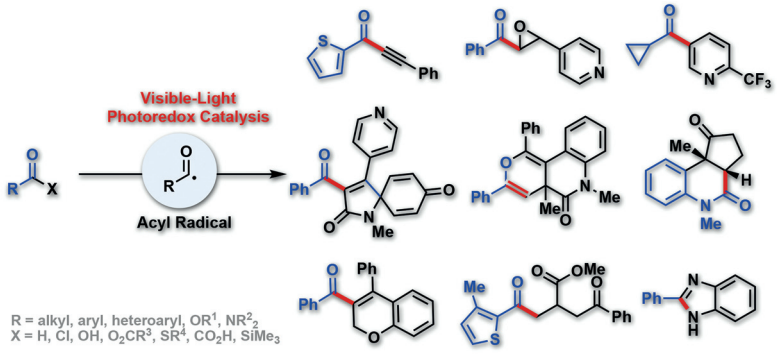
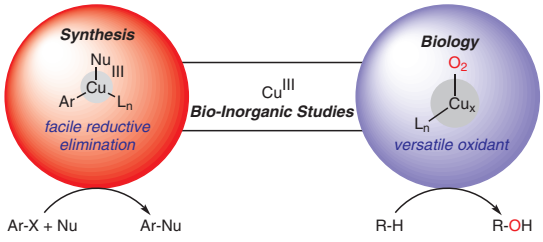
Synthesis

Reviews and Full Papers in Chemical Synthesis

2019
Vol. 51, No. 2
January II





Synthesis

Organocatalytic Group Transfer Reactions with Hypervalent Iodine Reagents

Short Review

359

Synthesis **2019**, *51*, 359–370
DOI: 10.1055/s-0037-1609639

M. K. Ghosh
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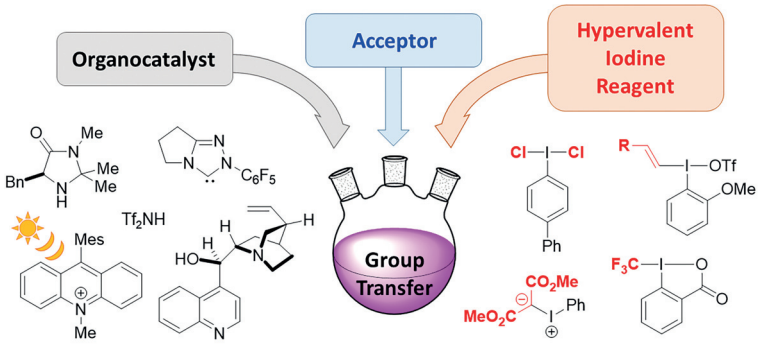


Synthesis

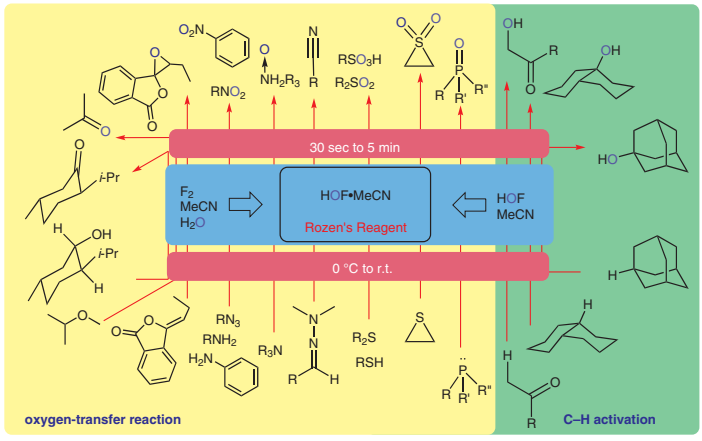
Applications of Rozen's Reagent in Oxygen-Transfer and C–H Activation Reactions

