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http://heteroletters.org **Vol. 1, special issue, July (2011), 2-12**

Graphical Abstract
Special Issue
"Publications from Professor Bimal K. Banik's Laboratories only"

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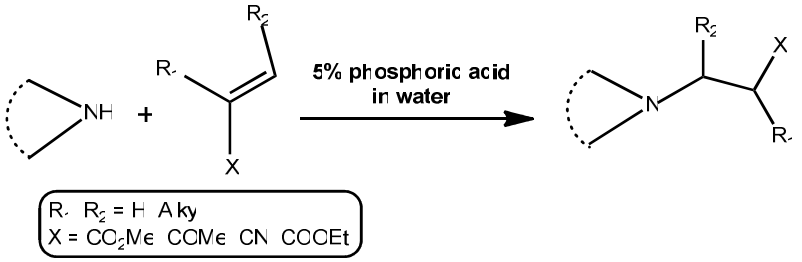
Heterocyclic Letters 1:special issue, July (2011), 13-16

Phosphoric Acid Catalyzed Aza-Michael Reaction in Water: An Ecofriendly Procedure.

Debasish Bandyopadhyay, Stephanie Maldonado, and Bimal K. Banik*

Phosphoric acid catalyzed aza-Michael reaction in water has been carried out in an efficient manner at room temperature. The reaction is general for primary, secondary (cyclic, heterocyclic and acyclic), benzylic as well as aromatic amines. No *bis*-addition was observed for primary amines.

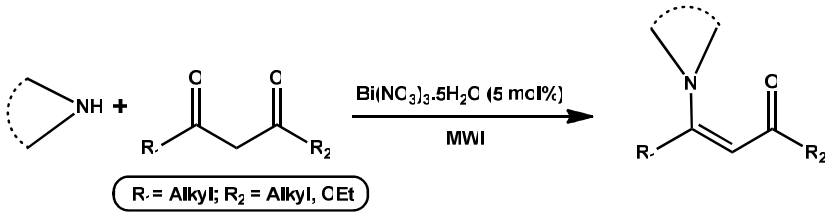


Heterocyclic Letters 1:special issue, July (2011), 17-21

Microwave-Induced Bismuth Nitrate-Catalyzed Expeditious Enamination of β-Dicarbonyl Compounds Under Solvent-Free Conditions.

Debasish Bandyopadhyay, and Bimal K. Banik*

Bismuth nitrate-catalyzed, automated microwave-assisted expeditious synthesis of β-enaminones and β-enaminoesters has been carried out in an efficient manner under solvent-free condition. The reaction is general for primary, secondary (cyclic, heterocyclic and acyclic), benzylic as well as aromatic amines.

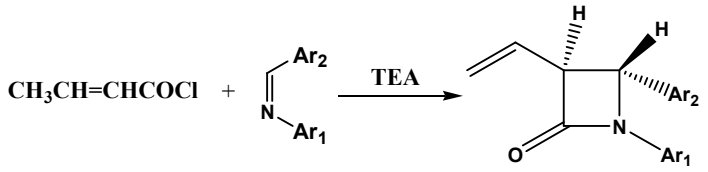


Heterocyclic Letters 1:special issue, July (2011), 23-26

Synthesis of Vinyl β-Lactams: Insights on the Mechanism of Their Formation

Hashim Mohamed and Bimal K. Banik*

Synthesis of vinyl β-lactams and mechanism of their formation have been investigated.

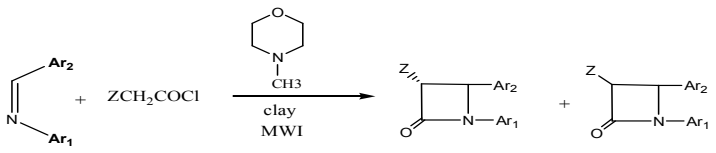


Heterocyclic Letters 1:special issue, July (2011), 27-30

Microwave-Induced Clay-Mediated Preparation Of Imines: One-Pot Synthesis of β-Lactams

Katherine Ramos and Bimal K. Banik*

Microwave-induced montmorrilonite clay K 10-mediated synthesis of imines has been performed in the absence of solvent. These imines have been converted to β-lactams following cycloaddition reaction in a one-pot method.

