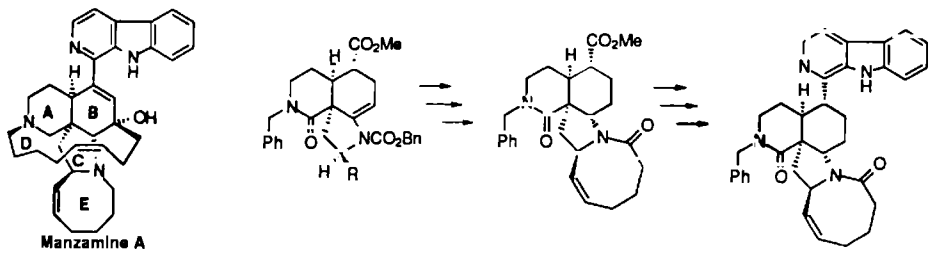
Heterocycl. Commun. 1 (1994) 115-118

APPROACHES TO THE SYNTHESIS OF MANZAMINE A. SYNTHESIS OF THE β-CARBOLINE-BEARING ABCE RING SYSTEM

Hans Bieräugel, Bennett C. Borer and Upendra K. Pandit,*
Laboratory of Organic Chemistry, University of Amsterdam, Nieuwe Achtergracht 129, 1018 WS Amsterdam, The Netherlands

The 8-membered ring E has been introduced onto a chiral pyrrolo[2,3-*i*]isoquinoline derivative by a combination of Wittig coupling and amide cyclization. The resulting tetracyclic structure has been converted to the ABCE-β-carboline ring system of manzamine A.

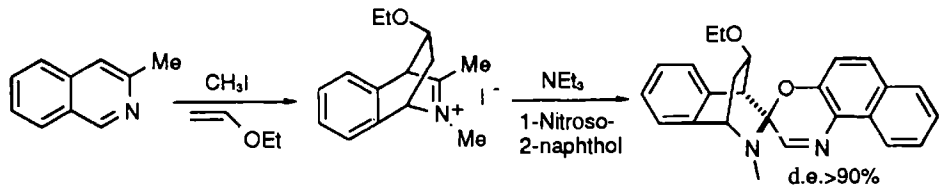


Heterocycl. Commun. 1 (1994) 119-123

STEREOSELECTIVE SYNTHESIS OF A NEW PHOTOCHROMIC SPIRO[AZABICYCLO-NAPHTHOXAZINE]

Pierre Laréginie, André Samat and Robert Guglielmetti,
GCOBO, URA CNRS 1320, Faculté des Sciences de Luminy,
Case 901, 13288 Marseille Cedex 09, France.

Diastereoselective synthesis is reported for 8-ethoxy-2-methylspiro-[syn-5,6-benzo-2-azabicyclo[2,2,2]octane-3,3'-[3H]-naphtho[2,1-b][1,4]oxazine].

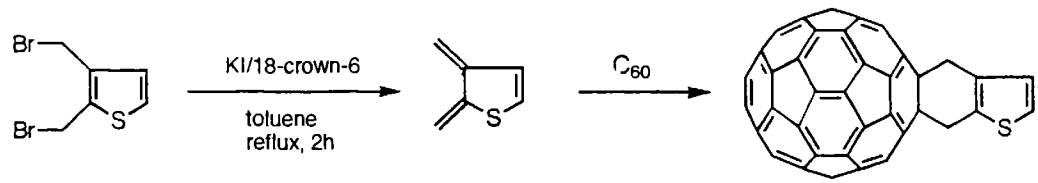


Heterocycl. Commun. 1 (1994) 125-128

SYNTHESIS OF A THIOPHENE DERIVATIVE OF C_{60} FROM [4+2]CYCLOADDITION REACTION WITH 2,3-DIMETHYLENE-2,3-DIHYDROTHIOPHENE

Masatomi Ohno, Naoya Koide, and Shoji Eguchi*
Institute of Applied Organic Chemistry, Faculty of Engineering, Furo-cho, Chikusa-ku, Nagoya 464-01, Japan

A thiophene-containing C_{60} derivative was synthesized from [4+2]cycloaddition reaction of C_{60} with thiophene-quinodimethane.



