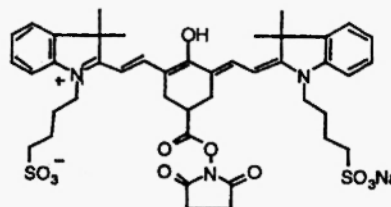


Graphical Abstracts

Heterocycl. Commun. 10 (2004) 381-382

SYNTHESIS OF A FUNCTIONALIZED CYANINE DYE FOR COVALENT LABELING OF BIOMOLECULES WITH A pH-SENSITIVE CHROMOPHORE

Lucjan Strekowski,* Christian C. Mason, Hyeran Lee and Gabor Patonay, Department of Chemistry, Georgia State University, Atlanta, Georgia 30303, USA



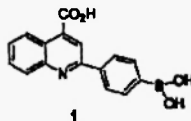
Heterocycl. Commun. 10 (2004) 383-388

A NEW TYPE OF WATER-SOLUBLE FLUORESCENT BORONIC ACID SUITABLE FOR CONSTRUCTION OF POLYBORONIC ACIDS FOR CARBOHYDRATE RECOGNITION

Wenqian Yang,¹ Li Lin,¹ and Binghe Wang^{1,2*}

¹Department of Chemistry, North Carolina State University, Raleigh, North Carolina 27695-8204, USA,

²Department of Chemistry, 33 Gilmer St. S.E., Georgia State University, Atlanta, Georgia 30303, USA. E-mail: wang@gsu.edu, fax: (404) 654-5827



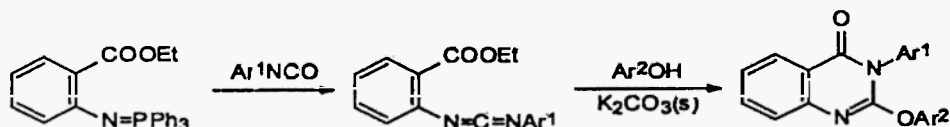
Boronic acid 1 with a quinoline moiety was found as a new type of fluorescent probe for carbohydrates, which shows significant fluorescence intensity increases upon sugar binding at physiological pH. This compound has the unique structural feature of separating the boronic acid moiety from the presumed fluorophore, and is ready for the construction of polyboronic acids through tethering to its carboxylic group for high selectivity and affinity recognition of carbohydrates of biological interest.

Heterocycl. Commun. 10 (2004) 389-392

NEW EFFICIENT SYNTHESIS OF 2-ARYLOXY-4(3H)-QUINAZOLINONES

Ming-Wu Ding*, Shang-Jun Yang, Bo-Qiao Fu

Institute of Organic Synthesis, Central China Normal University, Wuhan, 430079, P. R. China



Studies on cephradine and its compounds with tin(II), lead(II), manganese(II) and iron(II)

Ashu Chaudhary^a, Anita Phor^b, G.K. Agarwal^c and R.V. Singh^{a*}

^aDepartment of Chemistry, University of Rajasthan, Jaipur – 302 004, India

^bHindu College Sonapat – 131 001, India

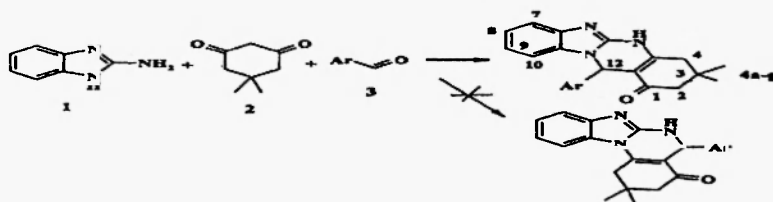
^cDepartment of Chemistry, D.J. College, Baraut, Meerut-250611, India

Synthesis, spectroscopic elucidation and biological aspects of tin(II), lead(II), manganese(II) and iron(II) complexes of cephradine has been given. The complexes have been screened for their antibacterial activity against *Escherichia coli*, *Staphylococcus aureus* and *Pseudomonas aeruginosa* in details.