Short Review

371

Synthesis **2019**, *51*, 371–383
DOI: 10.1055/s-0037-1609638

K. Singh*
Kulbir
T. Gupta
R. Kaur
R. Singh
Maharishi Markandeshwar (Deemed to be University), India



Synthesis

'Heteroaromatic Rings of the Future': Exploration of Unconquered Chemical Space

Short Review

384

Synthesis **2019**, *51*, 384–398
DOI: 10.1055/s-0037-1611279

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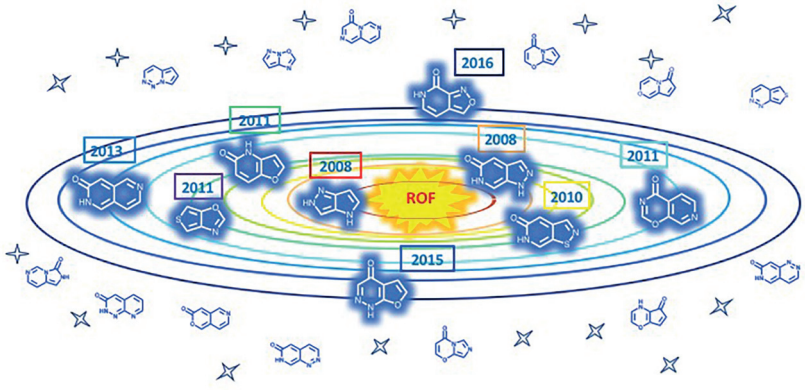

Synthesis

Synthesis **2019**, *51*, 399–406
DOI: 10.1055/s-0037-1610849

L. Fritze
N. A. Riensch
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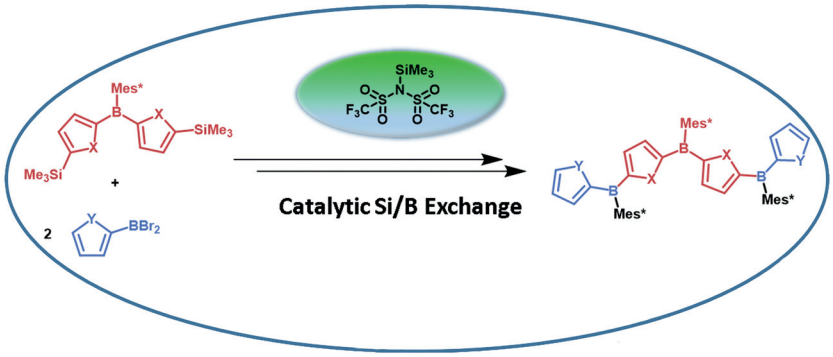
RWTH Aachen University, Germany

Catalytic Si/B Exchange Condensation: A Green B–C Coupling Method That Provides Access to Monodisperse (Het)arylborane 'Trimers'

Feature



Synthesis

Synthesis **2019**, *51*, 407–413
DOI: 10.1055/s-0037-1610844

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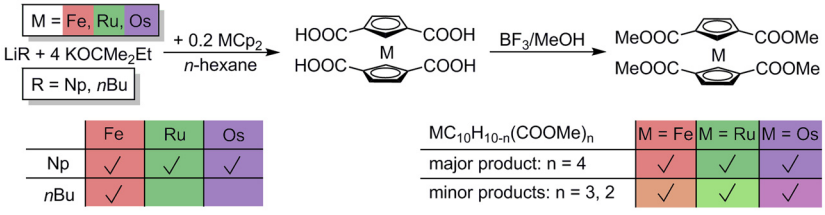
The Preparation of Tetramethyl 1,1′,3,3′-Ruthenocenetetracarboxylate and Tetramethyl 1,1′,3,3′-Osmocenetetracarboxylate, and a Simplified Synthesis for Tetramethyl 1,1′,3,3′-Ferrocenetetracarboxylate

Feature



	Fe	Ru	Os
Np	✓	✓	✓
*n*Bu	✓		

$MC_{10}H_{10-n}(COOMe)_n$	M = Fe	M = Ru	M = Os
major product: n = 4	✓	✓	✓
minor products: n = 3, 2	✓	✓	✓

