GRAPHICAL ABSTRACTS

Heterocycl. Commun. 3 (1997) 295-300

SYNTHESIS OF 1-(β-D-GLUCOPYRANOSYL)PYRIMIDIN-2(1*H*)-ONES FROM 2-CHLOROPYRIMIDINES

Ihrahim M. Abdou, Lucjan Strekowski,* Mohamed F. Abdel-Megeed†, Adel M.E. Attia‡ and Mahmoud A. Omara‡
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†Department of Chemistry, Faculty of Science, Tanta University, Tanta, Egypt
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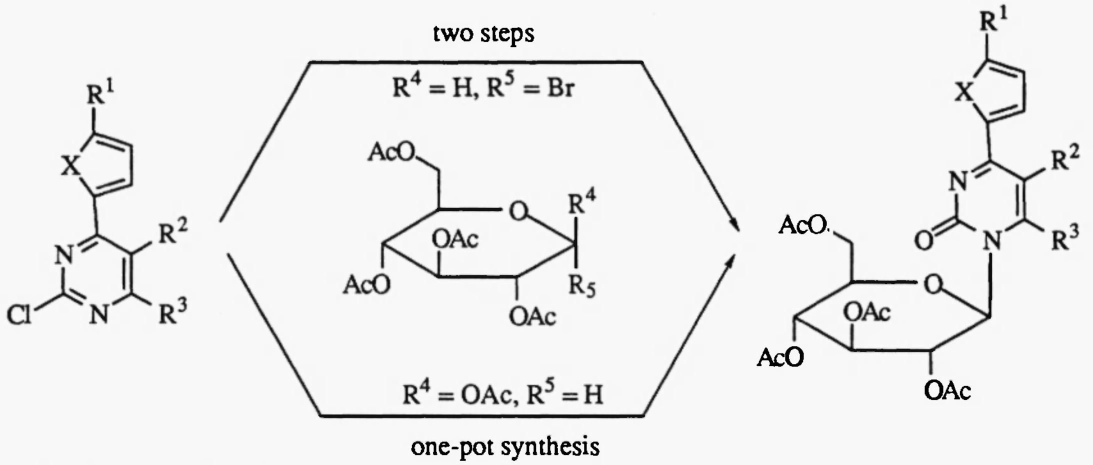

X = O: $R^1 = R^2 = R^3$ = H
X = S: R^1 = Br, $R^2 = R^3$ = H; R^1 = H, R^2 = Me, R^3 = 2-thienyl

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Heterocycl. Commun. 3 (1997) 301-306

THIAZOLIDINEDIONES: REACTIVITY OF THE ACTIVE METHYLENE GROUP

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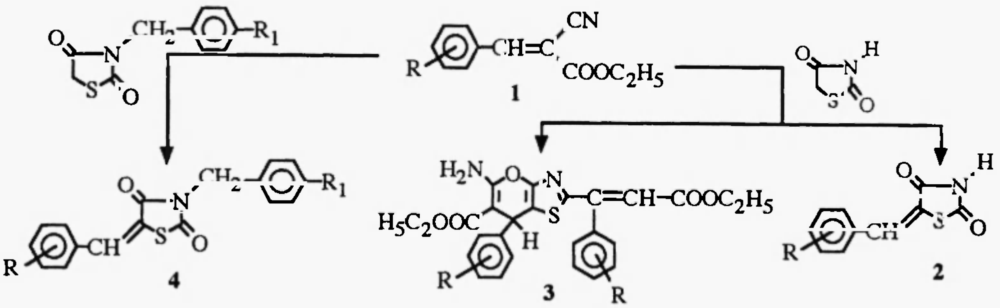
1 *CNRS UPRES-A 5077, Laboratoire de Chimie-Pharmacie, Universite Joseph-Fourier, Grenoble I, F 38706 La Tronche Cedex*
2 *Departamento de Antibioticos, Universidade Federal de Pernambuco, 50670-901 Recife (Bresil)*

The thiazolidine-2,4-diones contain an active methylene group. Thus, they give a nucleophilic addition reaction with alkyl 2-cyanocinnamates. Synthesis, mechanism of the reaction, physical and chemical properties of 5-benzylidene-thiazolidine-2,4-diones and pyrano-thiazoles obtained are described.

