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Graphical Abstract

Heterocyclic Letters 2: iss.-1, (2012), 13-18

Palladium-catalyzed route to novel five- and six-cyclic heterocyclic systems containing thiazole, imidazole and oxepine rings

Tatjana Beresneva, Sergey Belyakov, Edgars Abele

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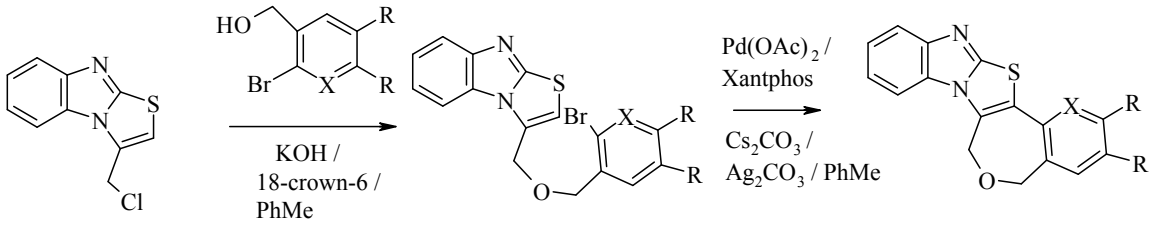
Novel and simple two step catalytic method for the preparation of novel five- and six-cyclic heterocyclic systems containing thiazole, imidazole and oxepine rings from 3-chloromethylbenzo[4,5]imidazo[2,1-b]thiazole and o-bromobenzyl alcohols or 2-bromo-3-hydroxymethylpyridine was described.



X= CH, N; R= H; RR = $O(CH_2)_2O$

Heterocyclic Letters 2: iss.-1, (2012), 19-26

One-pot, three-component, green synthesis of some indeno[2`,3`:5,6]pyrido[2,1-*b*]benzothiazoles and indeno[2`,3`-*e*]thiazolo[3,2-*a*]pyridines

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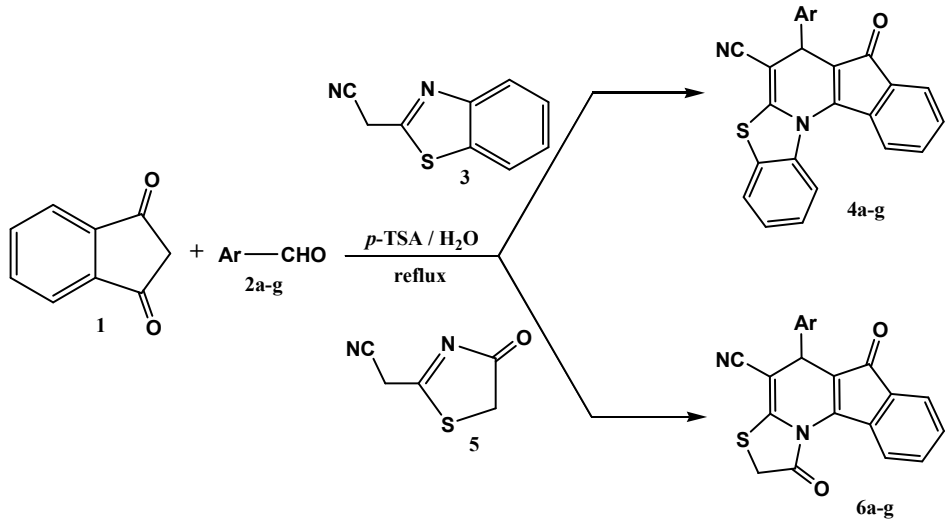
The green synthesis of some indeno[2`,3`:5,6]pyrido[2,1-*b*]benzothiazoles (**4a-f**) and indeno[2`,3`-*e*]thiazolo[3,2-*a*]pyridines (**6a-f**) via a one-pot, three-component reaction of indan-1,3-dion (**1**), aromatic aldehydes (**2a-f**), (benzothiazol-2-yl)acetonitrile (**3**) or 2-cyanomethyl-4-thiazolinone (**5**), and catalyzed by *p*-toluene sulfonic acid (*p*-TSA) using water as reaction medium is reported.



