING DIFFERENT ENERGY SOURCES AND A NATURAL CLAY AS CATALYST

Guillermo Penieres (1), Alejandra Flores(1), Guillermo Mendoza(1), Cecilio Alvarez(2), Olivia Garcia(1) and Juan M. Aceves(1).
(1) Facultad de Estudios Superiores Cuautitlán-Universidad Nacional Autonoma de Mexico, Seccion de Quimica Organica, Av. 1 de Mayo s/n, Cuautitlán Izcalli, Estado de Mexico, C.P. 54740, Mexico. (2) Instituto de Quimica-UNAM. Circuito Exterior, Ciudad Universitaria. Mexico D.F. C.P. 04510.

A new method for the production of ε-caprolactam from cyclohexanone and $NH_2OH.HCl$ using different sources of energy in presence of a Mexican clay in dry medium is reported.



Energy: Infrared, Microwave, Ultrasound, Thermal

Heterocycl. Commun. **3** (1997) 509-514

SYNTHESIS OF A BENZODIOXINIC ANALOGUE OF ELLIPTICINE AND EVALUATION OF ITS ANTITUMOR ACTIVITY

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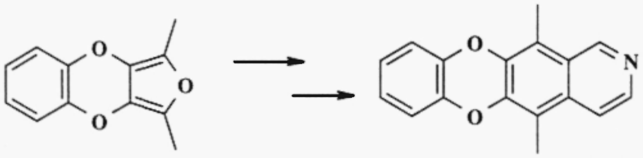
[1]Institut de Chimie Organique et Analytique, associé au C.N.R.S., Universite d'Orléans, BP 6759, 45067 Orléans Cedex 2, France
[2]Institut National de la Santé et de la Recherche Médicale Unité 71, BP 184, 63005 Clermont-Ferrand Cedex, France

A benzodioxinic analogue of Ellipticine was synthesized, using two strategies both involving a Diels Alder cycloaddition of furobenzodioxin.

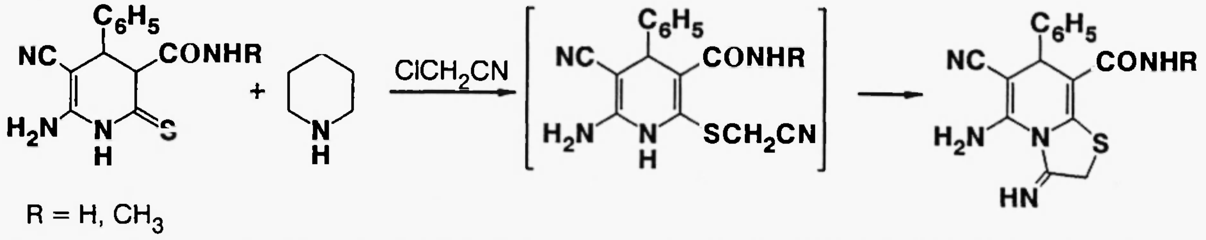


Heterocycl. Commun. 3 (1997) 515-520

SYNTHESIS OF 4,7(2H)-DIHYDROTHIAZOLO-[3,2-a]PYRIDINES FROM 3-CARBAMOYL-1,4-DIHYDROPYRIDINE-2(3H)-THIONES

A.Krauze*, J.Popelis, G.Duburs
Latvian Institute of Organic Synthesis, Aizkraukles 21, Riga, LV-1006, Latvia

A convenient method of synthesis of 4,7(2H)dihydrothiazolo[3,2-a]pyridines has been elaborated by smooth intramolecular N-acylation of 2-cyanomethylthio-1,4-dihydropyridines – probable intermediates of alkylation of 1,4-dihydropyridine-2(3H)-thiones with chloroacetonitrile.

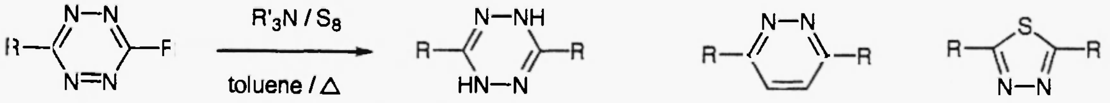


Heterocycl. Commun. 3 (1997) 521-526

RING TRANSFORMATION OF 3,6-DIARYL-1,2,4,5-TETRAZINES TO 3,6-DIARYLPYRIDAZINES AND 2,5-DIARYL-1,3,4-THIADIAZOLES BY ELEMENTAL SULFUR AND AMINES

Masahiko Takahashi* and Toshihiro Yamaoka
Department of Materials Science, Faculty of Engineering, Ibaraki University, Hitachi, Ibaraki 316, Japan

The reaction of 3,6-diaryl-1,2,4,5-tetrazines with elemental sulfur and amines in refluxing toluene gave 3,6-diaryl-1,4-dihydrotetrazines, 3,6-diarylpyridazines, or 2,5-diaryl-1,3,4-thiadiazoles.