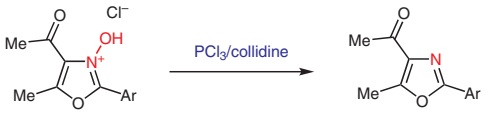
Synthesis

Synthesis **2019**, *51*, 414–420
DOI: 10.1055/s-0037-1610278

V. Z. Shirinian*
I. A. Lonshakov
A. V. Zakharov
A. G. Lvov
M. M. Krayushkin
N. D. Zelinsky Institute of Organic Chemistry, Russian Federation

Practical Deoxygenation of Oxazole *N*-Oxides by PCl_3/Collidine

PSP



Functional group tolerant
Novel inexpensive reduction agent

15 examples
up to 86% yield

Synthesis

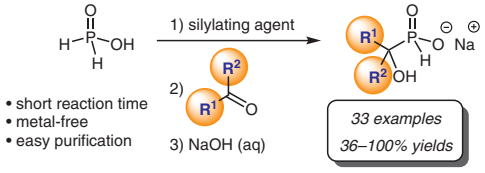
Synthesis **2019**, *51*, 421–432
DOI: 10.1055/s-0037-1610274

A General Protocol for the Synthesis of *H*-α-Hydroxyphosphinates

Paper

421

J. Dussart
J. Deschamp*
M. Monteil
O. Gager
E. Migianu-Griffoni
M. Lecouvey*
Université Paris 13, Sorbonne Paris Cité, France



Synthesis

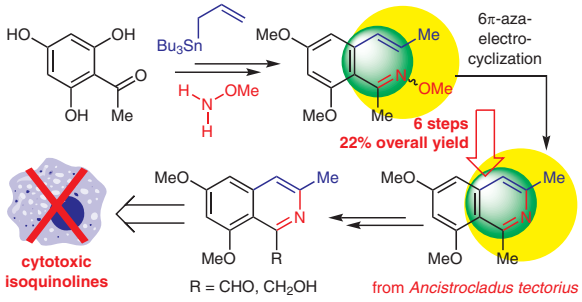
Synthesis **2019**, *51*, 433–440
DOI: 10.1055/s-0037-1610276

Total Synthesis and Cytotoxic Activity of 6,8-Dimethoxy-1,3-dimethylisoquinoline Isolated from *Ancistrocladus tectorius*: A 6π-Azaelectrocyclization Approach

Paper

433

I. Cortés
C. M. Borini Etichetti
J. E. Girardini
T. S. Kaufman*
A. B. J. Bracca*
Universidad Nacional de Rosario, Argentina



Synthesis

Synthesis **2019**, *51*, 441–449
DOI: 10.1055/s-0037-1610631

Novel and Convenient Synthesis of 2,7-Dialkyl-1,8-dihydro-*as*-indacenes

Paper

441

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M. Preite
E. Schott
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E. Molins
C. Morales-Verdejo*
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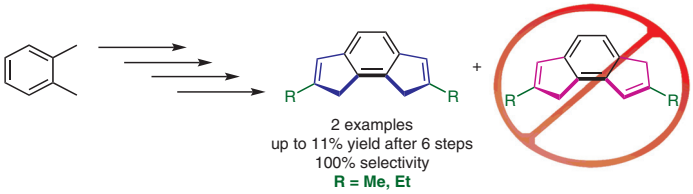

Synthesis

Synthesis **2019**, *51*, 450–462
DOI: 10.1055/s-0037-1610285

DFT-Assisted Design and Evaluation of Bifunctional Amine/Pyridine-Oxazoline Metal Catalysts for Additions of Ketones to Unactivated Alkenes and Alkynes