Heterocyclic Letters 2: iss.-1, (2012), 27-30

Synthesis and characterization of some Mannich base new 1,3,4-oxadiazole-2-thione derivatives

Iraj Sadrayi[1], Abolfazle Seyed Sajadi[2], Shahriar Ghammamy[3,*], Masoumeh Alem[4], Zahra Shokri[3], Hajar Sahebalzamani[5]

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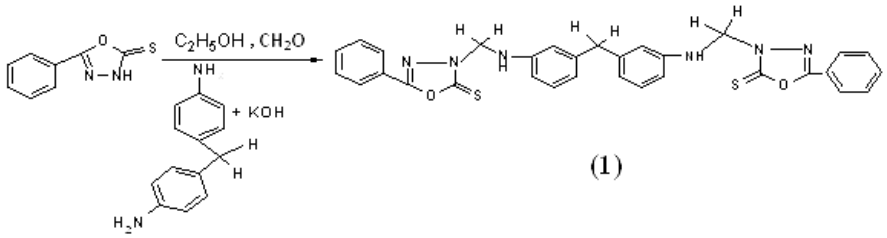
Two new oxadiazole compounds 3,3′-[methylin-bis(1,4-phenyline-iminomethyline]-bis-(5-phenyl-1,3,4-oxadiazol)-2,3(H)-thione and 5-phenyl3-[4-(5-phenyl-1,3,4-oxadiazole-3yl) methyl]amino}phenyl)amino]methyl1,3,4-oxadiazolidine-2-thione thiooxamethane have been synthesized. The reaction was done in pH= 7 and in presences of amin molecules by Mannich reaction. The structures of the compounds were characterized by FT-IR, ^{13}C NMR and ^{1}H NMR techniques.



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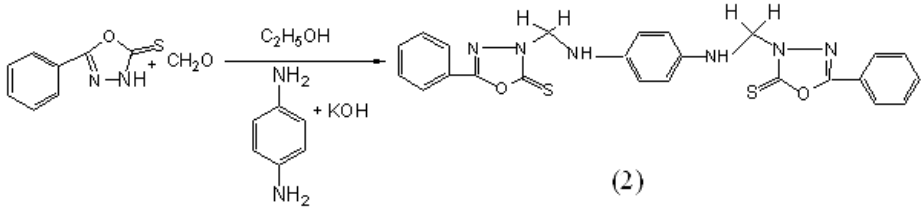

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Heterocyclic Letters 2: iss.-1, (2012), 31-36

A Solventless Synthesis of 2-aminothiophenes via the Gewald Reaction under Ultrasonic Conditions

Bruno Dias de C.F. dos Santos[a], Josué S. Bello Forero[a], Erika M. de Carvalho[b], Joel Jones Junior[a] and FlaviaM.daSilva[a]

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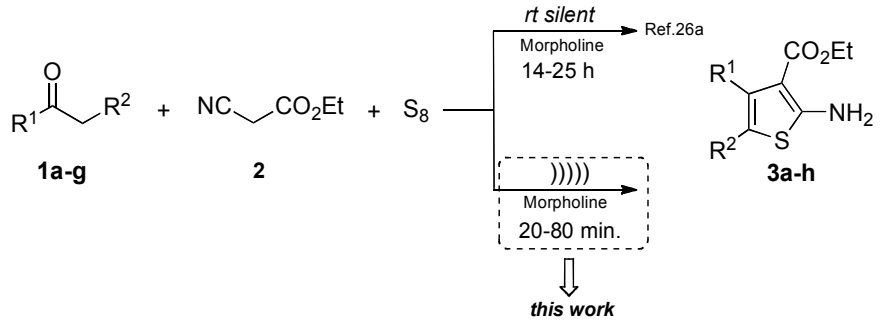
[b]Instituto de TecnologiaemFármacos, Far-Manguinhos, RuaSizenandoNabuco, 100, 21041-250, Rio de Janeiro, RJ, Brasil

A simple, fast and efficient one-pot, three-component, solventless procedure for the synthesis of 2-aminothiophene derivatives under ultrasonic conditions was developed. The combined advantages of sonochemistry, such as mild reaction conditions, good yield and short reaction times, enabled progress to be made on the synthesis of 2-aminothiophenes via the Gewald reaction.