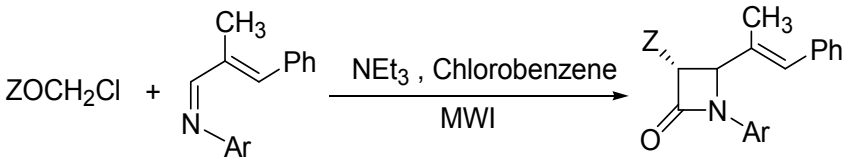


Heterocyclic Letters 1:special issue, July (2011), 31-34

Unprecedented Stereoselectivity of β-Lactam Formation via Staudinger Reaction with Conjugated Imines Derived from Polyaromatic Systems

Robert Rodriguez and Bimal K. Banik*

Synthesis of a few 3, 4-disubstitued β-Lactams derived from polycyclic aromatic conjugated imines has been achieved following Staudinger reaction under classical condition and Microwave-induced reaction.

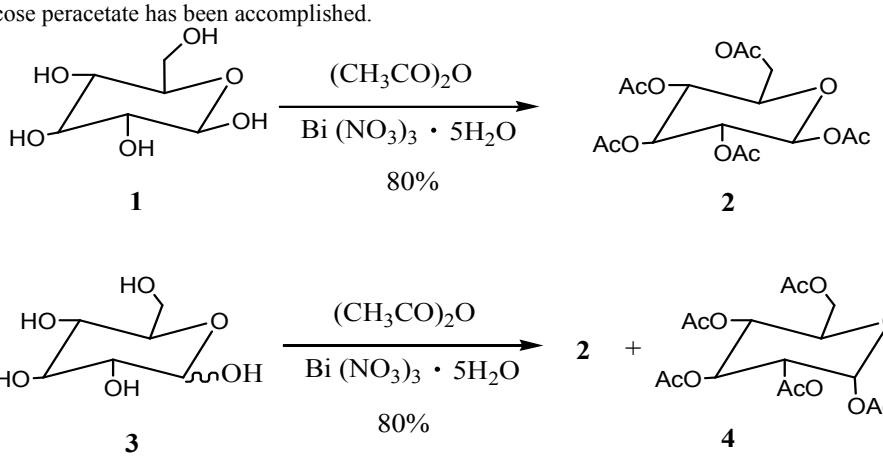


Heterocyclic Letters 1:special issue, July (2011), 35-36

Synthesis of Glucose Peracetate via Bismuth Nitrate-Induced Reaction

Jose Lerma and Bimal K. Banik*

Simple synthesis of glucose peracetate has been accomplished.



2: 4 = 1:1

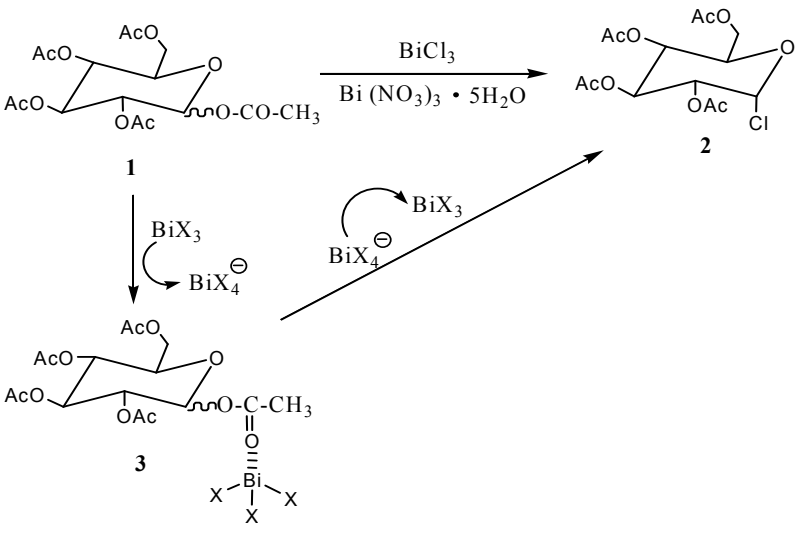
Heterocyclic Letters 1:special issue, July (2011), 37-39

Stereospecific Synthesis of Glycosyl Chloride Using a Combination of Bismuth Nitrate and Bismuth Chloride

David Alvarez and Bimal K. Banik*

Stereoselective synthesis of glycosyl chloride has been achieved using a combination of bismuth nitrate and bismuth chloride.

