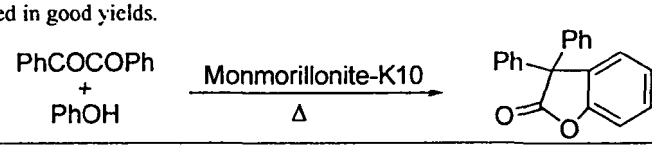
Graphical Abstract

Heterocycl. Commun.5(2009) 319-322

Chemoselective Synthesis of Diphenylbenzolactones under Montmorillonite K-10 Catalysis

Ali Sharifi,* M. Saeed Abaee, and Mojtaba Mirzaei
Chemistry and Chemical Engineering Research Center of Iran, P.O.Box 14335-186 Tehran, Iran.

Montmorillonite K-10 supported condensation of benzil with phenols is investigated. Selective synthesis of the corresponding benzofuranone products is observed in good yields.

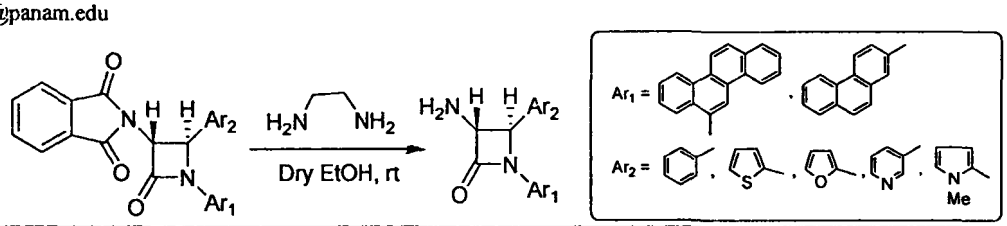


Heterocycl. Commun.5(2009) 323-325

An Expeditious Synthesis Of 3-Amino β -Lactams Derived From Polyaromatic Compounds

Gildardo Rivera, Debasish Bandyopadhyay, Sonam Jaggi, R. Christopher. Gonzales and **Bimal K. Banik***

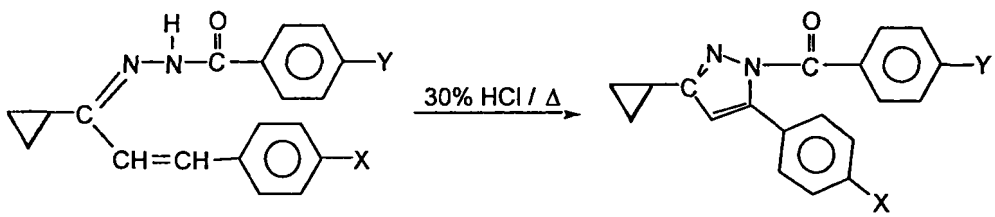
Department of Chemistry,, The University of Texas-Pan American, 1250 West University Drive, Edinburg, Texas 78541;
E-mail: banik@panam.edu



Heterocycl. Commun.5 (2009) 327-334

Synthesis And Spectral Studies Of Some Novel Pyrazole Derivatives From Chalcones Precursors

N. M. Hamada
Department of Chemistry, Faculty of Education, Alexandria University, Alexandria, Egypt



3a-e **4a-e**

Heterocycl. Commun.5 (2009) 335-341

Synthesis And Microbial Activities Of Oxadiazoles, Thiadiazoles And Triazoles Containing 5-Bromo-3-Amino Benzofuran Nucleus From 5-Bromosalicylonitrile