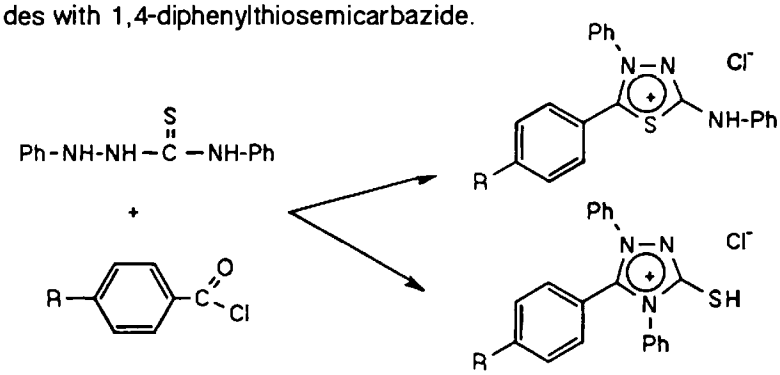
Heterocycl. Commun. 1 (1994) 129-136

REACTIONS OF AROYL CHLORIDES WITH 1,4-DIPHENYLTHIOSEMICARBAZIDE: FORMATION OF BOTH 1,3,4-THIADIAZOLIUM-2-AMINIDE AND 1,3,4-TRIAZOLIUM-2-THIOLATE

A. Echevarria[a],S.E. Galembeck[b],M.A.M. Maciel[a],J. Miller[c*],C. A. Montanari[d],V.M. Rumjanek[a],A.M. Simas[e] and J.B.P. Sandall[f]

[a]Departamento de Qulmica,Universidade Federal Rural do Rio de Janeiro,23.851-970,Itagual,RJ, Brasil; [b]Departamento de Qulmica, FFCL-RP, Universidade de São Paulo, 14.040-901, Ribeirão Preto, SP, Brasil; [c]Laboratório de Tecnologia Farmacêutica, Universidade Federal da Paraíba, 58.051-970, João Pessoa , Brasil ; [d]Departamento de Química, Universidade Federal de Minas Gerais, 31.270-901 , Belo Horizonte, MG, Brasil; [e]Departamento de Qulmica Fundamental, Universidade Federal de Pernambuco, 50.670-901, Recife, PE, Brasil;[f]Department of Chemistry , The University, Exeter EX4 4QD, UK.

Formation of 1,3,4-thiadiazolium-2-aminides and 1,3,4-triazolium-2-thiolates are reported by the reaction of aroyl chlorides with 1,4-diphenylthiosemicarbazide.

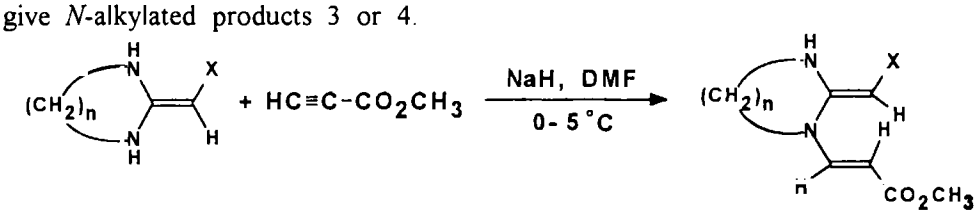


Heterocycl. Commun. 1 (1994) 137-145

REGIOSPECIFIC *N*-ALKYLATION OF HETEROCYCLIC KETENE AMINALS WITH METHYL PROPIOLATE

Li-Ben Wang, Chu-Yi Yu and Zhi-Tang Huang*
Institute of Chemistry, Academia Sinica, Beijing, 100080, PR of China

Heterocyclic ketene aminals 1 or 2 react with methyl propiolate in the presence of sodium hydride to give *N*-alkylated products 3 or 4.