Heterocyclic Letters 2: iss.-1, (2012), 37-42

Solvent-Free Splendid One Pot Synthesis Of 2-Amino-6-(Substitutedphenyl)-5-Methylpyrimidin-4-Ol Using Peg-400

Suresh Maddila[1], Sreekanth B Jonnalagadda[1], Venkatarao Chunduri[2], Palakondu Lavanya[2*]

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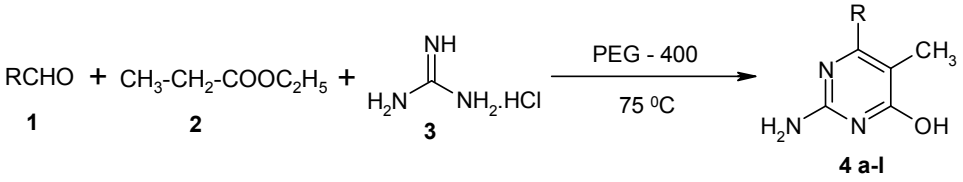
The simple and efficient approach towards one step synthesis of 2-amino-6-(substitutedphenyl)-5-methylpyrimidin-4-ol derivatives has been developed by three component condensation of aromatic aldehydes, ethyl propionate and guanidine hydrochloride using PEG as reaction medium.



Heterocyclic Letters 2: iss.-1, (2012), 43-51

An efficient one-pot synthesis of 1,8-dioxo-decahydroacridines by indium(III)chloride under ambient temperature in ethanol

Seyed Mohammad Vahdat[1]* and Saeed Baghery[2]

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[2]Young Researchers Club, Ayatollah Amoli Branch, Islamic Azad University, Amol, Iran
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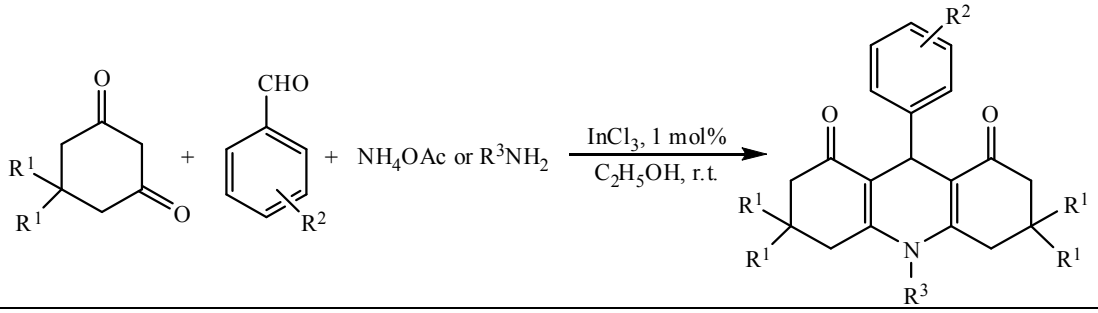
Indium(III)chloride was employed as a catalyst for facile preparation of 1,8-dioxo-decahydroacridines via the one-pot condensation of various aldehydes, 1,3-diketones with aromatic amines or ammonium acetate. Various aromatic aldehydes were utilized in the reaction and in all situations the desired product were synthesized successfully. The described novel synthesis method propose several advantages of mild condition, short reaction times, high yields, simplicity and easy workup compared to the traditional method of synthesis.



Heterocyclic Letters 2: iss.-1, (2012), 53-70

Synthesis, Antimicrobial And Antioxidant Activities Of Pyrimido [5,4-e]Thiazolo[3,2-a]Pyrimidines Linked To Indole Nucleus

Saundane Anand R*, Prabhaker Walmik Katkar Vijaykumar and Yarlakatti Manjunatha.