Parameshwarappa[1] G., Raga[2] B., Omkar Khandre S[1] and Sushila. S. Sangapure[1]*
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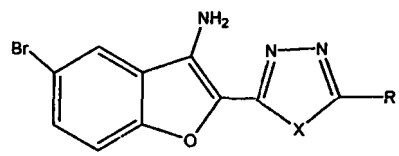
5-Bromosalicylonitrile **2** has been prepared from 5-Bromosalicylladehyde **1** and hydroxylamine hydrochloride, which on further treatment with ethyl chloroacetate gave ethyl 5-bromo-3-amino-2-benzofurancarboxylate **4**. The resulting compound **4** was treated with hydrazine hydrate in boiling ethanol gave the hydrazide compound **5**. The resulting hydrazide was reacted with substituted aryl isothiocyanates and offered thiosemicarbazide compounds **6-9**. The compounds **6-9** were underwent cyclization with different reagents under different reaction conditions to furnish benzofuran derivatives possessing oxadiazoles, triazoles and thiadiazoles **10-21** respectively. The synthesized compounds were screened for their antimicrobial and antifungal activities.



X= O, S, N-Ph

R= NHR, NHR, SH

Heterocycl. Commun.5 (2009) 343-348

Synthesis and anti-mirobial activity of thiazoleSubstituted coumarins

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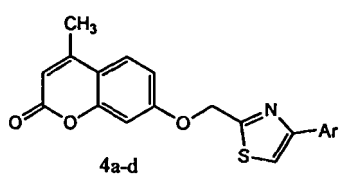
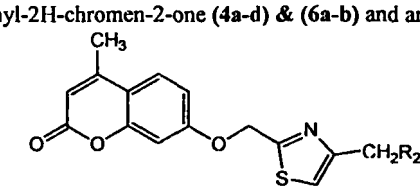
A synthesis of 7-((4-substituted thiazol-2-yl) methoxy)-4-methyl-2H-chromen-2-one **(4a-d) & (6a-b)** and anti-microbial activity



4a-d



6a-b

Heterocycl. Commun.5 (2009) 349-350

Convenient method for the synthesis of2-phenyl-4-chloro-3-formylquinoline and its utility for the synthesis of Thieno(3,2-c)-4-phenylquinoline-2-carboxylic acid

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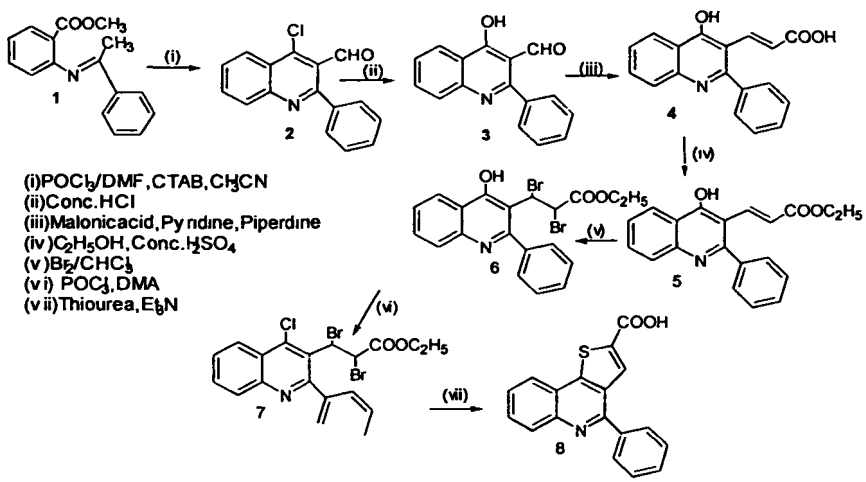
2-phenyl-4-chloro-3-formyl quinoline(**2**) was obtained by the reaction of (**1**) with $POCl_3$/DMF in CTAB medium. The newly synthesized aldehyde was then converted to acrylic ester(**4**) via its acid(**3**) which was then brominated and chlorinated to get the trihalocompound(**7**). The trihalocompound thus obtained was treated with thiourea to get the titled compound(**8**).