Regioselective Three-component Synthesis of 12-Aryl-3,3-dimethyl-3,4,5,12-tetrahydrobenzimidazo[2,1-b]quinazolin-1(2H)-ones

Braulio Insuasty,^{a*} Angela Salcedo,^a Jairo Quiroga,^{a*} Rodrigo Abonía,^a Manuel Noguera,^b Justo Cobo^b and Sofia Salido^b

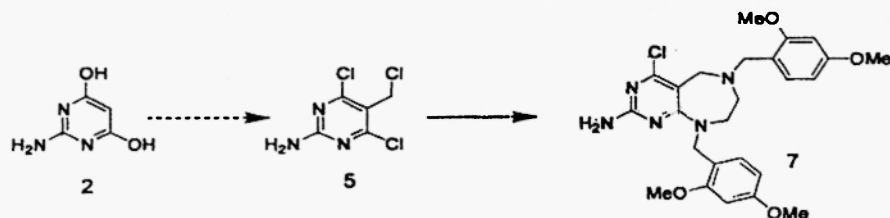
^aGrupo de Investigación de Compuestos Heterocíclicos, Department of Chemistry, Universidad del Valle, A. A. 25360, Cali – Colombia. ^bDepartment of Inorganic and Organic Chemistry, Universidad de Jaén, 23071 Jaén, Spain.



SYNTHESIS OF 2-AMINO-4-CHLORO-6,9-BIS-(2,4-DIMETHOXYBENZYL)-6,7,8,9-TETRAHYDRO-5H-PYRIMIDO[4,5-e][1,4]DIAZEPINE: A POTENTIALLY USEFUL INTERMEDIATE TO PYRIMIDO[4,5-e][1,4]DIAZEPINE-BASED FOLATES

Noah E. Huddleston, Jessica L. Harris, Hang L. Nguyen, and Partha S. Ray*

Department of Chemistry, State University of West Georgia, Carrollton, GA 30118, USA

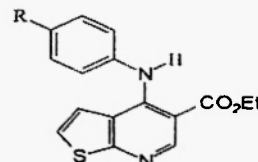


SYNTHESIS AND ANTIVIRAL ACTIVITY OF NEW 4-(PHENYLAMINO)THIENO[2,3-*b*]PYRIDINE DERIVATIVES

Alice M. R. Bernardino; Luiz C. S. Pinheiro, Vitor Francisco Ferreira; Alexandre R. Azevedo; Jose W. de M. Carneiro; Thiago M. L. Souza and Izabel C. P. P. Frugulhetti

Universidade Federal Fluminense, Instituto de Química, Departamento de Química Orgânica, Programa de Pós-Graduação em Química Orgânica. Outeiro de S. João Batista, s/n°, Centro, Niteroi, CEP 24020-150, Rio de Janeiro, Brazil

Several new 4-(phenylamino)thieno[2,3-*b*]pyridines (**6a-e**) were synthesized and tested against herpes simplex virus type 1 (HSV-1). For the first time one compound (**6a**) of this heterocyclic system showed 86% of inhibitory indicating that these compounds retain antiviral potency in comparison to the parent pirazolo-pyridine derivatives.¹

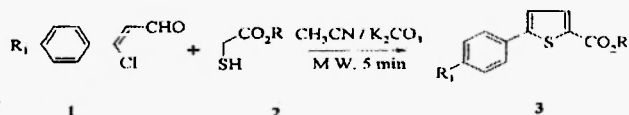


- 6a**, R = H
6b, R = *p*-CH₃
6c, R = *p*-OCH₃
6d, R = *p*-F
6e, R = *p*-NO₂

MICROWAVE ASSISTED SYNTHESIS OF 5-ARYL-THIOPHENE-2-CARBOXYLATES

G. Jagath Reddy *, D. Latha, S. Sailaja, K. Pallavi and K. Srinivasa Rao

R & D Laboratories, Dr. Jagath Reddy's Heterocyclics, 81, S.V.Co-op Industrial Estate, Balanagar, Hyderabad - 500 037, India. e-mail-jagathreddy@usa.net; Fax # 91-40-23773487.