Scheme 1



Heterocyclic Letters 1;special issue, July (2011), 41-42

Indium-induced Highly Stereoselective Thioglycosylation of Peracetylated Bromoglucose

Susanta Samajdar[1], Indrani Banik[1] and Bimal K. Banik[2]*

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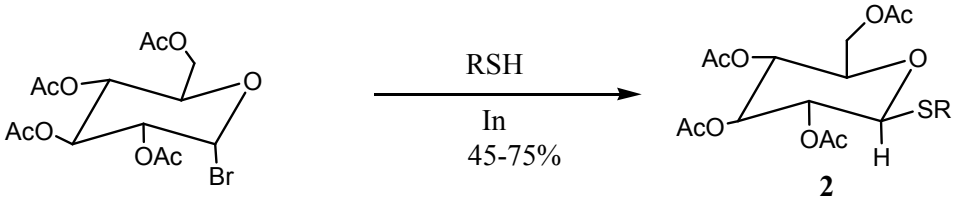
[2]Department of Chemistry, The University of Texas-Pan American, 1201 West University Drive, Edinburg, Texas 78539, USA; Phone: 956-665-7841; Fax: 956-665-5006, E-mail: banik@utpa..edu

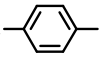
Indium-induced stereoselective thioglycosylation has been performed using commercially available acetobromoglucose.

Scheme -1



1 **2**

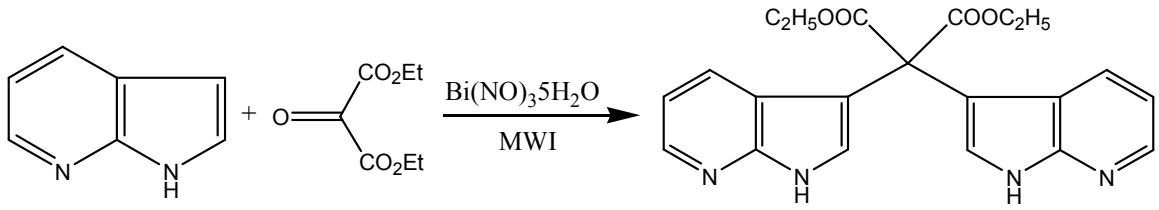
a : R = CH_3CH_2- c: R = 

b: R = $CH_3CH_2CH_2$- d: R= H_3C 

Heterocyclic Letters 1:special issue, July (2011), 43-46

Microwave-Induced Bismuth Nitrate-Catalyzed Electrophilic Substitution of 7-Aza Indole with Activated Carbonyl Compounds Under Solvent-Free Conditions

Sonya Rivera, Debasish Bandyopadhyay and Bimal K. Banik*

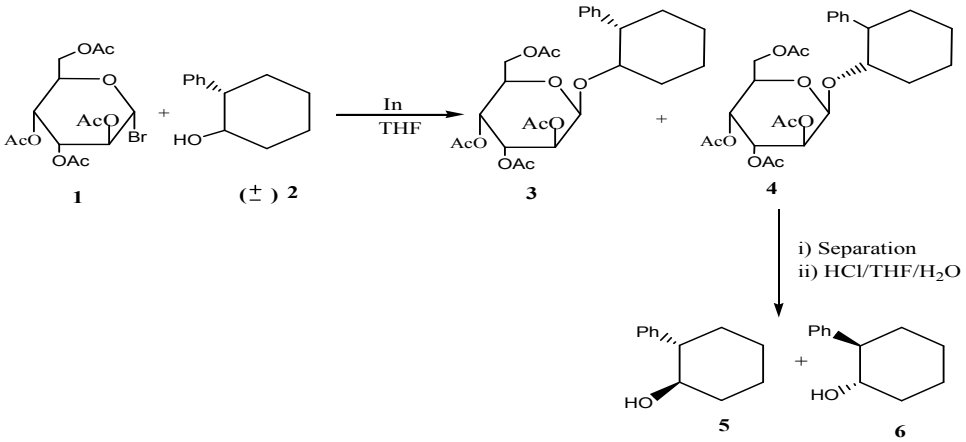


Heterocyclic Letters 1:special issue, July (2011), 47-48

Stereospecific Chiral Resolution of Trans 2- Phenylcyclohexanol via Indium-Induced Glycosylation

