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Graphical Abstract

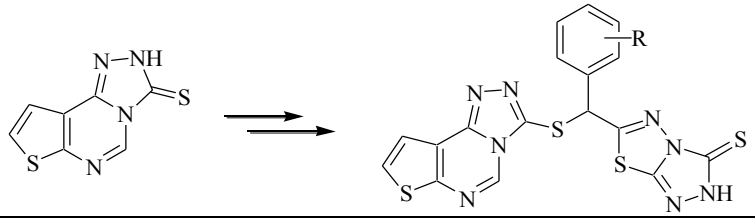
Heterocyclic Letters 1: iss.-4, (2011), 291-296

Synthesis of new sulfur-linked thienotriazolopyrimidine derivatives containing triazolothiadiazole moiety

Jina Whang and Yang-Heon Song*

Department of Chemistry, Mokwon University, Daejeon 302-729, South Korea
E-mail: yhsong@mokwon.ac.kr

A series of new sulfur-linked heterocyclic compounds were synthesized by the successive reactions of thieno[1,2,4]triazolo[4,3-*c*]pyrimidine-3-thione with α-bromophenylacetic acid derivatives and 4-amino-4*H*-[1,2,4]triazole-3,5-dithiol.



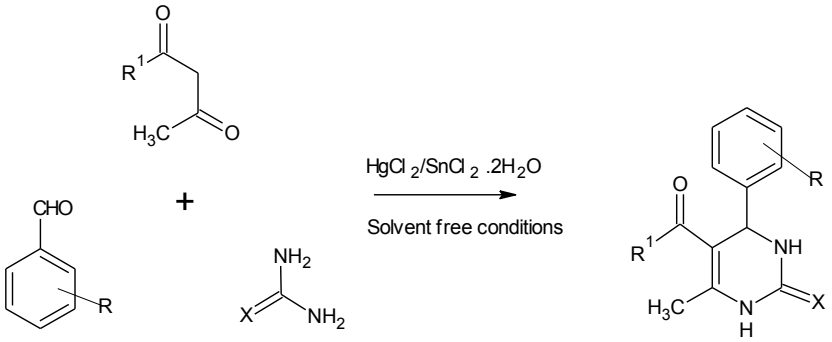
Heterocyclic Letters 1: iss.-4, (2011), 297-304

$Hgcl_2$ Promoted One Pot Synthesis Of 3, 4-Dihydropyrimidin-2 (1*H*)-Ones And Thiones Under Solvent Free Conditions

Harshita Sachdeva *, Rekha Saroj , Sarita khaturia and S.S. Chauhan

Department of Chemistry, Faculty of Engineering and Technology,
Mody Institute of Technology and Science, Lakshmangarh- 332311(Sikar), Rajasthan, India
mailto-drhmsachdevaster@gmail.com
mailto-hsachdeva.et@mitsuniversity.ac.in

A simple, efficient procedure for the one pot Biginelli condensation reaction of aldehydes, β-ketoester and urea/thiourea employing $HgCl_2$ as a novel catalyst under solvent free conditions is described. Compared to classical Biginelli reaction conditions, the present method has advantages of good yields, short reaction times and experimental simplicity. Further, comparative promoter efficiency of $SnCl_2.2H_2O$ and $HgCl_2$ in Multicomponent Biginelli Condensation reaction is also studied.



R= H; 4 -OH; 3 -OCH 3; 4-OCH 3; 4-Cl; 2-OH; 3-OH, 4-OCH 3; 4-OH,3-OCH 3 ; 2,4-dimethyl; 3,4-dimethoxy; 3,4,5-trimethoxy
R^1=OEt; OMe X= O; S