A simple and rapid method for the synthesis of 5-Aryl-thiophene-2-carboxylates **3** has been developed by the condensation of β -chlorovinyl aldehydes **1** with mercaptoacetic acid esters **2** under microwave irradiation conditions.

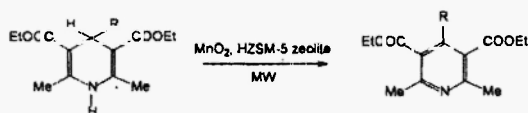
Manganese dioxide supported onto HZSM-5 Zeolite, A Versatile Reagent for the aromatization of Hantzsch 1,4-Dihydropyridines

M. M. Heravi,^{a,*} F. S. Sh. Moosavi^b, Y. Sh. Beheshtiha^a and M. Ghassemzadeh^b

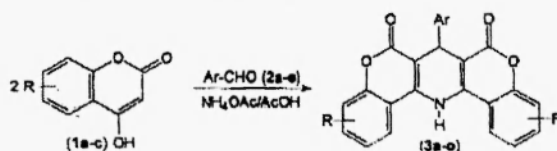
^aDepartment of Chemistry, School of Sciences, Azahra University, Vanak, Tehran, Iran

^bChemistry & Chemical Engineering Research Center of Iran, Tehran, Iran

A general and practical route for the fast and high yield aromatization of 1,4-dihydropyridine using a relatively benign oxidant, manganese dioxide under classical heating and microwave irradiation is described.

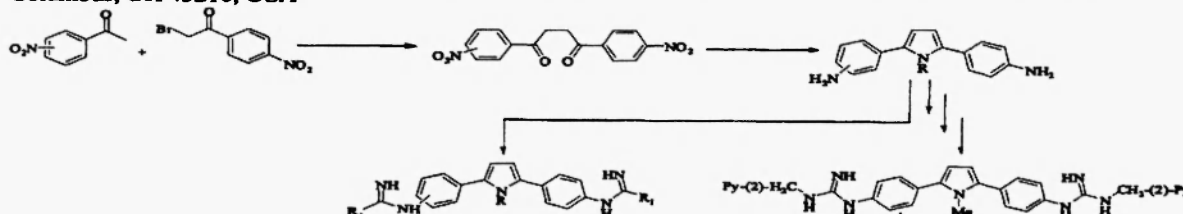


SYNTHESIS OF 4-ARYL-1,4-DIHYDRO DICOUMARINO[4,3-b;3',4':c]PYRIDINES

D I Brahmabhatt^a, Urvish R Pandya & G B Raolji

The title compounds **3a-e** have been synthesized by the Hantzsch reaction of 4-hydroxy coumarins **1a-c** and aromatic aldehydes **2a-e** in the presence of ammonium acetate in acetic acid.

SYNTHESIS OF DICATIONIC 2,5-DIARYLPYRROLES

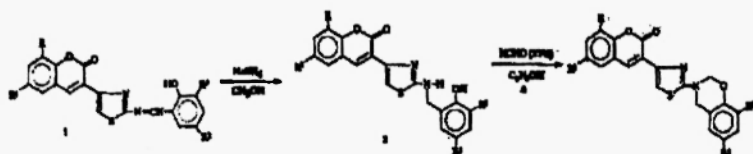
Reem K. Arafa^a, Reto Brum^b, Karl A. Werbovetz^c, W. David Wilson^a and David W. Boykin^{a*}^aDepartment of Chemistry, Georgia State University, Atlanta, GA 30303, USA^bAntiparasite Chemotherapy, Swiss Tropical Institute, Basel, Switzerland^cDivision of Medicinal Chemistry and Pharmacognosy, College of Pharmacy, The Ohio State University, Columbus, OH 43210, USA

FACILE SYNTHESIS OF SOME NEW 3-(2-1,3-BENZOXAZIN-3-YL)-4-THIAZOLYL COUMARINS

M. Madan Mohan Reddy and V. Rajeswar Rao^{*}

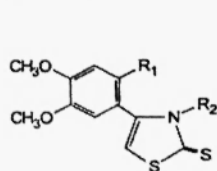
Department of Chemistry, National Institute of Technology, Warangal - 506 004, A.P., India.