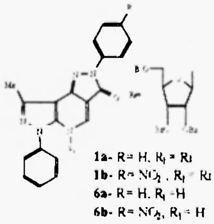


Heterocycl. Commun. 3 (1997) 527-534

SYNTHESIS OF β-D-RIBONUCLEOSIDES DERIVED FROM DIPYRAZO[3,4-*b*:3',4'-*d*]PYRIDIN-3-ONE SYSTEM

Alice M. R. Bernardino[a], Christiane M. Nogueira[a], Carla M. de Oliveira Lepesch[a], Claudia R. B. Gomes[a], Francis J. Schmitz[c], Gilberto A. Romeiro[a], Helena de S. Pereira[b], Isabel C. de P. P. Frughlhetti[b], Mara R. P. de Oliveira, Maria C. B. V. de Souza[a]*, Marietta Y. W. T. Lee[d], Salma A. Chaves[a] and Vitor F. Ferreira[a].

[a]Departamento de Quimica Orgânica, Instituto de Quimica, Universidade Federal Fluminense, Outeiro de São João Batista s/n⁰. Niteroi, CEP 24020-150, R. J., Brasil; [b]Departamento de Biologia Celular e Molecular, Instituto de Biologia, Universidade Federal Fluminense, Outeiro de São João Batista s/n°, Niteroi. CEP 24020-150, R. J., Brasil; [c]Department of Chemistry and Biochemistry, University of Oklahoma, Norman, OK 73019, USA; [d]Department of Medicine, University of Miami, School of Medicine, Miami, Fl 33101, USA



The new ribonucleosides 1a and 1b were prepared from catalysed ribosylations of the corresponding heterocycles and the effect of these compounds on the catalytic activities of reverse transcriptase from recombinant immunodeficiency virus type 1 was evaluated.

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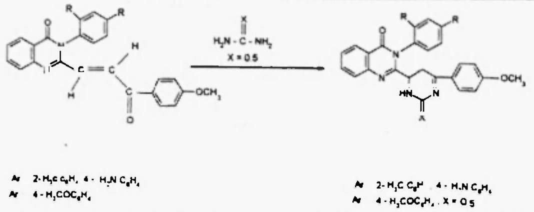
SYNTHESIS OF SOME NEW BIOLOGICALLY ACTIVE 2,3-DISUBSTITUTED QUINAZOLIN-4-ONES

T.M. Abdel-Rahman



Heterocycl. Commun. 3 (1997) 545-548

NITROSATION OF 1-(2-CHLOROETHYL)-3-(2-CHLORO-10*H*-PHENOTHIAZIN-10-YL)PROPYLUREA AND HPLC SEPARATION OF TWO NITROSATED ISOMERS

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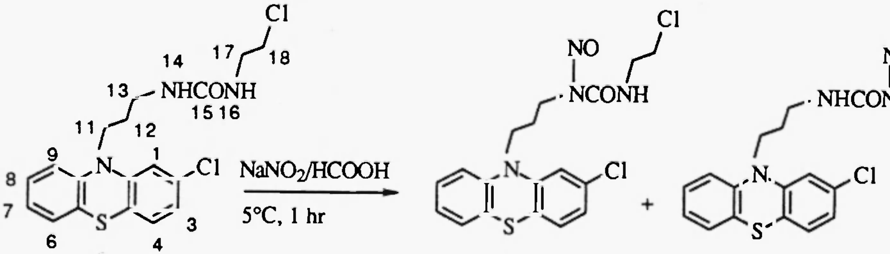
[1]Department of Medicinal Chemistry, Meiji College of Pharmacy, Tanashi-shi, Tokyo 188, Japan

[2]Faculty of Pharmaceutical Sciences, Josai University, Sakado-shi, Saitama 350-02, Japan

[3]Tokyo Metropolitan Research Laboratory of Public Health, Tama Branch, 3-16-25 Shibasaki-machi, Tachikawa-shi, Tokyo 190, Japan

1-(2-Chloroethyl)-3-(2-chloro-10*H*-phenothiazin-10-yl)propyl-1-urea **1** reacts with sodium nitrite to yield a mixture of isomeric nitrosoureas **2a** and **2b**. The two nitrosoureas **2a** and **2b** could be effectively separated by HPLC and identified.