Indrani Banik[1], Susanta Samajdar [1] and Bimal K. Banik*[2]

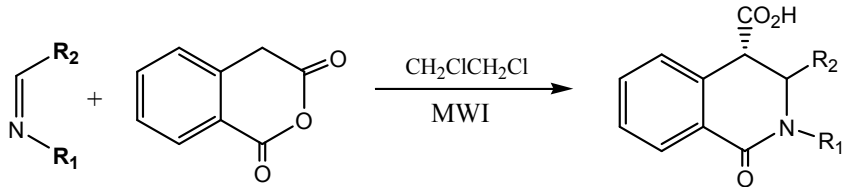
[1:] The University of Texas, M. D. Anderson Cancer Center, Department of Molecular Pathology Box-89, 1515 Holcombe Blvd., Houston, Texas 77030, USA
[2]: Department of Chemistry, The University of Texas-Pan American, Edinburg, TX 78541, USA
E-mail: banik@utpa..edu



Heterocyclic Letters 1:special issue, July (2011), 49-51

Stereospecific Synthesis of Tetrahydroisoquinoline via Microwave-Induced Reaction

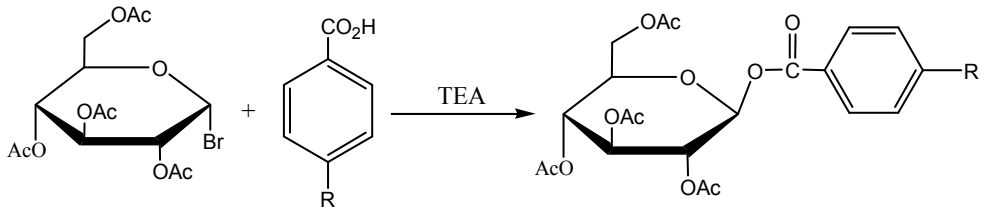
Bimal K. Banik



Heterocyclic Letters 1:special issue, July (2011), 53-54

Novel Synthesis of β-Substituted Benzoates in the Presence of Triethylamine

Sanghamitra Mukherjee, Robert Danso and Bimal K. Banik*

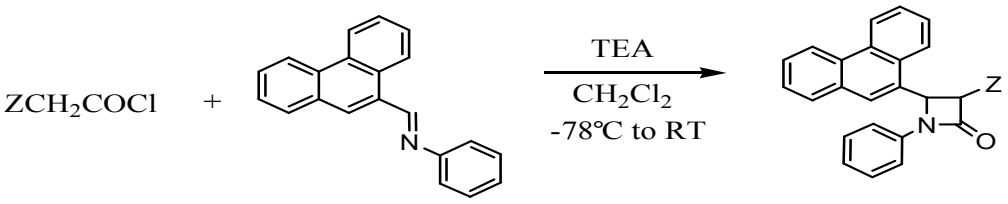


Heterocyclic Letters 1:special issue, July (2011), 55-57

Microwave-Induced Stereospecific Synthesis of β-Lactams Derived from Polyaromatic Imines: Influence of the Multicyclic Rings at the Nitrogen

Indrani Banik[a], Frederick F. Becker[a] and Bimal K. Banik[b*]

[a]Department of Molecular Pathology, Unit 951, The University of Texas M. D. Anderson Cancer Center,7435 Fannin Street , Houston, Texas, USA 77504 a
[b]The University of Texas Pan American, Department of Chemistry, 1201 West University Drive, Edinburg, Texas 78539, USA; E-mail: banik@utpa..edu

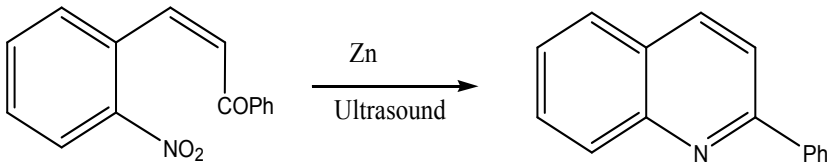


Heterocyclic Letters 1:special issue, July (2011), 59-60

Ultrasound-Induced Synthesis of Quinolines Via Reductive Coupling With Zinc in Water

Indrani Banik[1], Linda Heckfeld[1] and Bimal K. Banik*[2]