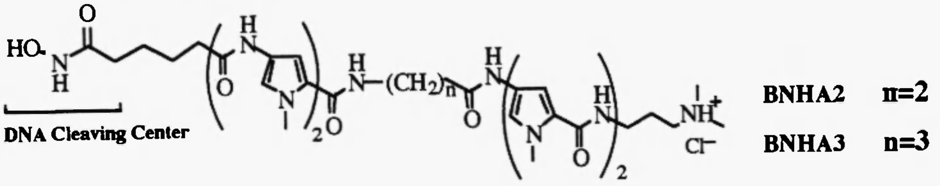


Heterocycl. Commun. 3 (1997) 307-315

SYNTHESIS OF BISNETROPSIN-LINKED HYDROXAMIC ACIDS AND THEIR DNA CLEAVAGE STUDY IN THE PRESENCE OF TRANSITION OR LANTHANIDE METAL IONS

Shigeki Hashimoto, Kazuto Itai, Yumiko Takeuchi and Yushin Nakamura *
Department of Biological Science and Technology, Science University of Tokyo, Yamazaki, Noda 278, Japan

Nobel hydroxamic acids containing bis-netropsin units coupled by polymethylene tether were synthesized and shown to cleave Col E1 plasmid DNA in the presence of Fe(II) or Ce(III) ions.



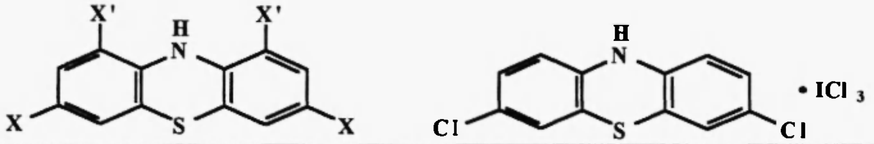
Heterocycl. Commun. 3 (1997) 317-322

REACTION OF Π-DEFICIENT AROMATIC HETEROCYCLES WITH AMMONIUM POLYHALIDES. III[1].HALOGENATION OF PHENOTHIAZINE WITH BENZYLTRIETHYLAMMONIUM (BTEA) POLYHALIDES.

Radu Custelceanu [a], Mircea Vlassa[a], I. A. Silberg [a] *, Monica Szöke [a], Sorin I. Fărcaş [b] and Monica Culea[b], [a]"Babeş-Bolyai University", Faculty of Chemistry and Chemical Engineering, str.Arany Janos 11, RO-3400-Cluj-Napoca, Romania.
[b] Institute of Isotopic and Molecular Technology, RO-3400-Cluj-Napoca 5, PO Box 700

Reaction of phenothiazine with BTEA polyhalides gave halogenophenotiazines and a charge-transfer complexes with mixed halogenes of the type phenotiazines. Cl_xI_y.

X=Br, X'=H
X=X'=Br
X=X'=Cl

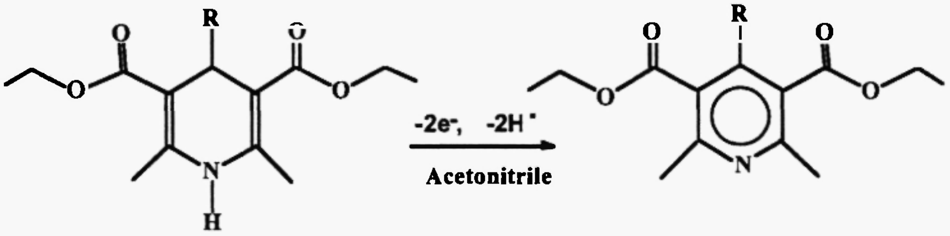


Heterocycl. Commun. 3 (1997) 323-326

ANODIC OXIDATION OF HANTZSCH ESTERS IN ACETONITRILE

R. Miranda*(1), J. M. Aceves(1), M. B. Vilchis(1), R. Garduno(1) M. Saloma(2) and M. Salmón*(2).
(1) Facultad de Estudios Superiores Cuautitlán, Universidad Nacional Autónoma de Mexico, Campo 1, Av. 1o. de Mayo s/n, Cuautitlan Izcalli, Estado de Mexico, CP 54740.
(2) Instituto de Química, Universidad Nacional Autónoma de México, Circuito Exterior, Ciudad Universitaria, México D.F., CP 04510.

Anodic oxidation of Hantzsch esters using several electrochemical conditions, Pt electrode with acetonitrile as the solvent and ammonium tetraethyl fluorborate as support, were carried out. The yields obtained are excellent in comparison to those previously reported, this new option requires less reaction times and generally no by-products are present.

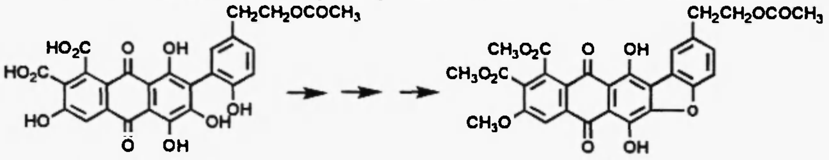


Heterocycl. Commun. 3 (1997) 327-330

ISOLATION AND STRUCTURE DETERMINATION OF LACCAIC ACID F FROM LAC-DYE PRODUCED FROM THAI STICKLAC

Dingyu Hu, Akira Hasegawa, and Shin-ichi Nakatsuka*
The United Graduate School of Agricultural Science, Gifu University, Yanagido, Gifu 501-11, Japan

A new red pigment, laccaic acid F, was isolated from lac-dye produced from Thai sticklac and the structure was determined by its chemical conversions to antha[2,3-*b*]benzofuran derivatives **8** *etc*.