Paper

E. Greve
J. D. Porter
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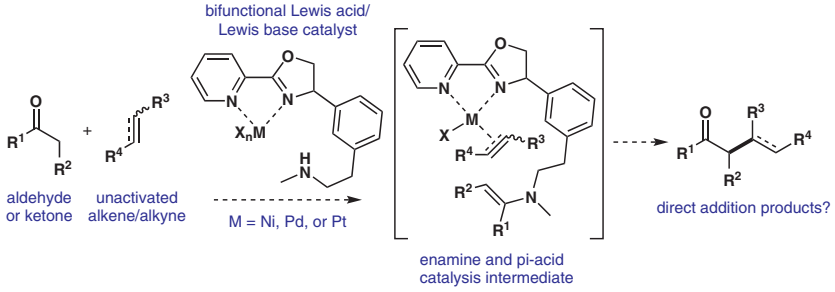


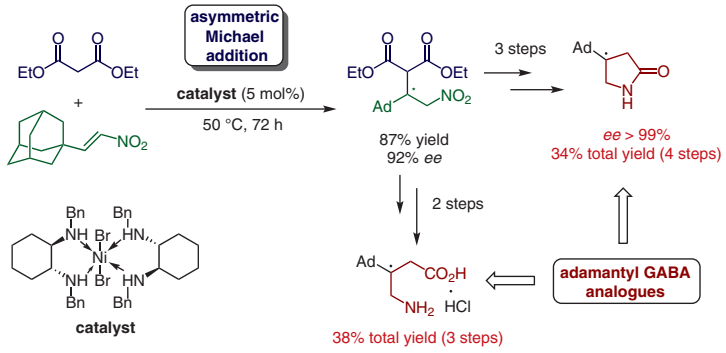
Synthesis

Synthesis **2019**, *51*, 463–469
DOI: 10.1055/s-0037-1610824

Asymmetric Synthesis of Adamantyl GABA Analogues

Paper

A. E. Sibiryakova*
V. A. Shiryaev*
A. N. Reznikov
A. A. Kabanova
Y. N. Klimochkin
Samara State Technical University, Russian Federation



Synthesis

Synthesis **2019**, *51*, 470–476
DOI: 10.1055/s-0037-1610277

An Improved N-Acylation of 1*H*-Benzotriazole Using 2,2′-Dipyridyldisulfide and Triphenylphosphine

Paper

A. S. Singh
A. K. Agrahari
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M. Singh
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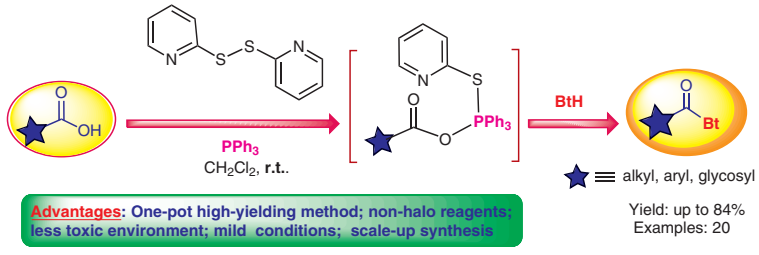
Banaras Hindu University, India



Synthesis

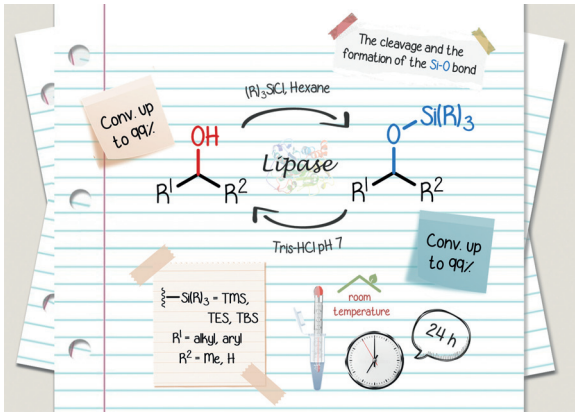
Synthesis **2019**, *51*, 477–485
DOI: 10.1055/s-0037-1610281

P. B. Brondani*
M. Mittersteiner
M. A. Voigt
B. H. Klinkowski
D. Riva Scharf
P. C. de Jesus
Universidade Federal de Santa Catarina, Brazil

Synthetic Versatility of Lipases: Application for Si–O Bond Formation and Cleavage