1, n = 2; 2, n = 3; 3, n = 2; 4, n = 3

X = CO-Ph , CO-Ph-CH$_3$, CO-Ph-OCH$_3$, CO-Ph-Cl, CO-Ph-Br , NO$_2$.

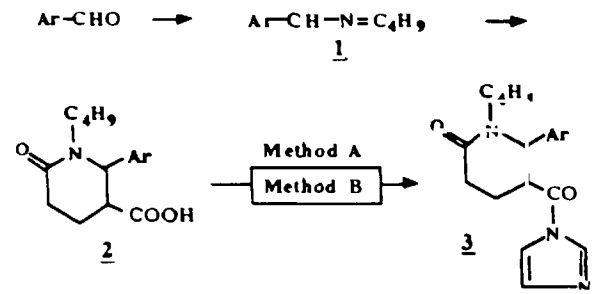
Heterocycl. Commun. 1 (1994) 147-151

Imidazolides of Piperidone Carboxylic Acids: Synthesis and Physical Properties

Moomen Baroudi, Jacqueline Robert and Cuong Luu-Duc*, *Laboratoire de Chimie-Pharmacie, Unité de Recherche Associée au CNRS n° 1287, Université de Grenoble I, F 38706 La Tronche Cedex (France)*

New imidazolides of piperidonic-carboxylic acids 3 were synthesized from *N*-Butyl-2-aryl-3-carboxy-piperidin-6-ones 2

Ar = Ph, 4NO_2-C_6H_5; 4Cl-C_6H_5; 4F-C_6H_5, 4NH_2-C_6H_5; 2,4 Cl_2-C_6H_4, 4 CN-C_6H_5; 4-C_5H_5N

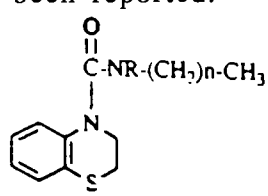


Heterocycl. Commun. 1 (1994) 153-155

IN VITRO-IN VIVO STUDIES OF BENZOTHIAZINES AGAINST LYMPHOCYTIC LEUKEMIA P388 CELLS

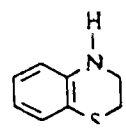
D.K. Todorov[1], M.V. Ilarionova[1], R.R. Gupta[2], J. Molnar[3] and N. Motohashi*
[1]Department of Oncopharmacology, National Oncological Centre, Sofia, Bulgaria; [2]Department of Chemistry, Rajasthan University, Jaipur-302004, India; [3]Faculty of Medicine, Institute of Microbiology, Albert Szent-Gyorgyi Medical University, Szeged, Hungary; *Department of Medicinal Chemistry, Meiji College of Pharmacy, Tokyo, Japan

Anticancer activity of benzothiazines 1-7 against lymphocytic leukemia P388 cells has been reported.



1-4

1 R = H, n = 1
2 R = H, n = 3
3 R = NO, n = 1
4 R = NO, n = 3



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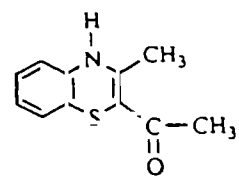

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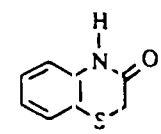

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Heterocycl. Commun. 1 (1994) 157-166