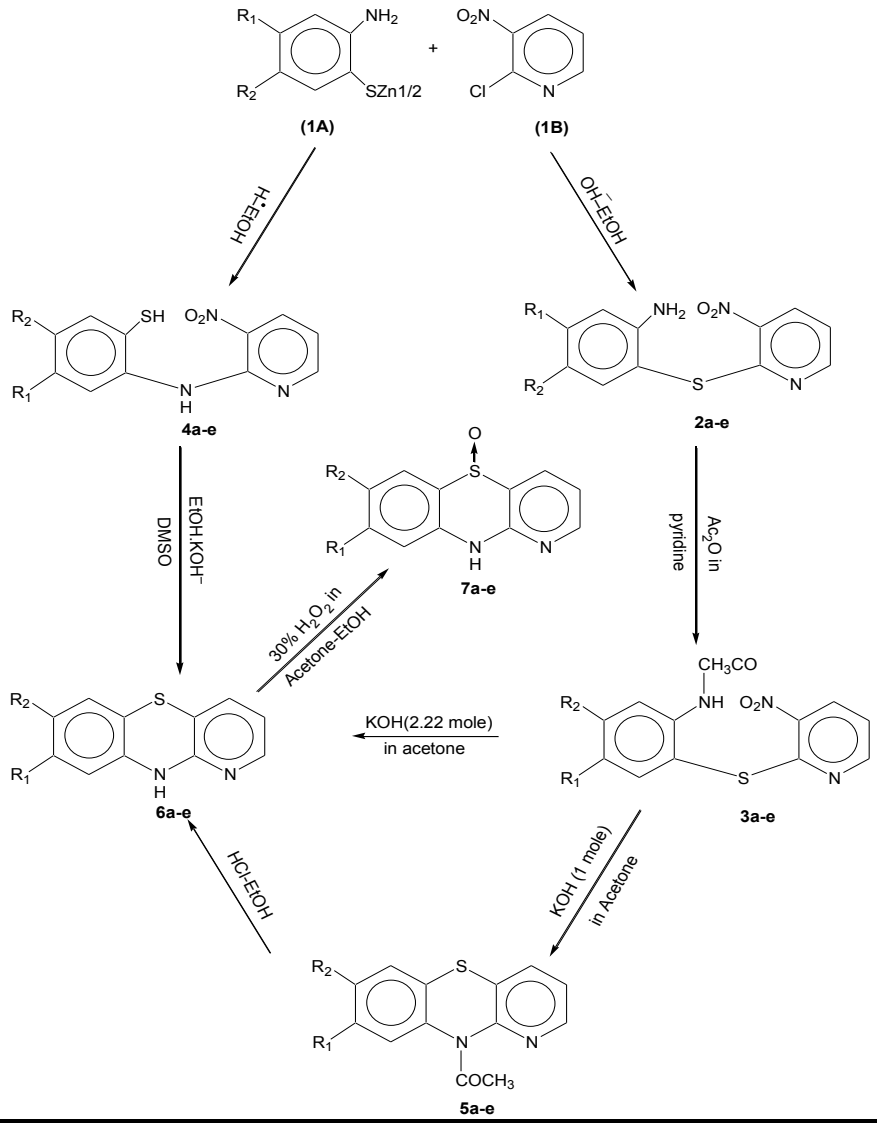
Heterocyclic Letters 1: iss.-4, (2011), 305-310

Synthesis and biological evaluation of substituted 10H-1-azaphenothiazines and their 5-oxide derivatives

V. Khatri*, V. Sareen, K. Sharma, P. Singh & S. Sareen

Department of Chemistry, University of Rajasthan, Jaipur-302055, India
Email: drkanti@gmail.com

A series of substituted 10H-phenothiazines were synthesized via smiles rearrangement. Further 5-oxide derivatives are obtained by reacting the title compound with hydrogen peroxide.



Heterocyclic Letters 1: iss.-4, (2011), 311-317

Microwave Assisted Synthesis Of 3-(2-Benzoyl-6-Hydroxy-3-Methyl Benzo[b] Furan-5-Yl)-5-(Aryl)-4,5-Dihydro-1*H*-Pyrazole Carbothioamides And Their Antibacterial Activity

Ashok D*, Sudershan K[1] and Khalilullah M[2]

*Department of chemistry, Osmania University, Hyderabad -500 007, India,
[1]Sven Genetech Ltd, I.D.A. Phase-II, Cherlapally, Hyderabad-500 051, India
[2]Department of Chemistry, JNTUH, Kupkatpally, Hyderabd-500 072, India