Paper

477



Synthesis

Synthesis **2019**, *51*, 486–499
DOI: 10.1055/s-0037-1609942

A. Hausherr
R. Zimmer
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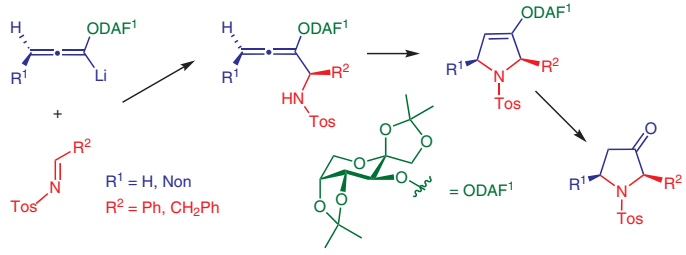
Freie Universität Berlin, Germany

Additions of Carbohydrate-Derived Alkoxyallenes to Imines and Subsequent Reactions to Enantiopure 2,5-Dihydropyrrole Derivatives

Paper

486



Synthesis

Synthesis **2019**, *51*, 500–507
DOI: 10.1055/s-0037-1610910

A. D. Sonawane
Y. B. Shaikh
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Synthesis of Isoquinoline-Fused Quinazolinones through Ag(I)-Catalyzed Cascade Annulation of 2-Aminobenzamides and 2-Alkynylbenzaldehydes

Paper

500

- *14 examples; up to 91% yield*
- *Good functional group tolerance*
- *In situ oxidation*
- *Regioselectivity*

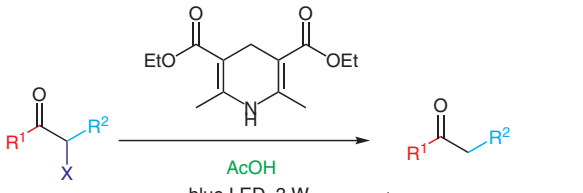
Synthesis

Synthesis **2019**, *51*, 508–515
DOI: 10.1055/s-0037-1610629

Catalyst-Free Photodriven Reduction of α-Haloketones with Hantzsch Ester

Paper

Z. Lu
Y.-Q. Yang*
Jiangsu University, P. R. of China



R^1 = aryl, hetaryl, alkyl
R^2 = H, Ph, alkyl
X = Cl, Br
26 examples, yield up to 98%

Synthesis

Synthesis **2019**, *51*, 516–521
DOI: 10.1055/s-0037-1609937

Na_2CO_3-Catalyzed *N*-Acylation of Indoles with Alkenyl Carboxylates

Paper

X.-Y. Zhou*
X. Chen*
Liupanshui Normal University, China

♣ *Selective N-Acylation of Indoles*
♦ *Inorganic Base as Catalyst*
♠ *Simple Reaction Conditions*
♥ *20 Examples*

R'' = alkyl or phenyl
Up to >99% Yield

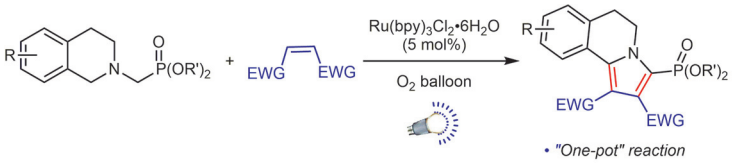
Synthesis

Synthesis **2019**, *51*, 522–529
DOI: 10.1055/s-0037-1610907

Visible-Light Photoredox-Catalyzed Cascade Reaction for the Synthesis of Pyrrolo[2,1-*a*]isoquinoline-Substituted Phosphonates

Paper

L. Wang
T. Ma
M. Qiao
Q. Wu
D. Shi*
W. Xiao
Central China Normal University, P. R. of China



- *"One-pot" reaction*
- *room temperature*
- *O_2 as green oxidant*
- *household CFL or sunlight*