STRUCTURE OF 4-UNDECYLPYRAZOLE IN THE SOLID STATE: A ^{13}C AND ^{15}N CPMAS NMR SPECTROSCOPY STUDY

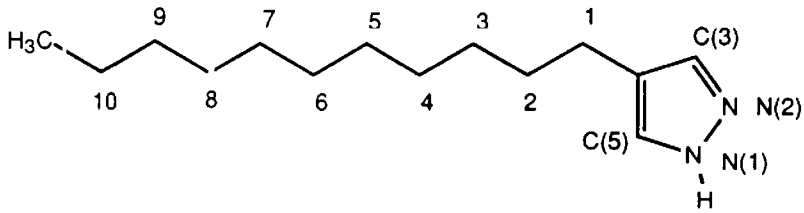
Carlos CATIVIELA[1]*, Jose Antonio GALVEZ[1], Jose Iganacio GARCIA[1], Francisco AGUILAR-PARRILLA[2] and Jose ELGUERO[3]*

[1]Instituto de Ciencia de Materiales de Àragón, Departamento de Química Orgánica, Universidad de Zaragoza-CSIC, 50009 Zaragoza, Spain.

[2]Institut für Organische Chemie, Fachbereich Chemie, Freie Universität Berlin, Takustraße 3, D-14195 Berlin, Germany.

[3]Instituto de Química Médica, CSIC, Juan de la Cierva, 3, 28006 Madrid, Spain.

CPMAS NMR spectroscopy and semi-empirical calculations (AMI and PM3) were used to determine the structure in the solid state of 4-undecylpyrazole. The conclusion is that this compound probably exists as a cyclic trimer.

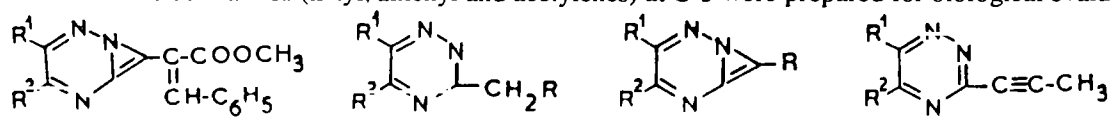


Heterocycl. Commun. 1 (1994) 167-175

AN EFFICIENT SYNTHESIS OF 3-ALKYL-, 3-ALKENYL AND 3-ACETYLENETRIAZINE DERIVATIVES *via* PHOSPHORANYLIDENETRIAZINES

Yehia O. ElKhoshnieh, Ibtisam T. Hennawy and Wafaa M. Abdou *
National Research Centre, Tahrir St., Dokki, Cairo, Egypt.

Several triazine derivatives (alkyl, alkenyl and acetylenes) at C-3 were prepared for biological evaluation.

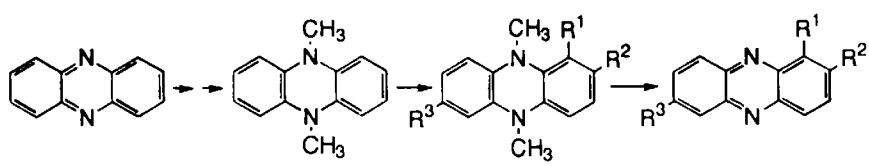


Heterocycl. Commun. 1 (1994) 177-180

NEW METHOD FOR PREPARATION OF SUBSTITUTED PHENAZINES UTILIZING REDOX REACTION

Akira SUGIMOTO[1]*, Haichen JIN[1], Kaku UEHARA[1], Tomohiro ADACHI[2], and Hiroo INOUE[1]
[1]Department of Applied Chemistry, College of Engineering, [2]Department of Cemistry, Faculty of Integrated Arts and Sciences, University of Osaka Prefecture, Sakai, Osaka 593, JAPAN

New method for preparing substituted phenazines has been developed.