Abstract:
A series of 3-(2-Benzoyl-6-hydroxy-3-methyl benzo[b] furan-5-yl)-5-(aryl)-4, 5-dihydro-1*H*-pyrazole carbothioamides have been prepared by the reaction of (*E*)-1-(2-Benzoyl-6-hydroxy-3-methylbenzo[b]furan-5-yl)-3-aryl-2-propen-1-ones with thiosemicarbazide in the presence of sodium hydroxide under microwave irradiation. The structures of newly synthesized compounds have been confirmed on the basis of elemental analysis, IR, ^{1}H-NMR, ^{13}C-NMR and mass spectral data. All the compounds were screened for their antibacterial activity.
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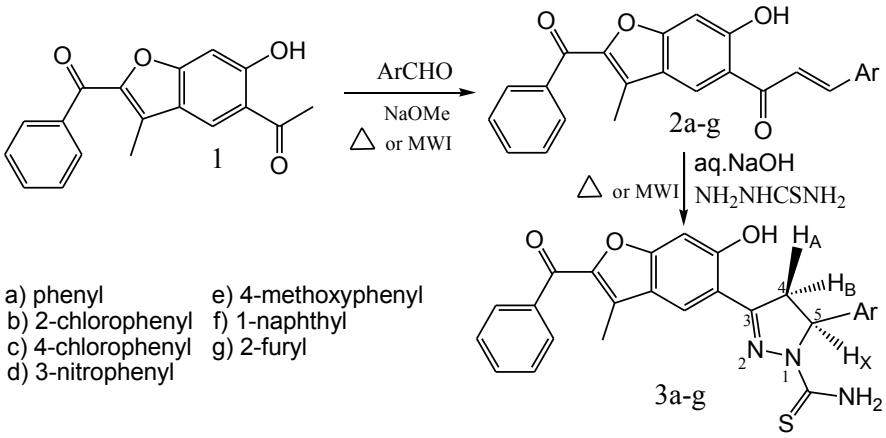


Scheme

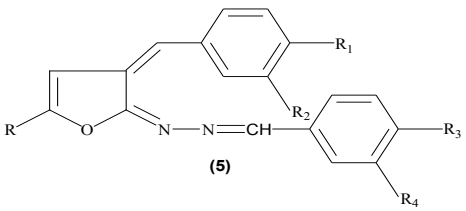
Heterocyclic Letters 1: iss.-4, (2011), 319-322

Synthesis of novel furan and their hydrazones.

Vijay V Dabholkar* & Syed Sagir Ahmed

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

β-benzoylproponic acid **(1)** on lactonization reaction with excess of acetic anhydride, and few drops of concentrated sulfuric acid as a catalyst reviled 5-phenyl-furan-2(3H)-ones **(2)**. A mixture of 5-phenyl-furan-2(3H)-ones with aromatic aldehydes, potassium hydroxide as a catalyst result to 2-Phenyl-4-benzylidene-5-hydrazinofuran-2-ene (**3**), which on further reaction with hydrazine hydrates yielded corresponding 5-hydrazine (**4**). This on condensation reaction with different aldehydes reviled final 2-Phenyl-4-benzylidene-5-benzylidinehydrazo-furan-2-ene (**5**). The structures of the compounds have been elucidated on the basis of spectral analysis.