Synthesis

Synthesis **2019**, *51*, 530–537
DOI: 10.1055/s-0037-1610270

M. L. Trujillo-Lagunas
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I. Zaragoza-Galicia
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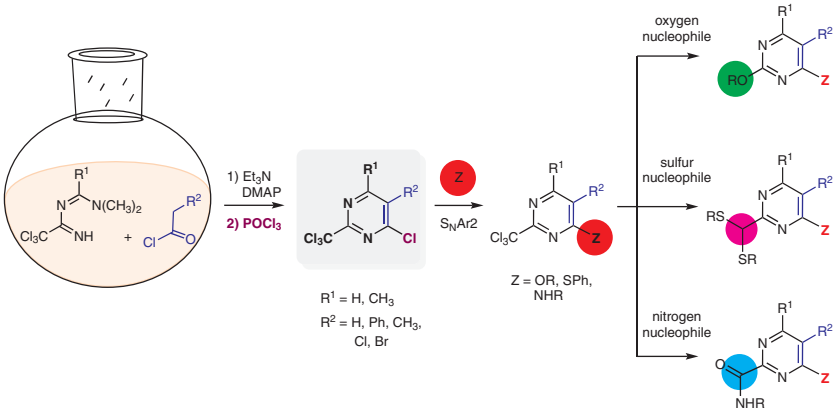
Universidad Autónoma del Estado de México, México

A Synthesis of 4-Chloro-2-(trichloromethyl)pyrimidines and Their Study in Nucleophilic Substitution

Paper

530



Synthesis

Synthesis **2019**, *51*, 538–544
DOI: 10.1055/s-0037-1610251

Q. Yang
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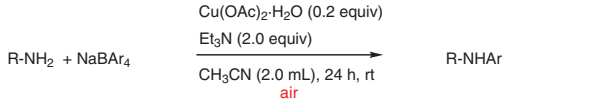
Copper-Catalyzed $NaBAr_4$-Based N-Arylation of Amines

Paper

538



aliphatic primary and second amines
aromatic and heteroaryl amines,
naphthalenamines,
indole, benzimidazole,
benzamide, *etc.*

Ar = Ph, 4-MeC_6H_4,
4-$EtOC_6H_4$, 4-ClC_6H_4,
4-FC_6H_4, Bz, etc.

29 examples, yields: 21–99%

Synthesis

Synthesis **2019**, *51*, 545–551
DOI: 10.1055/s-0037-1610295

W. Xu
Y.-Y. Hei
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C.-L. Deng*
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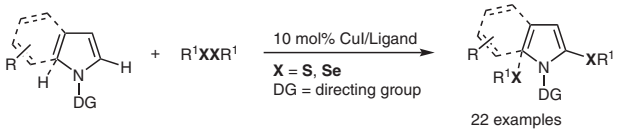
Copper(I)-Catalyzed Thiolation of C–H Bonds for the Synthesis of Sulfenyl Pyrroles and Indoles

Paper

545



22 examples
up to 97% yield

Synthesis

Synthesis **2019**, *51*, 552–556
DOI: 10.1055/s-0037-1610909

Total Synthesis of the Natural Pyridocoumarins Goniothaline A and B

Paper

552

S. Ahn
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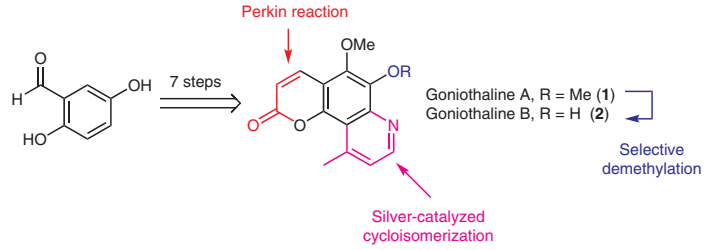
Republic of Korea



Synthesis

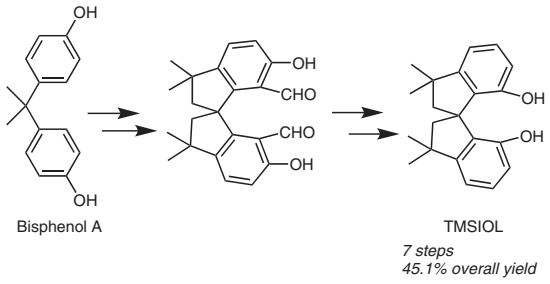
Synthesis **2019**, *51*, 557–563
DOI: 10.1055/s-0037-1610831