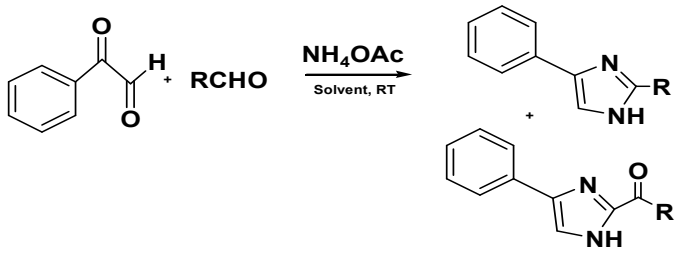
[1:] The University of Texas, M. D. Anderson Cancer Center, Department of Molecular Pathology Box-89, 1515 Holcombe Blvd., Houston, Texas 77030, USA
[2]: Department of Chemistry, The University of Texas-Pan American, Edinburg, TX 78539, USA, banik@utpa..edu



Heterocyclic Letters 1:special issue, July (2011), 61-63

An Easy and Straightforward Route for the Synthesis of Disubstituted Imidazoles

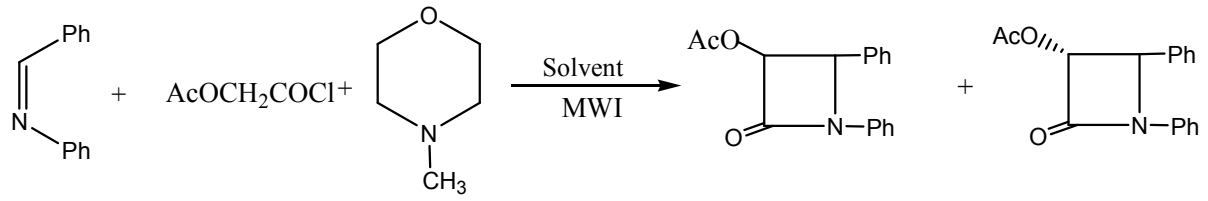
Debasish Bandyopadhyay, Yvette Mora, Jesús A. Treviño Cantu and Bimal K. Banik*



Heterocyclic Letters 1:special issue, July (2011), 65-67

Microwave-Induced Stereoselectivity of β-Lactam Formation: Effects of Solvents

Debasish Bandyopadhyay, Marco Yanez and Bimal K. Banik*

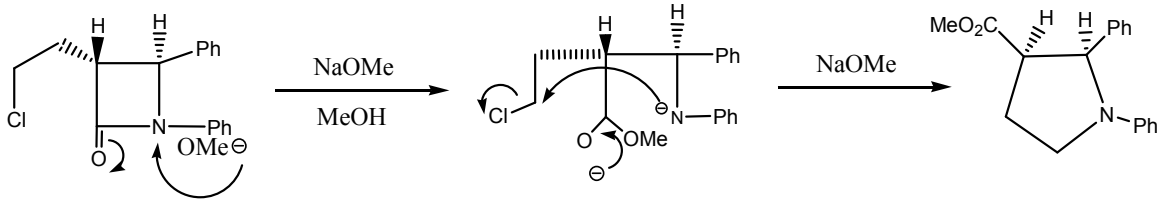


Heterocyclic Letters 1:special issue, July (2011), 69-72

Microwave-Induced Sodium-Methoxide-Mediated Molecular Rearrangements of β-Lactams to 3-Substituted Pyrrolidines

Indrani Banik,[a] Susanta Samajdar[a] and Bimal K. Banik[b*]

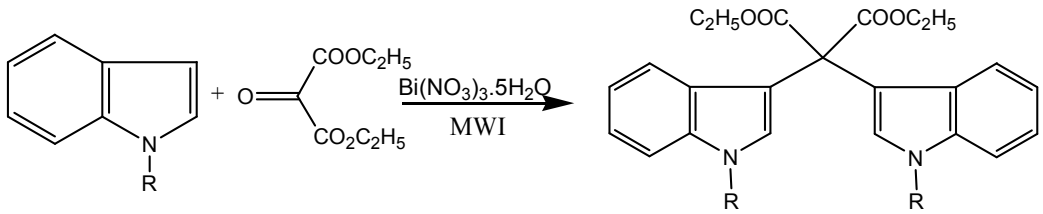
[a] Department of Molecular Pathology, Unit 951, The University of Texas M. D. Anderson Cancer Center,7435 Fannin Street , Houston, Texas, USA 77504
[b]The University of Texas Pan American, Department of Chemistry, 1201 West University Drive, Edinburg, Texas 78539, USA; banik@utpa..edu