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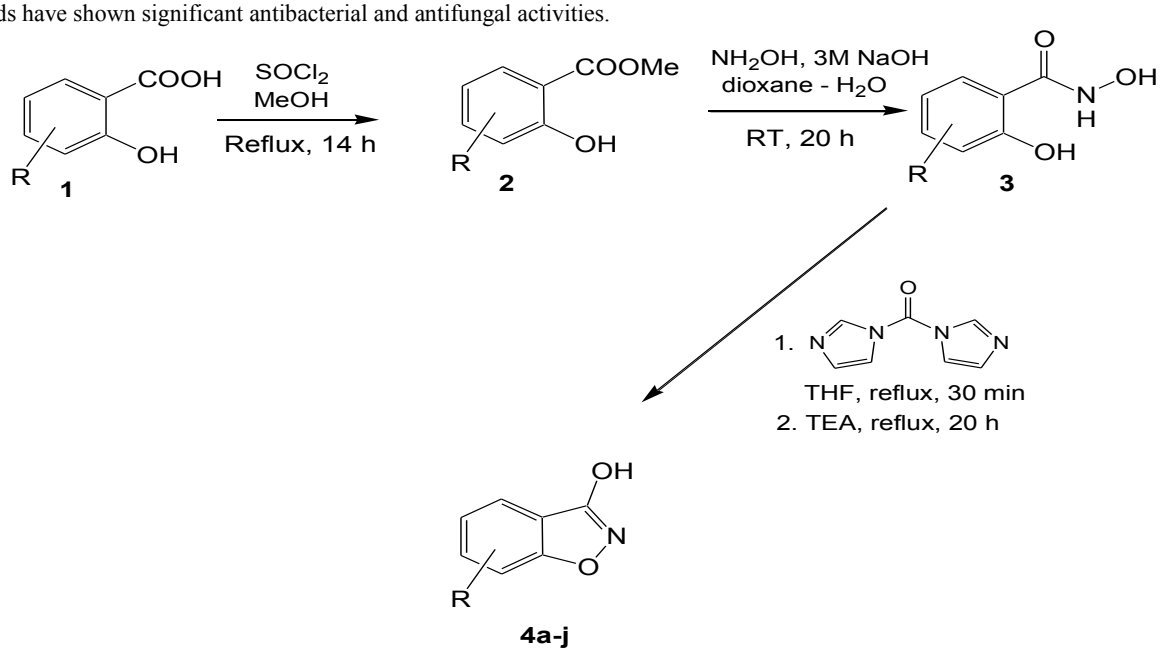
Heterocyclic Letters 1: iss.-4, (2011), 323-328

Synthesis And Antimicrobial Activity Of Novel Substituted Benzo[*D*]Isoxazol-3-Ol Derivatives

G. Surendra Reddy[1], A. Babul Reddy[1], G. Ramachandra Reddy[2], P. Raveendra Reddy[1]*

[1]Department of Chemistry, Sri Krishnadevaraya University, Anantapur 515055, India
[2]Department of Polymer Science & Technology, Sri Krishnadevaraya University, Anantapur 515055, India
*E-Mail: raveendrareddy_sku@gmail.com

A novel 5/6/7-substitited benzo[*d*]isoxazol-3-ol derivatives **4a-j** obtained by the reaction of substituted salicylic acid **1** with thionyl chloride to get **2**, which on treatment with hydroxyl amine hydrochloride to yield **3**. The subsequent reaction with carbonyldiimidazole to results title compounds **4a-k** with good yields and the structures of these compounds were confirmed by IR, ^{1}H NMR & Mass spectral analysis. The newly synthesized compounds were evaluated for antimicrobial activity against variety of bacterial and fungal strains some of these compounds have shown significant antibacterial and antifungal activities.



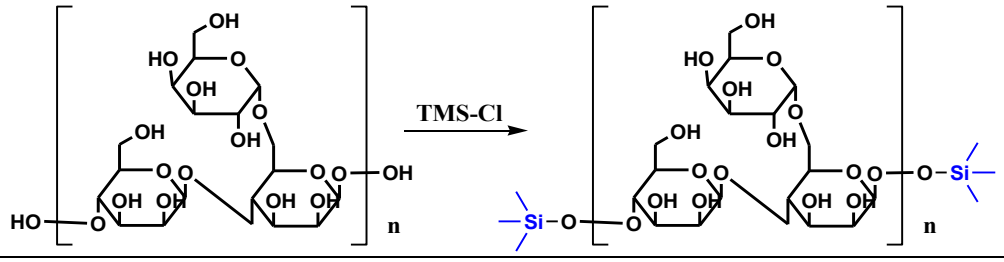
Heterocyclic Letters 1: iss.-4, (2011), 329-333

Silanization of Guar Gum to Improve the Temperature Resistance

Jie Zhang, Gang Chen

College of Chemistry and Chemical Engineering, Xi'an Shiyou University, Xi'an, 710065, China
E-mail: gangchen@xsyu.edu.cn

The temperature resistance of Guar gum was improved by silanization using TMS-Cl. The viscosity of silanized guar gum aqueous gel was improved much under 30-80℃.