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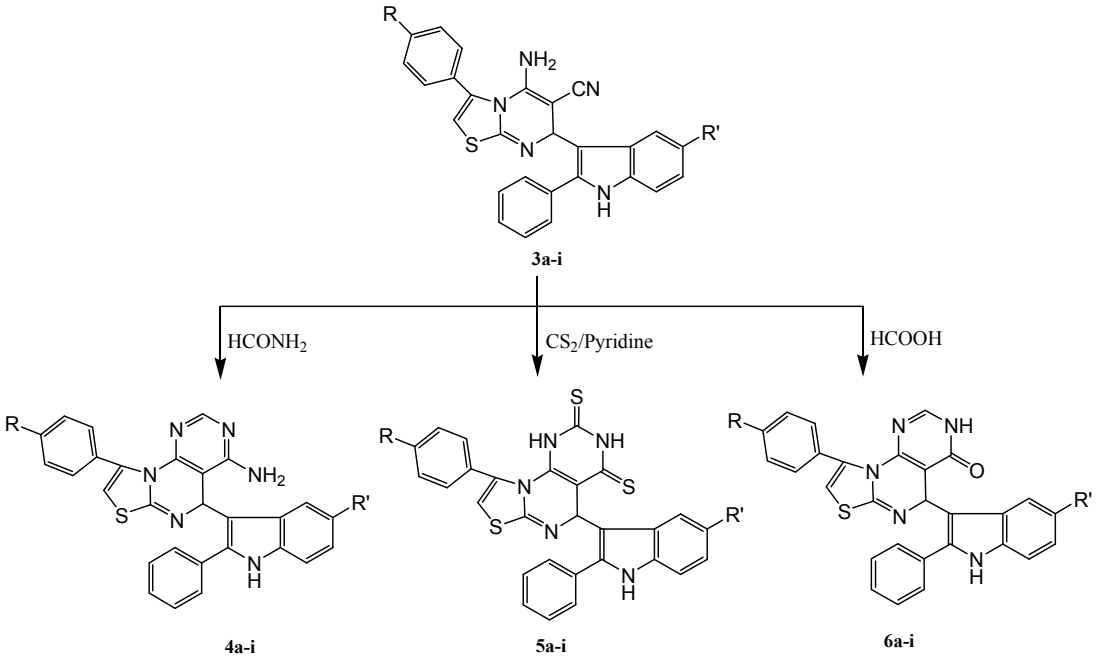
In the present investigation we have prepared the substituted indol-3-yl thiazolopyrimidopyrimidines (**3, 4, 5** and **6**) in which indole, thiazole and pyrimidine systems are embedded in one molecule so to get the enhanced biological activities. These compounds have been evaluated for their antimicrobial and antioxidant activities.



Where

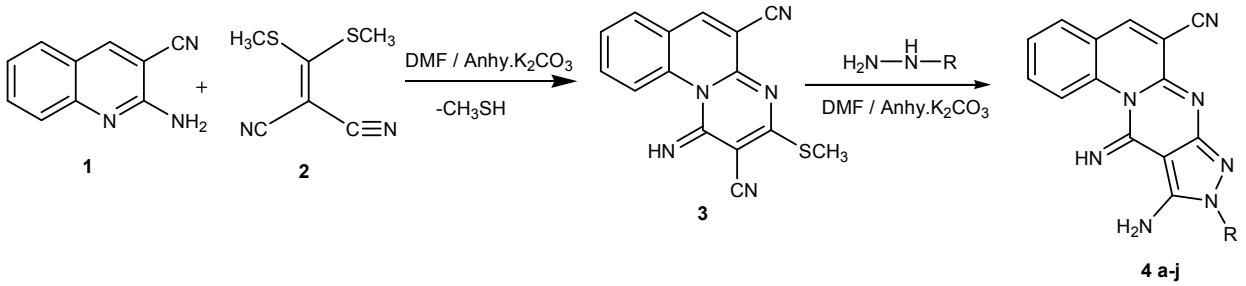
	a	b	c	d	e	f	g	h	i
R	Cl	Cl	Cl	CH_3	CH_3	CH_3	H	H	H
R'	Cl	CH_3	H	Cl	CH_3	H	Cl	CH_3	H

Heterocyclic Letters 2: iss.-1, (2012), 71-78

Synthesis And Antimicrobial Evaluation Of 3-Amino-11-Cyano-4-Imino- Pyrazolo [4, 5-E]-*4h*-Pyrimido [2, 1-B] Quinoline And Their Substuited Derivatives

Sambhaji P. Vartale*, Nilesh K. Halikar & Yogesh D. Pawar

P.G. Research centre, Department of chemistry,
Yeshwant Mahavidyalaya, Nanded-431602(MS)India.
Email : spvartale@gmail.com.



1 2 3 4 a-j

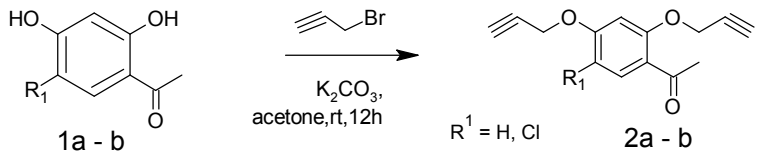
Heterocyclic Letters 2: iss.-1, (2012), 79-83

Regioselective Synthesis Of Novel 1,4 Disubstituted Bis 1,2,3 Triazoles : Click Chemistry Approach