Heterocycl. Commun.5 (2009) 351-354

Synthesis Of Novel 5-Methylindeno[2,1-E][1,3]Thiazolo[3,2-A]Pyrimidine-1,6(2H ,10bH)-Diones

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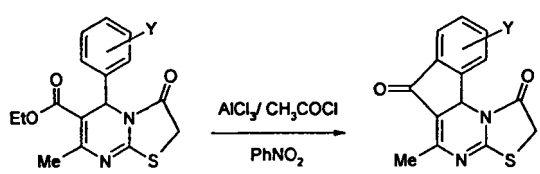
5-Methylindeno[2,1-e][1,3]thiazolo[3,2-a]pyrimidine-1,6(2H,10bH)-diones were synthesized via an intramolecular reaction of ethyl 5-aryl-7-methyl-3-oxo-2,3-dihydro-5H-thuazolo[3,2-a]pyrimidine-6-carboxylic acid ethyl ester with aluminum chloride and acetyl chloride in nitrobenzene.



Heterocycl. Commun. 5 (2009) 355-360

Synthesis and Antitumor Activity Evaluation of Regioselective Spiro [pyrrolidine-2,3'-oxindole] Compounds

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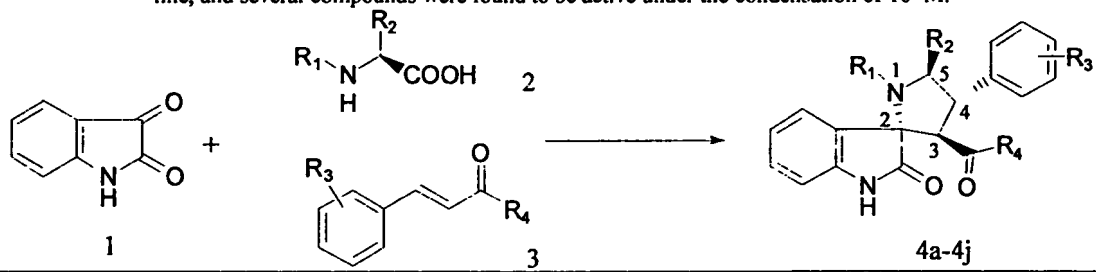
[2]State Key Laboratory of Phytochemistry and Plant Resources in West China,
Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650204, P. R. China

[3]State Key Laboratory of Drug Research, Shanghai Institute of Materia Medica,
Chinese Academy of Sciences Shanghai 201203, P. R. China

Abstract: A series of spiro [pyrrolidine-2,3'-oxindole] derivatives were synthesized by 1,3-dipolar cycloaddition reaction of isatin, α-amino acid and (E)-β-substituted-styrene. Four kinds of trapping dipolarophiles were introduced into this reaction, and the regioselectivity of these reactions proved to be the same fashion. Bioactivity screening showed these compounds were active on anti-tumor in A549 and P388 cell line, and several compounds were found to be active under the condensation of 10^{-4}M.



Heterocycl. Commun.5 (2009) 361-364

Synthesis Of *N, N*-Dialkyl Phosphoramidic Dichloride From Dialkyl Amine And Phosphoryl Chloride Using Basic Anion Exchange Polymer Resins/Beads

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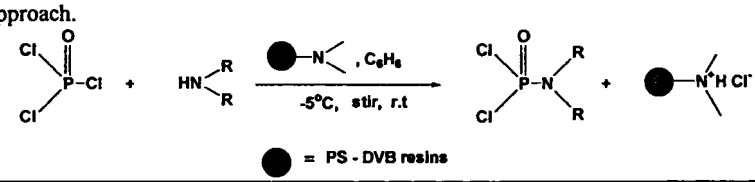
Significance of the work-In this communication we wish to report a very convenient, efficient, straightforward method for the synthesis of *N, N*-dialkyl phosphoramidic dichloride from dialkyl amine and phosphoryl chloride using basic anion exchange polymer resins/beads. The method reported herein describes the synthesis of compounds through a very clean and solid support scavenger recyclable resin with environmental friendly approach.