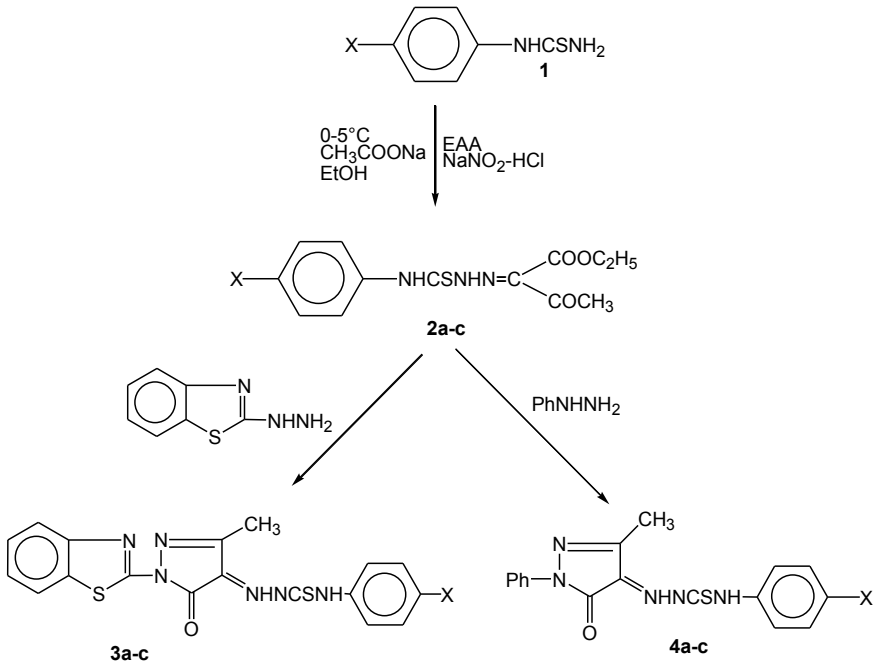
Heterocyclic Letters 1: iss.-4, (2011), 335-338

Synthesis of some new 1-benzothiazolyl/phenyl-4-(substituted phenylthioureido) hydrazono-3-methyl-2-pyrazolin-5-ones and their antifungal activity

V. Khatri, K. Sharma, V. Sareen and S. Sareen

Department of Chemistry University of Rajasthan, Jaipur – 302004
Email: drkanti@gmail.com

Reaction of diazonium salt of substituted phenylthiourea with ethylacetoacetate in the presence of sodium acetate and ethanol gave 1-ethyl-2-(substituted phenyl thioureido) hydrazono-3-oxobutyrate which on reaction with 2-hydrazinobenzothiazole and phenyl hydrazine in acetic acid yielded 1-benzothiazolyl/phenyl 4-(substituted phenyl thioureido) hydrazono-3-methyl-2-pyrazolin-5-ones. The structure of all the new synthesized compounds has been confirmed by spectral and analytical data and compounds have been screened for their antifungal activities.



a; X = F; b, X = Cl; C, X = Br

Heterocyclic Letters 1: iss.-4, (2011), 339-350

Synthesis and Biological Activities of Some Indole Analogues Containing Pyridine, Pyridopyrimidine and Pyranonaphthyridine Systems