Synthesis and Optical Resolution of 3,3,3′,3′-Tetramethyl-1,1′-spirobiindane-7,7′-diol

Paper

557

Q. Zhou
R. Pan
H. Shan
X. Lin*
Zhejiang University,
P. R. of China



Synthesis

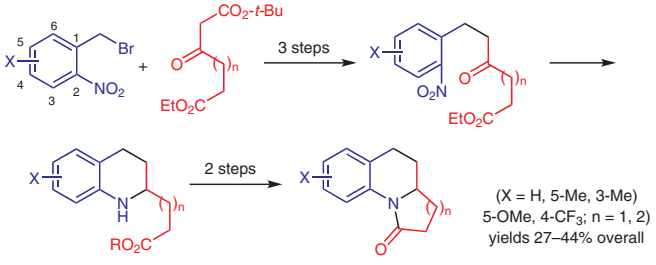
Synthesis **2019**, *51*, 564–572
DOI: 10.1055/s-0037-1609940

Synthesis of Aryl-Substituted 3,3a,4,5-Tetrahydropyrrolo[1,2-*a*] quinolin-1(2*H*)-ones and 2,3,4,4a,5,6-Hexahydro-1*H*-pyrido[1,2-*a*]quinolin-1-ones

Paper

564

F. M. Watts
R. A. Bunce*
Oklahoma State University, USA



Synthesis

Synthesis and Antitumor Activity of Novel 1-Substituted 3-(4,5-Substituted 1,2,4-Triazol-3-yl)-β-carboline Derivatives

Synthesis **2019**, *51*, 573–577
DOI: 10.1055/s-0037-1610291

G. Brand
C. M. B. Gomes
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A. L. T. G. Ruiz
M. H. Sarragiotto*
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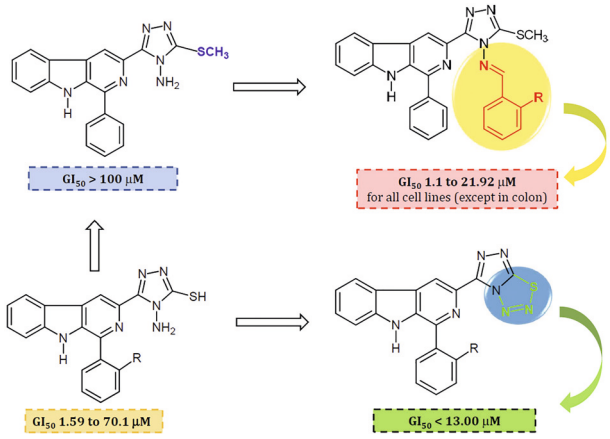

Synthesis

Synthesis of 2-(Arylselanyl)benzo[*b*]chalcogenophenes via Intramolecular Cyclization of Vinyl Selenides

Synthesis **2019**, *51*, 578–586
DOI: 10.1055/s-0037-1610656

G. Stach
T. J. Peglow
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F. Penteado
T. Barcellos
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G. Perin*
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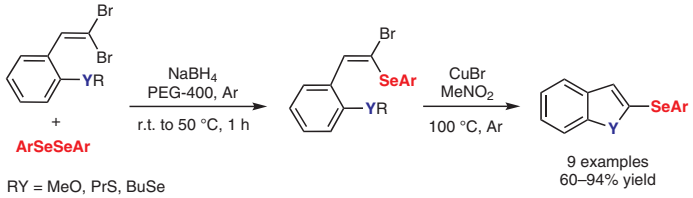

RY = MeO, PrS, BuSe
Y = O, S, Se

Synthesis

Intructions for Authors