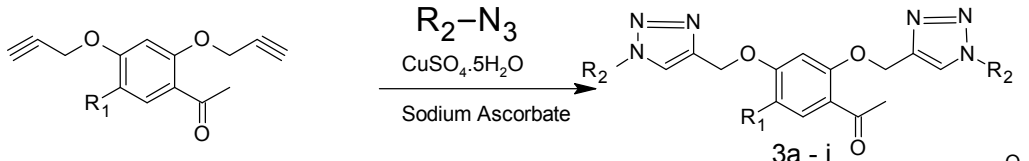
Hemasri Y[1*] and Srinivas A[2]

[1] A.V.P.G.Centre Gaganmahal (affiliated to Osmania University), Hyderabad, India 500029 Email: hemay2@yahoo.com
[2] Post Graduate College of Science, Saifabad, Osmania University, Hyderabad, India 500004.

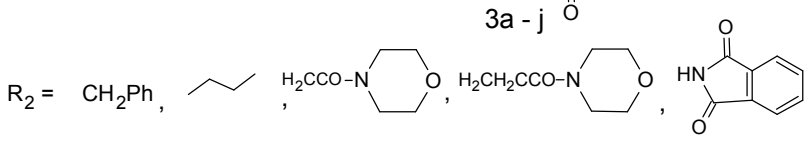
Regioselective synthesis of a series of new 1,4-disubstituted bis 1,2,3-triazoles **3a-j** from bis propargyloxy acetophenones and organic azides are reported. Optimal experimental conditions were established for these triazoles catalysed by copper (II) sulfate pentahydrate in presence of sodium ascorbate by the conventional click chemistry. The compounds are characterized by the IR, ^{1}H NMR, MS.



1a - b 2a - b



2a - b 3a - j



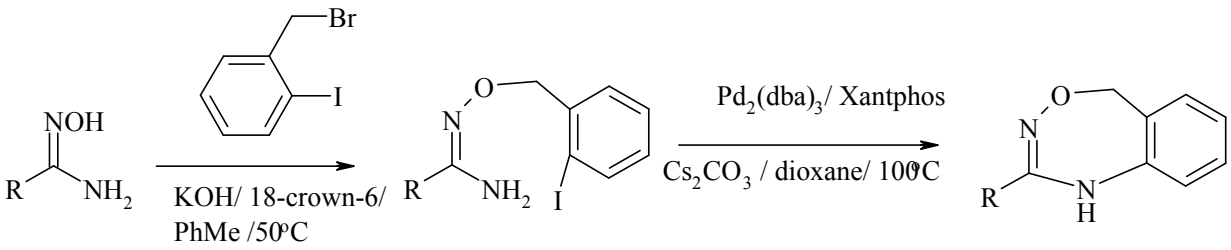
Heterocyclic Letters 2: iss.-1, (2012), 85-89

A new pathway for the preparation of 3-substituted 1,2,4-oxadiazepines by intramolecular palladium catalyzed cyclization of (*E*)-O-(2-iodophenylmethyl) amidoximes

Edgars Abele, Kira Rubina, Lena Golomba, Ramona Abele

Latvian Institute of Organic Synthesis, 21 Aizkraukles Street, Riga, LV-1006, Latvia

A simple synthesis of novel class of heterocyclic compounds - 3-substituted 1,2,4-oxadiazepines from corresponding (E)-O-(2-iodophenylmethyl)amidoximes in the system $Pd_2(dba)_3$/ Xantphos / solid Cs_2CO_3 / dioxane has been developed.



Heterocyclic Letters 2: iss.-1, (2012), 91-98

Novel β -Lactum-1,2,3-Triazoles- Their Synthesis and Antibacterial activity

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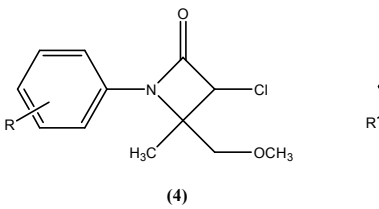

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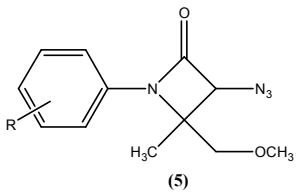

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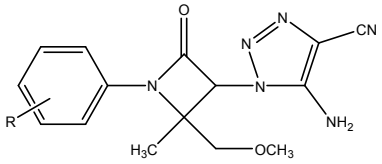