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

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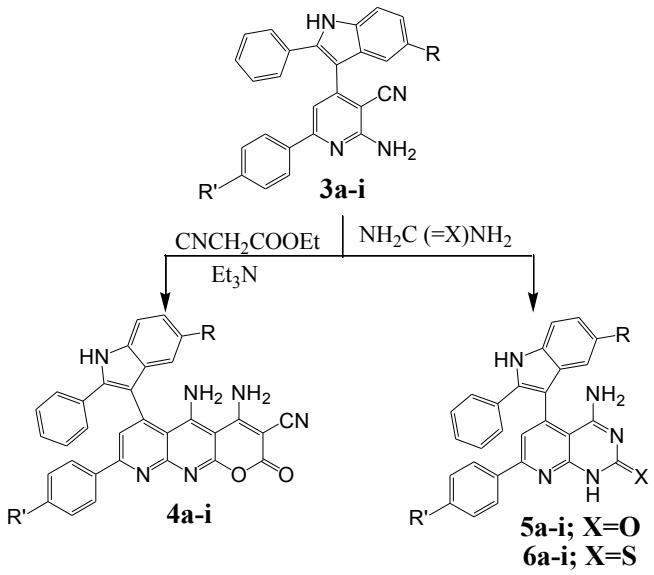
Department of Postgraduate Studies and Research in Chemistry, Gulbarga University, Gulbarga-585 106, Karnataka, India.

E-mail:arsaundane@rediffmail.com

Several analogues of 5-substituted indoles containing pyridine **3**, pyranonaphthyridine **4**, pyridopyrimidine **5** and **6**, linked to position-3 were synthesized. The structures of these newly synthesized compounds were confirmed by their elemental analyses and spectral studies. The newly synthesized compounds have been screened for their antimicrobial and antioxidant activities.



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

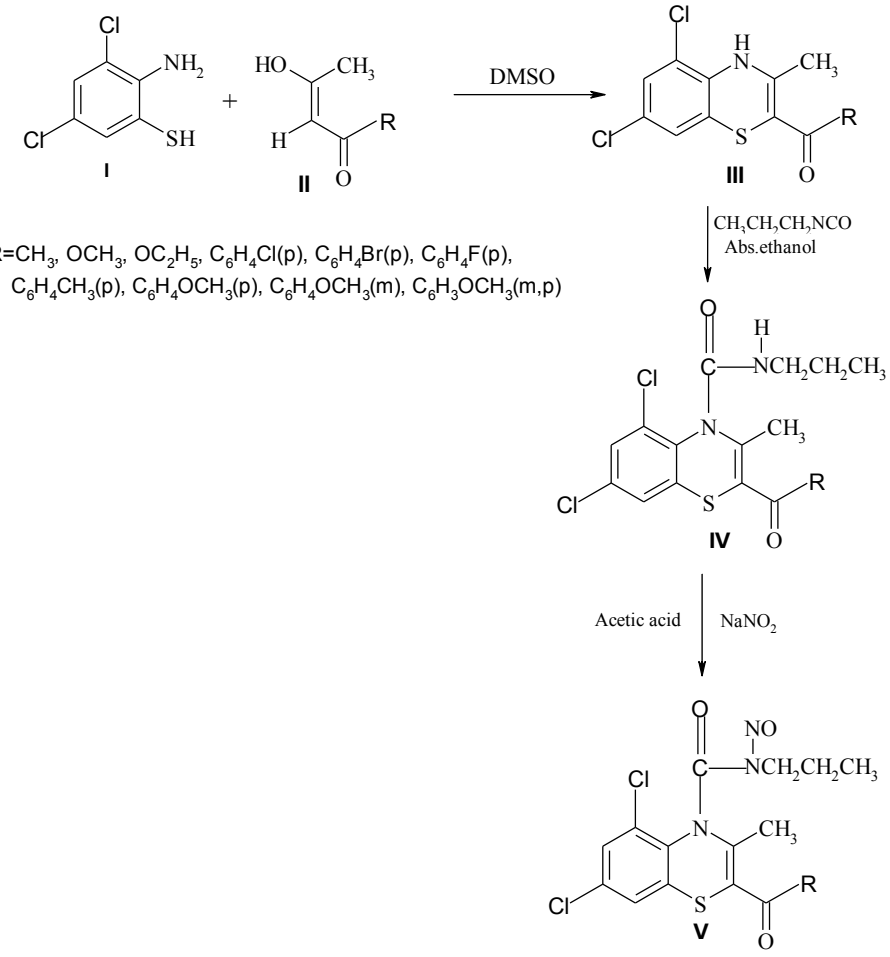
Heterocyclic Letters 1: iss.-4, (2011), 351-358