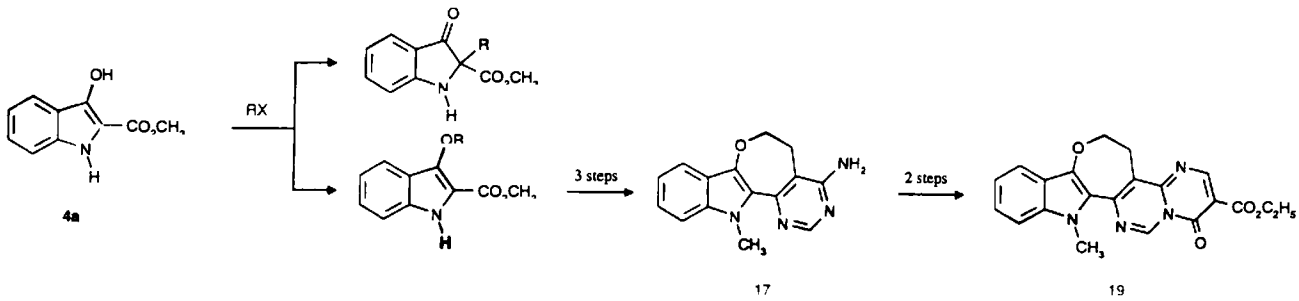


Heterocycl. Commun. 1 (1994) 181-189

ALKYLATION OF METHYL 3-HYDROXYINDOLE-2-CARBOXYLATE USE IN PYRIMIDINE SYNTHESIS

A.S. Bourlot, J.Y. Merour *.
LCBA, URA-CNRS 499, Universite d'Orleans, BP 6759, 45067 Orleans Cedex 2, France.

Reactions of methyl 3-hydroxyindole-2-carboxylate **4a** with functionalized halides led to *O*- or *C*-alkylated compounds. To illustrate this methodology, the pyrimidine derivative **17** was synthesized as an intermediate to the compound **19**.

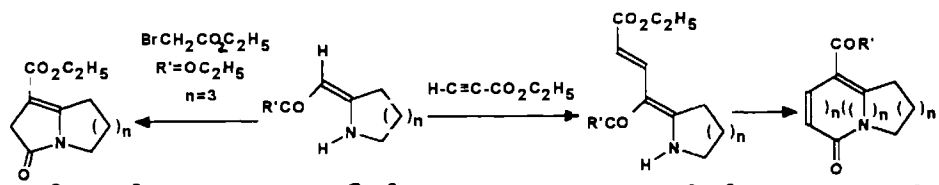


Heterocycl. Commun. 1 (1994) 191-194

A NOVEL AND FACILE ROUTE TO THE PRECURSORS OF ALKALOIDS, SYNTHESIS OF LACTAM-FUSED HETEROCYCLES

Ying Cheng, [a] Mei-Xiang Wang,[b] and Zhi-Tang Huang,* [b] a) Department of Chemistry, Beijing Normal University, Beijing 100875, China; b) Institute of Chemistry, Academia Sinica, Beijing 100080, China.

Heterocyclic enamines 7 reacted with ethyl propiolate to give cis-adducts 8 which underwent cyclization to yield 2-pyridone-fused heterocycles 6.



9 n = 3 7a-f 8a-f 6a-f

Heterocycl. Commun. 1 (1994) 195-198

FUSED 1,2,4-TRIAZOLE HETEROCYCLES, II: REACTION OF 2-CHLORO-3-(1,3-DIOXOLAN-2-YL)QUINOLINES WITH 1,2,4-TRIAZOLE-5-THIOL

Ferenc Koródi*, Zoltán Szabo and Zoltán Cziáky
Alkaloida Chemical Company Ltd., H-4440 Tiszavasvári, Hungary