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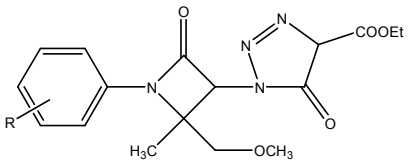

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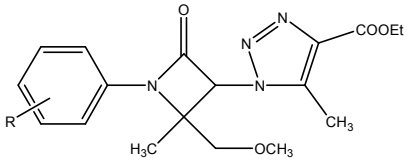

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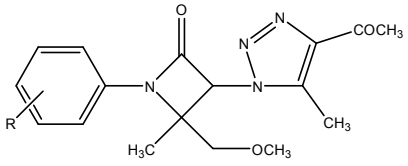

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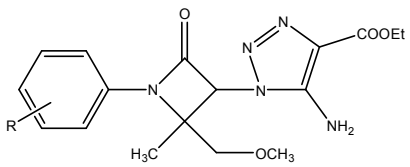

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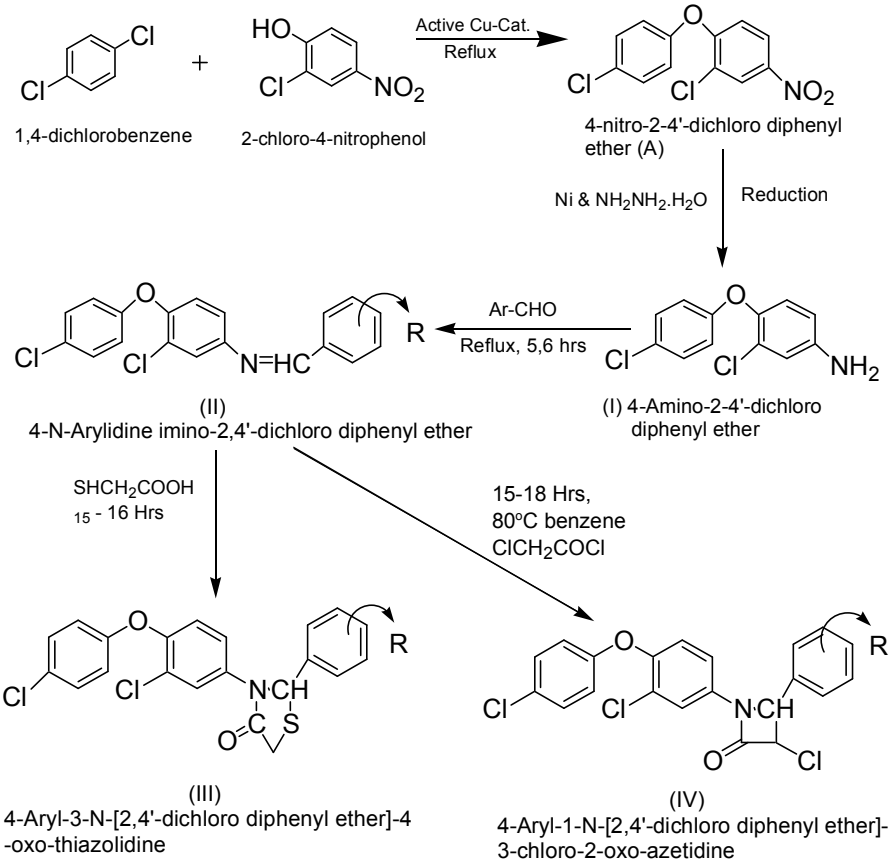
Heterocyclic Letters 2: iss.-1, (2012), 99-105

Synthesis Of New Heterocyclic Schiff Base, Thiazolidinone And Azetidinone Compounds And Their Antibacterial Activity And Anti –Hiv Activities

Rajarshi n. Patel[1]*, p.v.patel[2],k.r. Desai[2],p.y. Purohit[2],k.s.nimavat[3] and k.b. Vyas[4]

[1] Suleshvari pharma, Ankleshwar -393 002, Gujarat, India.
[2.] Department of Chemistry, South Gujarat University, Surat – 395007 (India)
[3.] Department of Chemistry, Government Science College ,Gandhinagar-38015,Gujarat,India.
[4.] Department of Chemistry, Sheth .L.H. Science Collage– Mansa-382 845, Gujarat, India.
E-mail: Dadaji.raja@gmail.com Phone : +91-9033231942

Thiazolidines and azetidinopnes have been prepared by the reaction of various Schiff bases with thioglycine acid chloroacetyl chloride respectively. The intermediate Schiff bases were synthesized by the condensation of 4-amino-2,4'-dichloro diphenyl ether with various aldehydes. The structures of the compounds have been confirmed by elemental analysis and spectral analysis. The antibacterial and anti HIV activities of the compounds have been also screened.