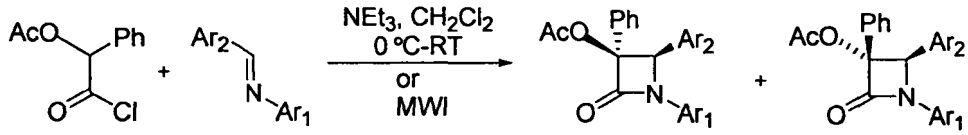


Heterocycl. Commun.5 (2009) 365-368

Stereoselectivity Of 3, 3-Disubstituted β-Lactam Formation Via Staudinger Reaction

Hector Aguilar and Bimal K. Banik*

Department of Chemistry,. The University of Texas Pan American, 1250 West University Drive, Edinburg, Texas 78541; E-mail: banik@panam.edu

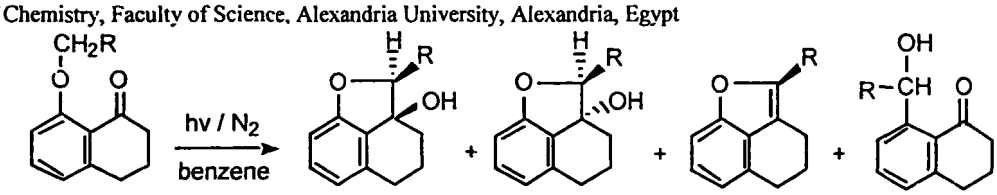


Heterocycl. Commun.5 (2009) 369-376

1,5-And 1,3-Photocyclization Reactions Of 8-Substituted-1,2,3,4-Tetrahydro-1-Naphthalenones

Essam Mohamed Sharshira

Department of Chemistry, Faculty of Science, Alexandria University, Alexandria, Egypt



1 **cis-2** **trans-2** **3** **4**

Heterocycl. Commun.5 (2009) 377-384

Synthesis And Characterization Of Novel Pyrimidine Derivatives From 2,3-Furandiones

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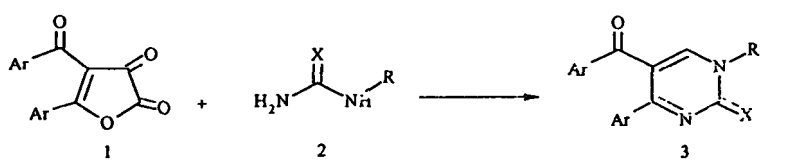
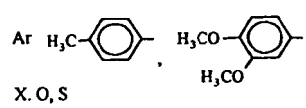
Various novel pyrimidine-2(*1H*)-one and pyrimidine-2(*1H*)-thione derivatives **3a-m** have been synthesized efficiently in good yields by the treatment of 4-*p*-methylbenzoyl-5-*p*-methylphenyl-2,3-furandione (**1a**) and 4-(3,4-dimethoxybenzoyl)-5-(3,4-dimethoxyphenyl)-2,3-furandione (**1b**) with some ureas and thioureas **2**.



1 2 3



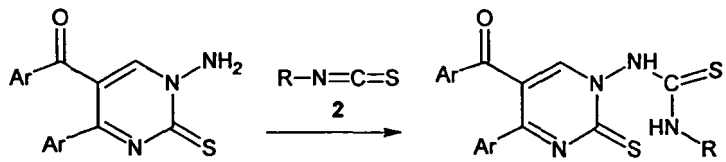
X. O, S

Heterocycl. Commun.5(2009) 385-388

Reactions of 1-Amino-5-(4-methylbenzoyl)-4-(4-methylphenyl)pyrimidine-2(1*H*)-thione with Various Isothiocyanates

Zülbiye Önal*, Neslihan Atlı, İlhan Özer İlhan
Department of Chemistry, Erciyes University, 38039, Kayseri, Turkey

1-Amino-5-(4-methylbenzoyl)-4-(4-methylphenyl)pyrimidine-2(1*H*)-thione (**1**) react with the various isothiocyanates (**2a-g**) under different conditions to yield the new *N,N'*-disubstituted thioureas (**3a-g**). The newly synthesized compounds were characterized by elemental analysis, IR, ^{1}H and ^{13}C NMR spectral data.



1 Ar: 4-$CH_3C_6H_4$- R: Alkyl-, Aryl- 3