1 **2a** **2b**

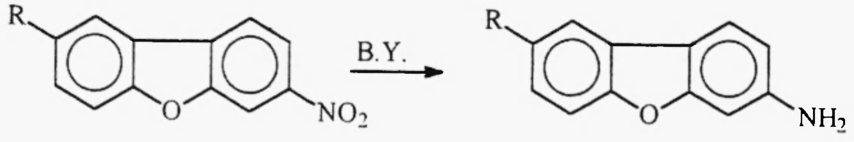
Heterocycl. Commun. 3 (1997) 549-553

BAKERS' YEAST-MEDIATED REDUCTIONS OF SOME NITRO-DIBENZOFURANS

Florin-Dan Irimie, Csaba Paizs, Monica-Ioana Toşa, Cerasella Afloroaei, Vasile Miclăuş

"Babeş-Bolyai" University, Faculty of Chemistry and Chemical Engineering Arany Janos 11, 3400 Cluj-Napoca

The reduction of 3 - nitro - (**2**) and 3,8 - dinitro-benzofurans (**4**) in biocatalytic conditions, with Bakers' Yeast is disscused.



R=H, NO$_2$

Heterocycl. Commun. **3** (1997) 555-562

HIGHLY SUBSTRATE SELECTIVE NUCLEOPHILIC AMINATION OF NITRO-SUBSTITUTED 4-(2-HYDROXYETHYLAMINO)PHTHALAZIN-1(2H)-ONES

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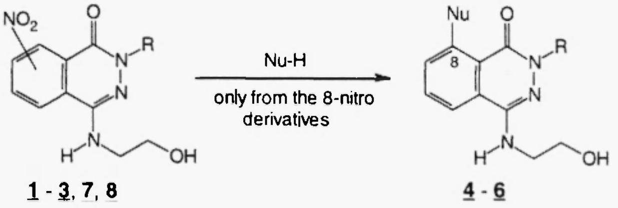
Institue of Chemistry, Eötvös Loránd University, H-1518 Budapest 112, POB 32, HUNGARY

An extreme substrate selectivity observed in the aromatic nucleophilic displacement of 6-8-nitro derivatives of 4-(2-hydroxyethylamino)phthalazin-1(2*H*)-ones is reported.

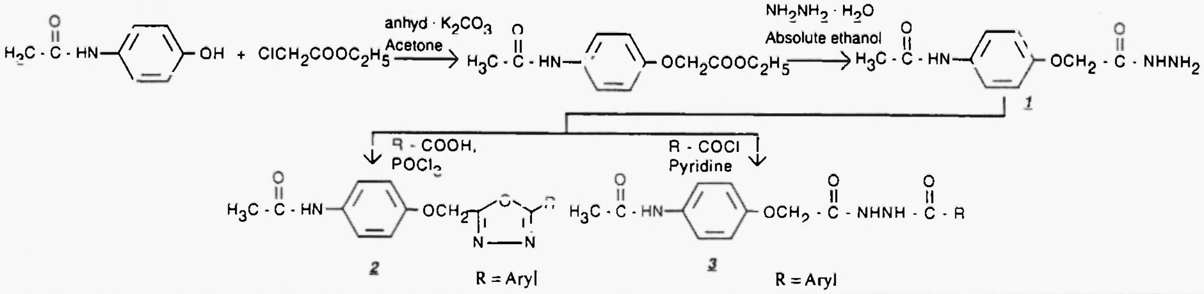


Heterocycl. Commun. **3** (1997) 563-568

SYNTHESIS AND BIOLOGICAL EVALUATION OF NOVEL OXADIAZOLE AND ARYLACETAMIDE DERIVATIVES.

Haresh Oza, Dharti Joshi and Hansa Parekh*
Department of Chemistry, Saurashtra University,Kalawad Road, Rajkot 360 005, INDIA.

Formation of oxadiazoles 2a-o and arylacetamides 3a-o are reported from 1. The compounds were evaluated for their antimicrobial and antitubercular activity.

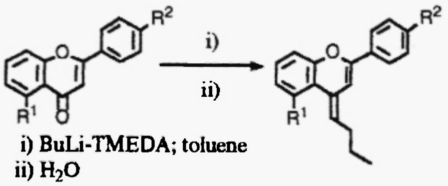


Heterocycl. Commun. 3 (1997) 569-572

REGIO- AND STEREOSELECTIVE REACTIONS OF FLAVONES WITH BUTYLLITHIUM-TMEDA: SYNTHESIS OF (*E*)-4-BUTYLIDENEFLAVONES

Artur M. S. Silva,* Lúcia M. P. M. Almeida, Hilário R. Tavares and José A. S. Cavaleiro; Department of Chemistry, University of Aveiro, 3810 Aveiro, Portugal

The regio- and stereoselective reactions of flavones with mixtures of BuLi-TMEDA are reported. Stereochemistry of each (*E*)-4-butylideneflavone was established by NOE experiments.



i) BuLi-TMEDA; toluene
ii) H_2O