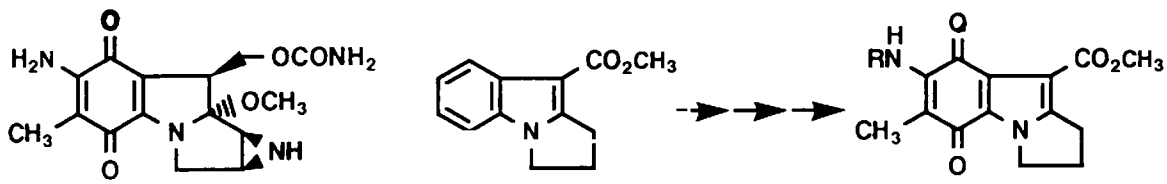
Synthesis of 11-(2-hydroxyethyl)oxy-11*H*-[1,2,4]triazolo[5',1':2,3][1,3]thiazino[6,5-*b*]quinolines 3 and 11-(2-hydroxyethyl)oxy-11*H*-[1,2,4]triazolo[3',4':2,3][1,3]thiazino[6,5-*b*]quinolines 4 is given starting from 2-chloro-3-(1,3-dioxolan-2-yl)quinolines and 1,2,4-triazole-5-thiol. The structures of the products were determined by homonuclear NOE difference spectroscopy and desulfurisation.

Heterocycl. Commun. 1 (1994) 199-202

INTRODUCTION OF ALL FUNCTIONAL GROUPS FOUND IN THE BENZENE PART OF MITOMYCIN C TO PYRROLO[1,2-*a*]INDOLE DERIVATIVE

Satoshi Hirano, Yoshihiko Shinoda and Shin-ichi Nakatsuka*
The United Graduate School of Agricultural Science, Gifu University, Yanagido, Gifu 501-11, Japan

All functional groups on the benzene part of mitomycin C were directly introduced on pyrrolo[1,2-*a*]indole 2 by Friedel-Crafts alkylation, oxidative introduction of *p*-quinone moiety *etc.*



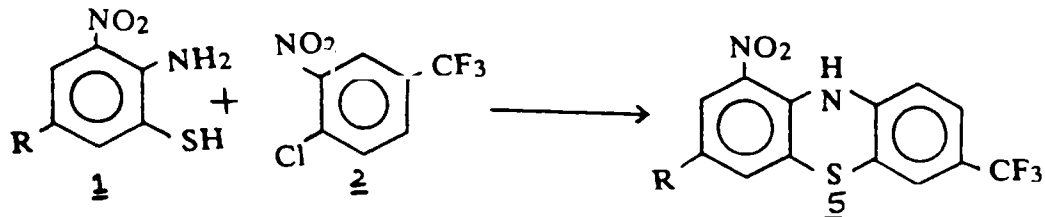
Mitomycin C (1) **2** 3 R=Bn

Heterocycl. Commun. 1 (1994) 203-205

SYNTHESIS OF 3-TRIFLUOROMETHYL-7-ALKOXY-9-NITROPHENOTHIAZINES VIA SMILES REARRANGEMENT

Naresh K. Goswami
P.H.E.D. Laboratory, Ajmer-305001, India

Synthesis of title compounds is reported by Smiles rearrangement.



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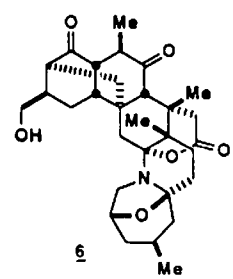
Heterocycl. Commun. 1 (1994) 207-214

THE ISOLATION AND STRUCTURES OF FIVE NEW ALKALOIDS, NORZOANTHAMINE, OXYZOANTHAMINE, NORZOANTHAMINONE, CYCLOZOANTHAMINE AND EPINORZOANTHAMINE

Seketsu Fukuzawa, Yoshinori Hayashi, Daisuke Uemura,* Akito Nagatsu†, Kaoru Yamada†, and Yasuharu Ijuin†
Faculty of Liberal Arts, Shizuoka University, Ohya, Shizuoka 422, Japan, †Sagami Chemical Research Center, 4-4-1 Nishi-Ohnuma, Sagamihara, Kanagawa 229, Japan

Norzoanthamine, oxyzoanthamine, norzoanthaminone, cyclozoanthamine **6** and epinorzoanthamine have been isolated from a colonial zoanthid *Zoanthus* sp.and their structures have been elucidated by detailed spectroscopic analysis and X-ray crystallographic analysis.



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