Laccaic acid F

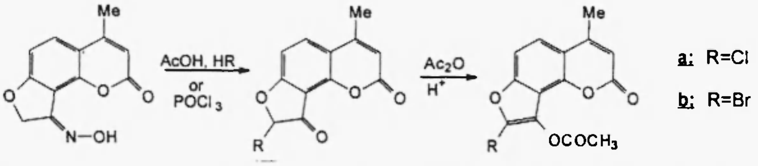
8

Heterocycl. Commun. 3 (1997) 331-338

Unusual transformation of 4-methyldihydrofuro[2,3-h]coumarin-9-one oxime in presence of Beckmann rearrangement catalysts

Dmitrii V. Kravtchenko, Tatjana A. Chibisova, Valery F. Traven*
Department of Organic Chemistry, D.Mendeleev University of Chemical Technology of Russia, 125047 Moscow, Russia

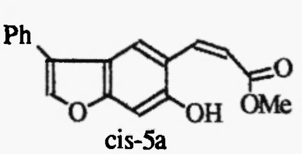
4-Methyldihydrofuro[2,3-h]coumarin-9-one oxime transforms to 8-halogeno-4-methyldihydrofuro[2,3-h] coumarin-9-ones in presence of Beckmann rearrangement catalysts (CH_3COOH + HCl/HBr) or $POCl_3$. 8-Halogenodihydrofurocoumarinones readily undergo to 9-acetoxy-8-halogeno-4-methylangelicins via acetylation reaction.



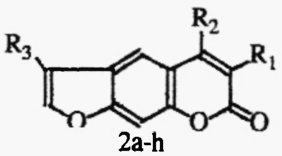
Heterocycl. Commun. 3 (1997) 339-344

The Base-Catalyzed Cyclization of Acylmethyl Ethers of 7-Hydroxycoumarins

Valery F. Traven*[a], Roman V. Rozhkov[a], Alexander Yu. Tolmachev[a], Natalja A. Kuznezova[a], Natalja Ya. Podhaluzina[a], Edward A. Carberry[b]
a: Department of Organic Chemistry, D. Mendeleev University of Chemical Technology of Russia, 125047 Moscow, Russia
b: Department of Chemistry, Southwest State University, Marshall, MN 56258, USA



cis-5a



2a-h

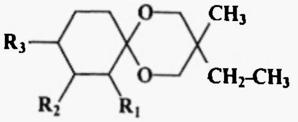
The base-catalyzed cyclization of acylmethyl ethers of 7-hydroxycoumarins have been shown to proceed via formation of the propenoic acid derivative (cis-5a) as an intermediate. A series of new psoralens **2a-h** which have a phenyl group in the lactone and (or) in the furan ring have been synthesized and characterized by NMR and mass spectra.

Heterocycl. Commun. 3 (1997) 345-354

SYNTHESIS AND STEREOCHEMISTRY OF SOME NEW DERIVATIVES OF1.5-DIOXASPIRO [5.5]UNDECANE

I.Grosu[a], G. Plé[b], C. Mesaros[a] and S. Mager[a]
[a]"Babes-Bolyai" University, Organic Chemistry Department, 11 Arany Janos str., RO-3400, Cluj-Napoca. Roumania
[b]Université de Rouen et IRCOF, Laboratoire Associé au CNRS DO-464, Faculté de Sciences, 76821 Mont Saint Aignan, Cedex, France

The synthesis and the stereochemistry of some spiro-1,3-dioxanes (1-5) with axial and helical chirality, obtained by the acetalization of substituted cyclohexanones with 2-ethyl-2-methyl-1,3-propanediol are discussed.