Heterocyclic Letters 1:special issue, July (2011), 73-74

Microwave-Induced Bismuth Nitrate-Catalyzed Electrophilic Substitution of Indole with Keto Ester Under Solvent-Free Conditions

Sonya Rivera, Laura Iglesias, Debasish Bandyopadhyay and Bimal K. Banik*

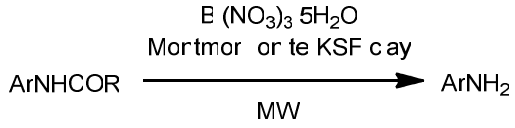


R=H
R=CH_3

Heterocyclic Letters 1:special issue, July (2011), 75-77

Microwave-Induced Bismuth Nitrate-Mediated Selective Hydrolysis of Amide

Debasish Bandyopadhyay, Rene Solano Fonseca and Bimal K. Banik*

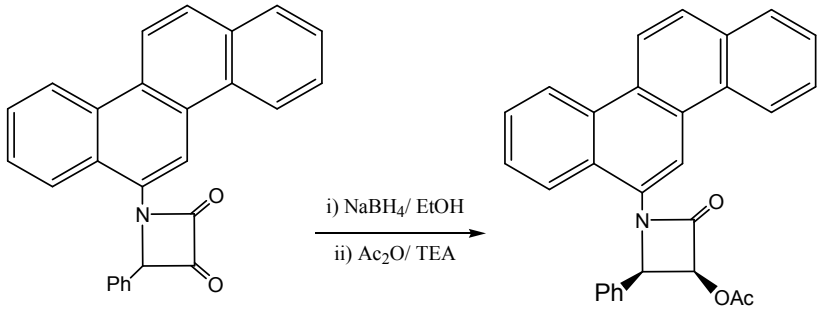


Heterocyclic Letters 1:special issue, July (2011), 79-81

Stereoselective Synthesis of β-Lactams Derived from Chrysenyl Imine

Indrani Banik[1], Frederick F. Becker[1] and Bimal K. Banik*[2]

[1]University of Texas, M. D. Anderson Cancer Center, Department of Molecular Pathology Box-89, 1515 Holcombe Blvd., Houston, Texas 77030, USA
[2]Department of Chemistry, The University of Texas-Pan American, Edinburg, TX 78541, USA; E-mail: banik@utpa..edu

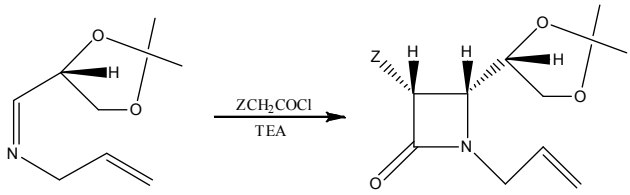


Heterocyclic Letters 1:special issue, July (2011), 83-85

Synthesis of Racemic and Optically Active β-Lactams Derived from Allyl and Propargyl Imine

Indrani Banik, [1] Atsushi Okawa[1] and Bimal K. Banik[2]*

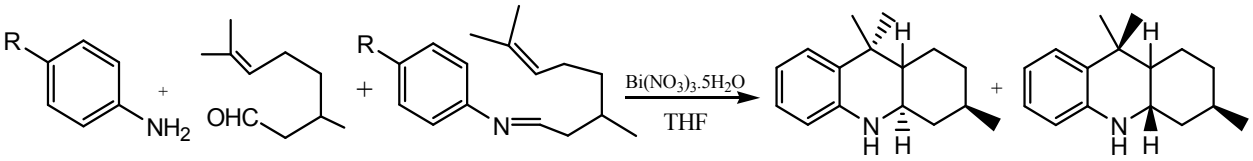
[1]University of Texas, M. D. Anderson Cancer Center, Department of Molecular Pathology Box-89, 1515 Holcombe Blvd., Houston, Texas 77030, USA
[2]Department of Chemistry, The University of Texas-Pan American, Edinburg, TX 78541, USA; E-mail: banik@utpa..edu