3-(2-Substituted benzalimino-4-thiazolyl)-coumarins (**1**) on reduction with NaBH_4 resulted in the formation of corresponding 3-(2-o-hydroxy benzyl hydrazino-4-thiazolyl)coumarins (**2**). These on condensation with formaldehyde gave the cycloproducts 3-(2-(1,3-benzoxazin-3-yl)-4-thiazolyl)coumarins (**3**).

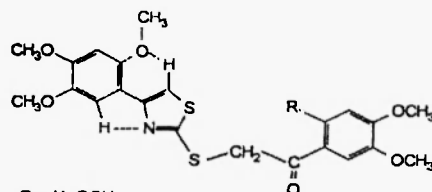


SYNTHESIS AND SPECTROSCOPY OF NEW 4-ARYL-2(3*H*)-THIAZOLETHIONES AND DERIVED THIAZOLES

E. Sanchez-Viescu* and Martha Berros

Faculty of Chemistry, Graduate Division, National Autonomous University of Mexico
University City, Mexico, D. F., 04510

R₁ = H, OCH₃, Cl
R₂ = H, CH₃

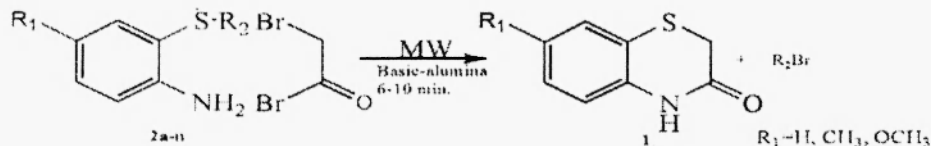


R = H, OCH₃
and structural isomer without hydrogen bonding

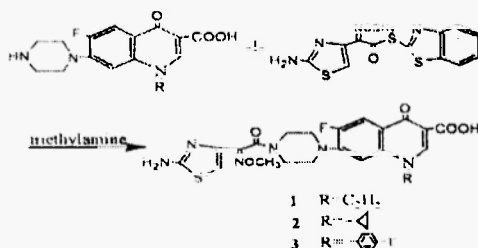
Impact of microwave radiations on macrocyclization reactions: solvent free synthesis of 1,4-benzothiazin-3-one derivatives on basic alumina

Bhupender S. Chhikara^{a,b}, Vibha Tandon^{a*} and Anil K. Mishra^b^aMedicinal Chemistry Research Laboratory, Dr. B. R. Ambedkar Center for Biomedical Research, University of Delhi, Delhi, India. ^bDepartment of Radiopharmaceutical Chemistry, Institute of Nuclear Medicine and Allied Sciences, Delhi, India.

A rapid transformation of alkyl and arylalkyl amino phenyl thioethers (2-alkylsulphanyl-phenylamine) into 7-substituted 1,4-benzothiazines in presence of basic-alumina under solvent free conditions using microwave irradiation has been described. The specific microwave effects are due to increase in polarity during the course of reaction



Syntheses of novel fluoroquinolone compounds

Jianying Li^{a,*,b}, Runhua Lu^{a,c}, Aimei Yang^a, Liyu Zhang^b^aLanzhou Institute of Chemical Physics, Chinese Academy of Sciences, Lanzhou 730000, P.R.China,^bLanzhou Institute of Animal and Pharmaceutical Veterinary Science, Chinese Academy of Agricultural Sciences, Lanzhou 730050, P.R.China,^cChengdu Institute of Biology, Chinese Academy of Sciences, Chengdu 610046, P.R.China