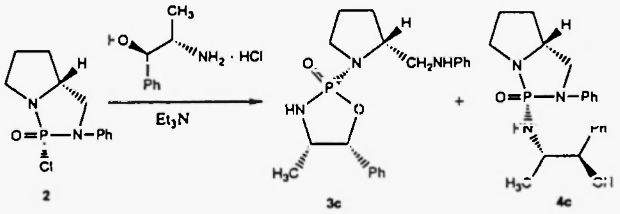
1-5

Heterocycl. Commun. 3 (1997) 355-361

X-RAY CRYSTALLOGRAPHIC ANALYSIS OF OPTICALLY ACTIVE 1,3,2-DIAZAPHOSPHOLIDINE DERIVATIVES AND N→O MIGRATION REACTION OF PHOSPHORUS ATOM UNDER NEUTRAL CONDITIONS

Tatsuo Oshikawa,a Miho Higashi,a Mitsuji Yamashita,a and Kuniaki Seob
a Department of Materials Chemistry, Faculty of Engineering, Shizuoka University, Hamamatsu 432, Japan
b Department of Chemistry and Biochemistry, Numazu College of Technology, Numazu 410, Japan

X-Ray crystallographic analyses of optically active 2-chloro-1,3,2-diazaphospholidine 2-oxide derivatives were performed, and novel reaction of the chloro derivatives with chiral amino alcohols in organic solvent was proceeded to afford 1,3,2-oxazaphospholidine 2-oxide derivatives.

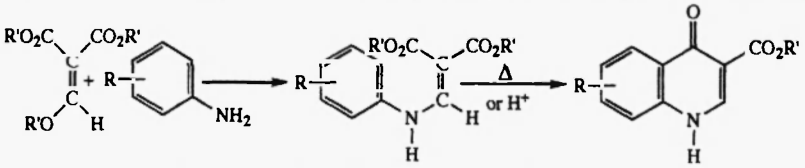


Heterocycl. Commun. 3 (1997) 363-367

SYNTHESIS OF 1.4-DIHYDRO-4-OXO-3-QUINOLINECARBOXYLIC ESTERS: REGIOSELECTIVITY PROBED BY THE X-RAY STRUCTURE OF A CYCLIZATION INTERMEDIATE.

S. Trippitelli[a], M. Pierrot[b], J-P. Gozard[c] and R. Gallo[a]*; a- ENSSPICAM, Faculté Saint-Jérome, Avenue Normandie-Niemen, 13397 Marseille Cedex 20, France; b- Laboratoire de cristallochimie, same adress; c- Rhône-Merieux, Laboratoire de Toulouse, 4 chemin du Calquet, 31057 Toulouse Cedex, France

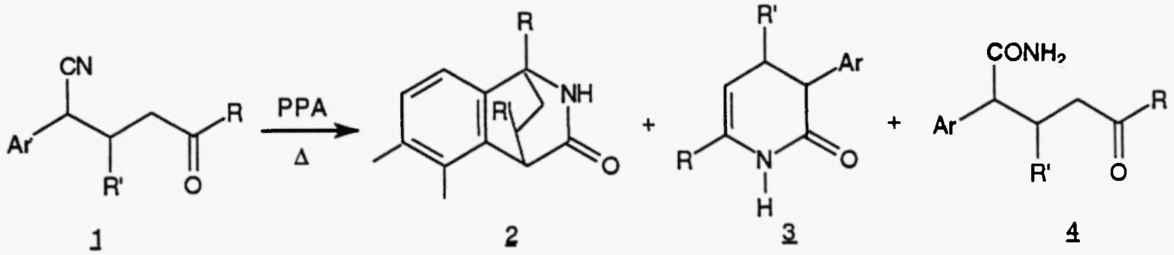
1,4-dihydro-4-oxoquinolines (quinolones) are prepared by cyclization of an arylaminomethylenemalonate precursor. The X-ray structure of the cyclization intermediate explains the regioselectivity of ring closure.



Heterocycl. Commun. 3 (1997) 369-370

NEW ACCESS TO ETHANOISOQUINOLONES

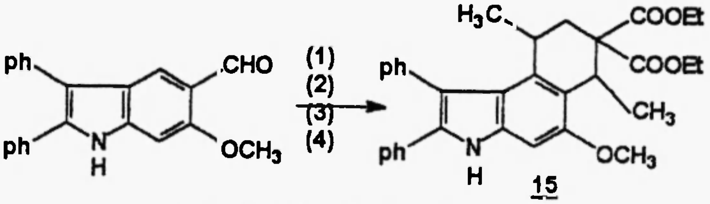
Didier Barbry *, Claudie Hautecoeur and Guillaume Sokolowski, Laboratoire de Chimie Organique et Environnement, Universite des Sciences et Technologies de Lille, 59655 Villeneuve d'Ascq Cedex, France



Heterocycl. Commun. 3 (1997) 371-380

THE USE OF ACTIVATED DOUBLE BOND SYSTEMS IN HETEROCYCLIC SYNTHESES

E. Kandeel*, I. El-Ghamry and A. Abd-el-Rahman
Department of Chemistry, Faculty of Science, Mansoura University, Mansoura, Egypt



(1) : $CH_2(COOEt)_2$/piperidine
(2) : $CH_3MgI/(C_2H_5)_2O$
(3) : $CH_2{=}CH\text{-}CH_2\text{-}Br/C_2H_5ONa$
(4) : Polyphosphoric acid