Synthesis And Spectral Studies Of Nitrosourea Derivatives Of 3-Methyl- 5, 7-Dichloro-4h-1,4-Benzothiazines As Possible Bifunctional Anticancer Agents

Rajni Gupta* and Archana Gupta

Department of Chemistry, University of Rajasthan, Jaipur-302004, India
Email: rajni187@yahoo.co.in

The synthesis of 3-methyl-5,7-dichloro-4-(N-propyl-N-nitrosoamido)-2-substitted-4H-1,4-benzothiazines by the isocyanation and successive nitrosation of 3-methyl -5,7-dichloro-2-substituted-4H-1,4-Benzothiazines has been reported. The synthesized compounds have been characterized by their elemental analyses and spectral characteristics.



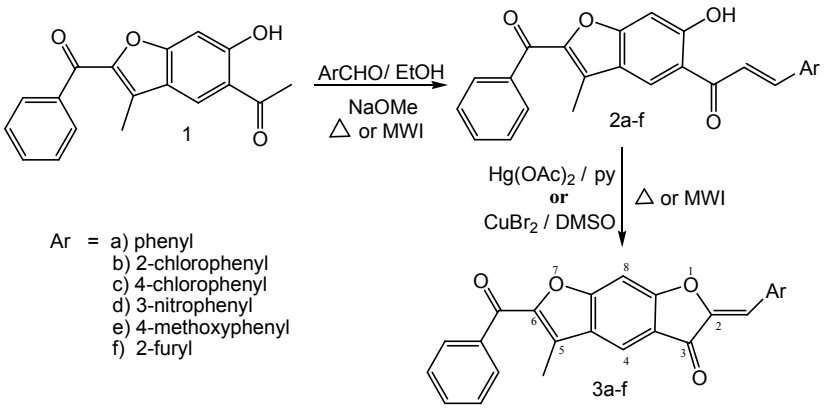
Heterocyclic Letters 1: iss.-4, (2011), 359-364

Microwave assisted synthesis of 6-Benzoyl-5-methyl -2-[(z)-1-arylmethyl idene]-2,3-dihydrofuro[3',2':4,5]benzo[b]furan-3-ones and their antibacterial activity

Ashok D*, Sudershan K[1] and Khalilullah M[2]

*Department of chemistry, Osmania University, Hyderabad -500 007, India,
[1]Sven Genetech Ltd, I.D.A. Phase-II, Cherlapally, Hyderabad-500 051, India
[2]Department of Chemistry, JNTU, Kupkatpally, Hyderabd-500 072, India

A series of 6-Benzoyl-5-methyl-2-[(z)-1-arylmethylidene]-2,3-dihydrofuro[3',2':4,5] benzo[b] furan-3-ones have been prepared by an efficient oxidation of 2-Benzoyl-*E*-1-(6-hydroxy-3-methyl benzofuran-5-yl)-3-aryl-2-propen-1-ones with cupric bromide or mercuric acetate under microwave irradiation. All the compounds were screened for their antibacterial activity.
Scheme:



Heterocyclic Letters 1: iss.-4, (2011), 365-371

The synthesis of imidazoles via the Radziszewski reaction in aqueous media

July A. Hernández Muñoz[a], Bruno Dias de C.F. dos Santos[a], Renata F. Soares[a], Erika M. de Carvalho[b], Joel Jones Junior[a]* and Flavia M. da Silva[a*]

[a]*DeptQuímicaOrgânica - Instituto de Química - UFRJ- CP 68.584, 21941-972, Rio de Janeiro, RJ, Brasil – mail: soa@soa.pro.br*
[b]*Instituto de TecnologiaemFármacos, Far-Manguinhos, RuaSizenandoNabuco, 100, 21041-250, Rio de Janeiro, RJ, Brasil*

A new, simple and eco-friendly protocol has been developed for the preparation of trisubstitutedimidazoles through the Radziszewski reaction between formaldehyde (37% aqueous solution), amines, ammonium carbonate and biacetyl. The synthesis was conducted at room temperature using water as the solvent.