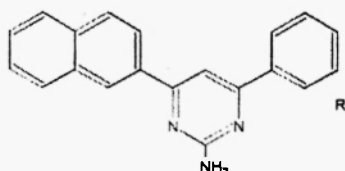
Scheme 1 Synthesis of 7-(4-acyl piperazinyl)fluoro-quinolones (1, 2, 3).
Reagents and conditions: (1) 95% ethyl alcohol, triethylamine, 4h, (2) HCl (until PH=2-3), (3) DMF (recrystallized)

SYNTHESIS AND ANTIBACTERIAL ACTIVITIES OF SOME 2-AMINO-4, 6-DIARYLPYRIMIDINES

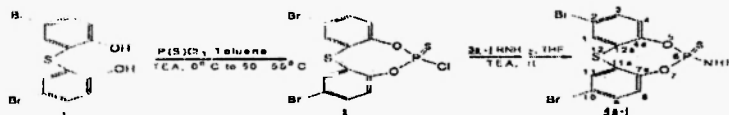
T. Balasankar and S. Nagarajan*

Department of Chemistry, Annamalai University, Annamalaiagar-608 002, India

A series of 2-aminopyrimidines have been prepared by the condensation of 1-(1,1'-biphenyl-4-yl)-3-arylprop-2-en-1-ones with guanidine-nitrate



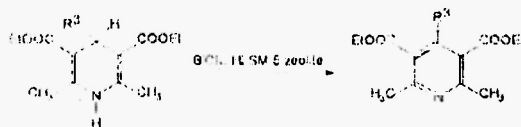
Synthesis and Antimicrobial activity of 2, 10 - dibromo dibenzo [d,g] [1,3,6,2] dioxathiaphosphocin 6-sulfido-6-amino acid esters

P. Haranath, U. Anasuyamma, G. Syam Prasad, C. Naga Raju and C. Suresh Reddy* Department of Chemistry, Sri Venkateswara University, Tirupati-517 502, India.
csureshsvu@yahoo.comThe title compounds **4a-i** were synthesized by 5, 5'-dibromo -2, 2'- dihydroxy diphenyl sulfide **1** with thiophosphoryl chloride followed by addition of amino acid ester hydrochlorides **3a-i** in the presence of triethylamine in dry tetrahydrofuran.

Aromatization of Hantzsch 1,4-Dihydropyridine with Bismuth(III) Chloride Supported onto Wet HZSM-5 Zeolite under Microwave Irradiation in Solventless System

Majid M. Heravi* and Mitra Ghassemzadeh, Department of Chemistry, School of Sciences, Azzahra University, Vanak, Tehran, Iran; Chemistry & Chemical Engineering Research Center of Iran, Tehran, Iran

Hantzsch 1,4-dihydropyridines (1,4 DHP's) can be aromatized to pyridines by bismuth(III) chloride supported onto wet HZSM-5 zeolite under microwave irradiation in high yields and short time.

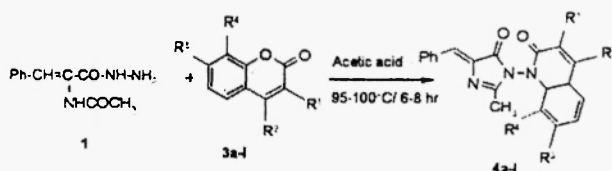


Synthesis of New Aryl Imidazole Quinoline-2-Ones

G V Parakala Rao, B Rajitha, Y. Thurupathi Reddy and P. Narsimha Reddy

Department of Chemistry, National Institute of Technology, Warangal-506004 (A P) India.

A new class of aryl imidazole quinoline-2-ones were synthesized

**An efficient and facile synthesis of substituted 3-aminocoumarins under MW irradiation in dry media**H. Valizadeh^{1,*} and A. Shokravi²¹Department of Chemistry, Faculty of Science, Tarbiat-Moallem University of Azarbaydjan, P. O. Box 53714-161, Tabriz, Iran.

A variety of 3-aminocoumarins were prepared by reaction of salicylaldehyde derivatives with benzoylglycine catalyzed by piperidine under microwave irradiation (MWI) and subsequent acid hydrolysis.