Heterocyclic Letters 2: iss.-1, (2012), 107-115

Application of Schotten–Baumann and Gabriel- Michael reaction for Synthesis of novel Phthalazine Derivatives

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[2] Department of Pharmaceutical Chemistry (PG), Modern College of Pharmacy, Sector No. 21, Yamunanagar, Nigdi, Pune – 411044, Maharashtra, India.
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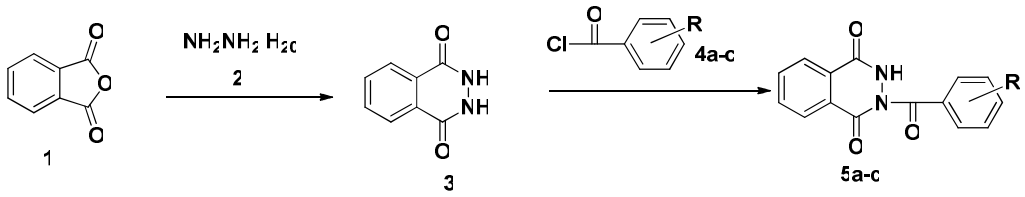
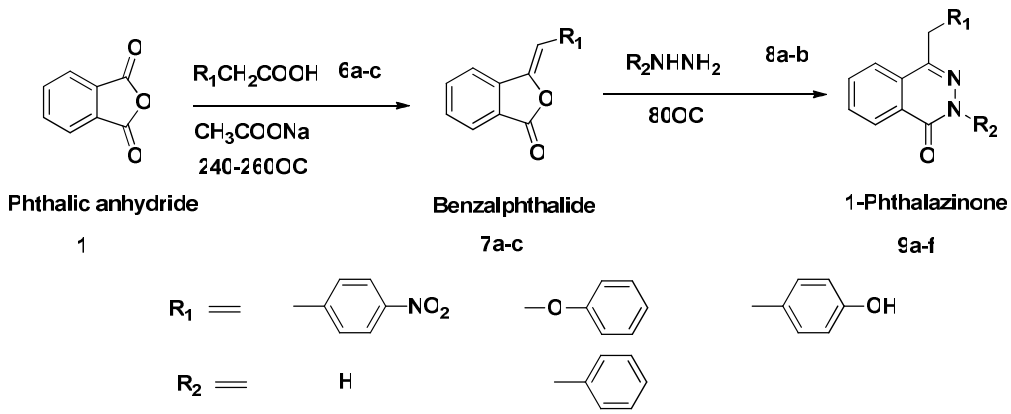
A simple and convenient procedure has been developed for the synthesis of Novel 1-phthalazinone and 1, 4-phthalazinedione derivatives using Schotten–Baumann reaction and Gabriel- Michael reaction respectively. All compounds have been characterized by IR, NMR, and MASS spectroscopy.

Scheme 1



Scheme 2



Heterocyclic Letters 2: iss.-1, (2012), 117-128

Synthesis of novel analogs 3,4- dihydro-1*H*-quinolin-2-one derivatives as typical antidepressant, sedative and anti-parkinson agents.

Nandini R. Pai * and Deeptaunshu Atul Pusalkar , Dileep Khandekar

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Mumbai 400016,
Maharashtra, INDIA
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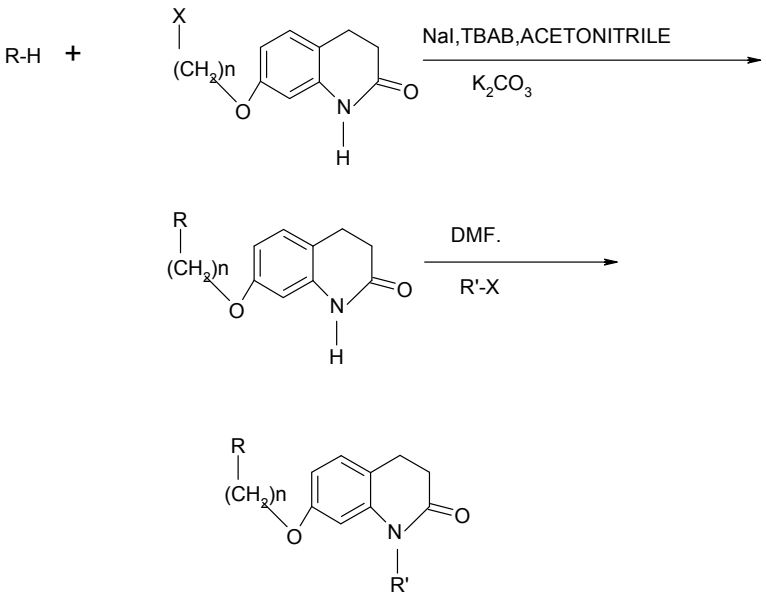
This study aimed at synthesis of the potential Antidepressant and Sedative ,anti-parkinson's activity of structurally diverse derivatives of lead compound 3, 4-dihydro-1*H*-quinolin-2-one; synthesized via straightforward and efficient synthetic process. The structures of the compounds were characterized by spectral data (IR and 1H-NMR).