Heterocyclic Letters 1:special issue, July (2011), 87-88

Microwave-Induced Bismuth Nitrate-Catalyzed Intramolecular Diels-Alder Reaction

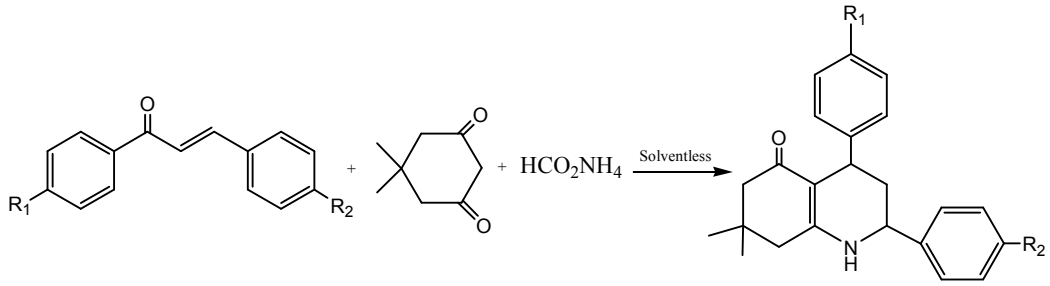
Sanghamitra Mukherjee, Rene Solano Fonseca, Robert Danso and Bimal K. Banik*



Heterocyclic Letters 1:special issue, July (2011), 89- 91

Microwave-Assisted Synthesis of Polyhydroquinoline in the Absence of Solvent

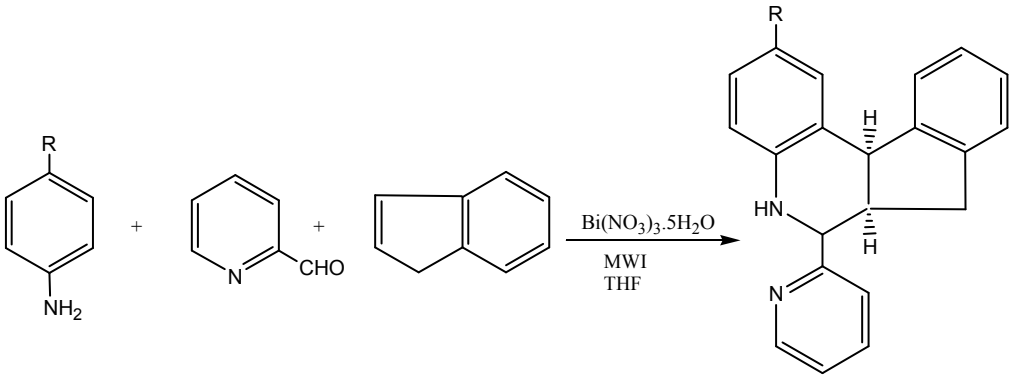
Mark Castillo, Mitchell Ortiz and Bimal K. Banik*



Heterocyclic Letters 1:special issue, July (2011), 93-94

Microwave-Assisted Synthesis of Pyridinyl Substituted Quinoline Through bismuth nitrate-catalyzed Diels-Alder Reaction

Robert Rodriguez, Karen Gomez and Bimal K. Banik*

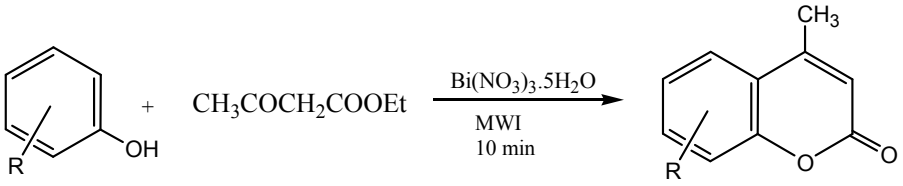


R=H, CH_3, OCH_3

Heterocyclic Letters 1:special issue, July (2011), 95-96

Microwave-Induced Bismuth Nitrate-Catalyzed Pechman Reaction Under Solventless Condition