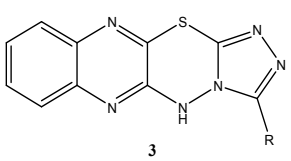
Heterocyclic Letters 2: iss.-1, (2012), 129-136

Synthesis And Microbial Activity Of Novel Quinoxaline Derivatives

Vijay V. Dabholkar* and Sunil R.Patil, Rajesh V. Pandey

Organic Research Laboratory, Department of Chemistry,
Mumbai University, K.C. College, Churchgate, Mumbai-400 020, India
E-mail: vijaydabholkar@gmail.com
srpatil1684@gmail.com

Quinoxaline-2,3(1H,4H)-dione **1** was chlorinated by using $SOCl_2$/DMF, to form 2,3-dichloroquinoxaline **2**, The dichloro compound **2** was subjected to reaction with Substituted Triazole, 1,10-diaminonaphthalene, 2-aminothiophenol, o-phenylenediamine, 1,2-diaminoethane,Sodim azide, thiocarbohydrazones and thiosemicarbazones to furnish *3'-substituted-(1',2',4') triazolo [5,6-b] [quinoxalo (2,3-e)]-1,3,4-thiadiazine* **3a-c**, *Quinoxalino [1,4-b]-1,4-dihydronaphto[18-ef][1,4]-diazepine* **4,** *7-substituted-1,4-benzothiazino[2,3-b]-quinoxalines* **5a-c,** *benzopiperazino[2,3-b]-quinoxalines* **6 ,** *piperazino[2,3-b]-quinoxalines* **7,** *bis-triazo-[4,5-a/c]-quinoxalines* **8,** *2-(benzylidine)-hyrazino-1,3,4-thiadiazino [5,6-b]-quinoxalines* **9** and *2-(benzylidine)-imino-1,3,3-thiadiazino [5,6-b]-quinoxalines* **10** respectively. Representative samples were screened for their anti-microbial activity against gram-negative bacteria, *E coli* and *Paeruginosa* and gram-positive bacteria, *S aureus*, and *C diphtheriae* using disc diffusion method. The structures of the products were confirmed by IR, ^1H, ^{13}C NMR and elemental analysis.



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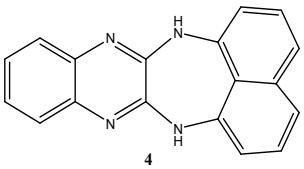

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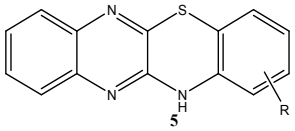

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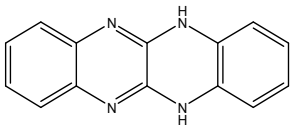

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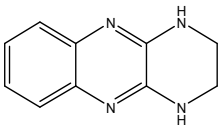

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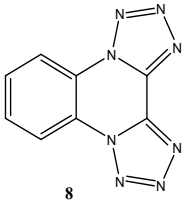

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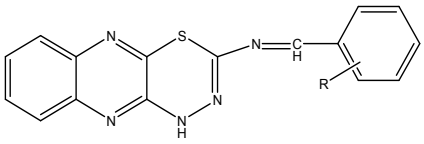

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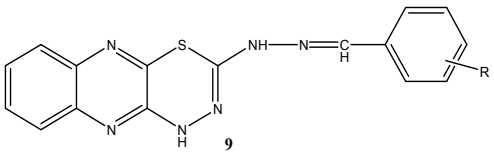

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