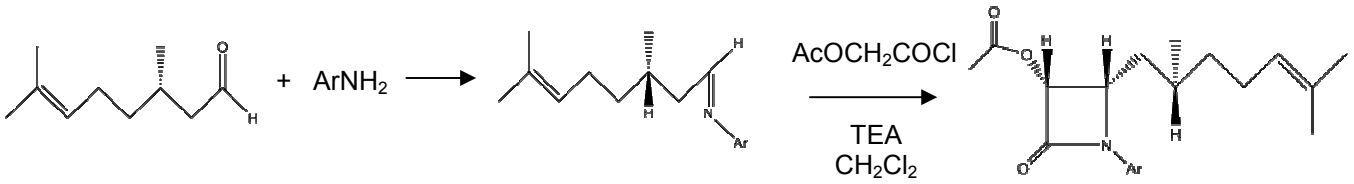
Hector Aguilar, Anupama Reddy and Bimal K. Banik*



Heterocyclic Letters 1:special issue, July (2011), 97-98

Asymmetric Synthesis of β-Lactam Using S-Citronellal

Rene Solano Fonseca, Sanghamitra Mukherjee and Bimal K. Banik*



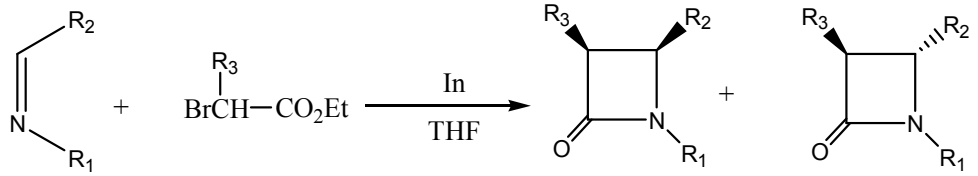
Heterocyclic Letters 1:special issue, July (2011), 99-101

Indium-Induced Reformatsky Reaction for the Synthesis of β-Lactams

Anjan Ghatak[1] and Bimal K. Banik*

[1]University of Texas, M. D. Anderson Cancer Center, Department of Molecular Pathology Box-89, 1515 Holcombe Blvd., Houston, Texas 77030, USA
[2]Department of Chemistry, The University of Texas-Pan American, Edinburg, TX 78541, USA; E-mail: banik@utpa..edu

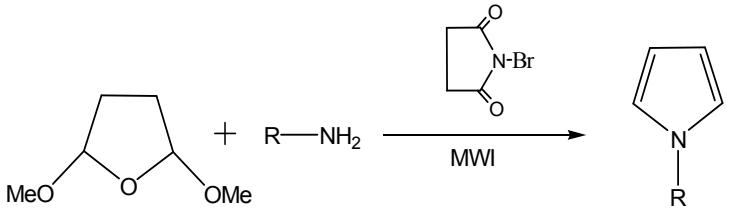
The synthesis of a few 3, 4-disubstitued β-lactams derived from imines has been achieved following Reformatsky with bromoacetate in the presence if indium metal.



Heterocyclic Letters 1 :special issue, July (2011), 103-106

Microwave-Induced N-Bromosuccinimide-Mediated Novel Synthesis of Pyrroles

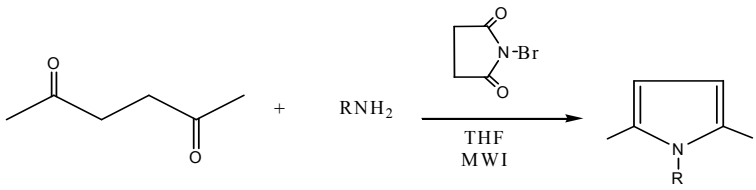
Rosemarie Andoh-Baidoo, Sanghamitra Mukherjee and Bimal K. Banik*



Heterocyclic Letters 1 :special issue, July (2011), 107-109

Microwave-Induced N-Bromosuccinimide-Mediated Novel Synthesis of Pyrroles Via Paal-Knorr Reaction

Rosemarie Andoh-Baidoo, Robert Danso, Sanghamitra Mukherjee, Debasish Bandyopadhyay and Bimal K. Banik*



Heterocyclic Letters 1 :special issue, July (2011), 111-118

Molecular Iodine-Catalyzed Protection of Carbonyl Compounds

Indrani Banik[a], Susanta Samajdar[a], Manas K. Basu[a] and Bimal K. Banik*[b]

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[b]The University of Texas Pan American, Department of Chemistry, 1201 West University Drive, Edinburg, Texas 78539, USA; banik@utpa.edu