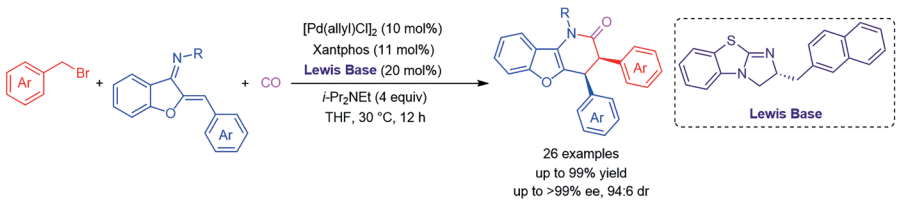
Synthesis

Reviews and Full Papers in Chemical Synthesis

May 2, 2024 • Vol. 56, 1335–1504



Stereoselective Synthesis of 3,4-Dihydrobenzofuro[3,2-*b*]pyridin-2(1*H*)-ones Enabled by Pd/Chiral Isothiourea Relay Catalysis

M. Sayed, Z. Shi, T. Fan, H.-C. Shen, Z.-Y. Han

9

Thieme

Synthesis

Reviews and Full Papers in Chemical Synthesis

2024
Vol. 56, No. 9
May I

Cover Design: © Thieme
Cover Image: M. Sayed et al.

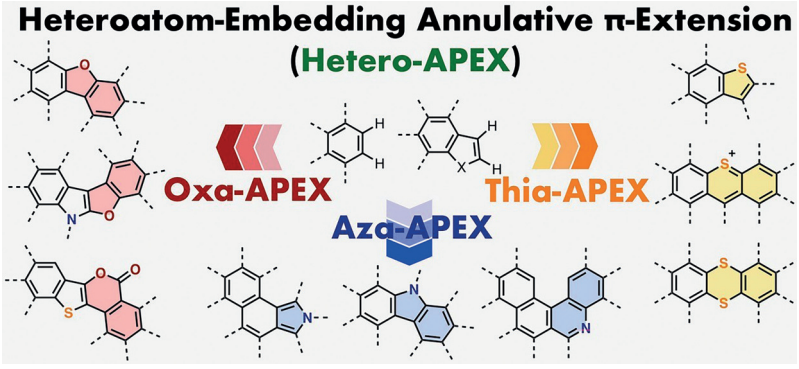
Synthesis

Synthesis **2024**, *56*, 1335–1354
DOI: 10.1055/a-2169-4078

H. Ito*
K. P. Kawahara
K. Itami*
Nagoya University, Japan

Heteroatom-Embedding Annulative π-Extension (Hetero-APEX) Reactions: An Overview

Review



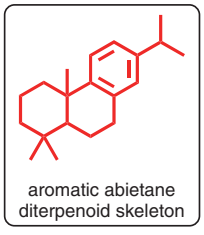
Synthesis

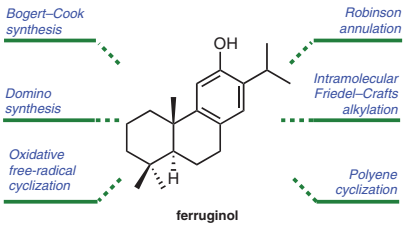
Synthesis **2024**, *56*, 1355–1368
DOI: 10.1055/a-2186-7983

M. Li
P. Chen
H. Liu
J. Huang*
Y. Chen*
Guizhou University,
P. R. of China

Review of the Total Synthesis of the Aromatic Abietane Diterpenoid Ferruginol

Short Review





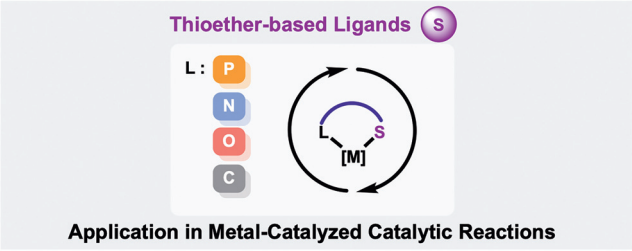
Synthesis

Synthesis **2024**, *56*, 1369–1380
DOI: 10.1055/a-2193-4927

S. Bellemin-Laponnaz*
T. Achard*
Université de Strasbourg, France
Aix Marseille Université, France

Recent Progress in Developing Thioether-Containing Ligands for Catalysis Applications

Short Review



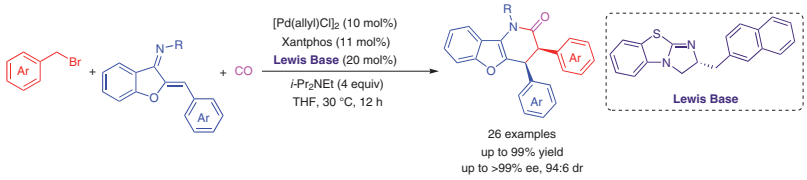
Synthesis

Synthesis **2024**, *56*, 1381–1392
DOI: 10.1055/s-0043-1763679

M. Sayed*
Z. Shi
T. Fan
H.-C. Shen
Z.-Y. Han*
University of Science and Technology of China, P. R. of China

Stereoselective Synthesis of 3,4-Dihydrobenzofuro[3,2-*b*]pyridin-2(1*H*)-ones Enabled by Pd/Chiral Isothiourea Relay Catalysis

Paper



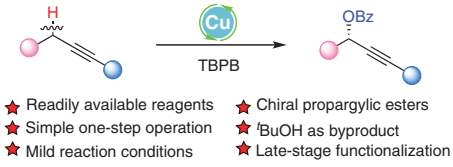
Synthesis

Synthesis **2024**, *56*, 1393–1400
DOI: 10.1055/a-2240-5349

J. Xi
X. Zhu*
H. Bao*
Fujian Normal University, P. R. of China
Fujian Institute of Research on the Structure of Matter, P. R. of China

Copper-Catalyzed Enantioselective Radical Esterification of Propargylic C–H Bonds

Paper



Synthesis

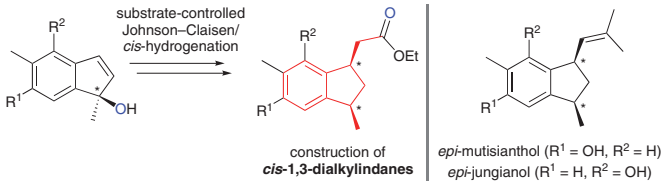
Synthesis **2024**, *56*, 1401–1406
DOI: 10.1055/a-2249-2326

C. S. Tran
M. Yoon
L. D. Le
S. Kim
H. Kim
J. Kim
L. H. Nguyen
M. Koh*
H. Yun*

Pusan National University, Republic of Korea

Rapid Access to *cis*-1,3-Dialkylindanes: Asymmetric Formal Syntheses of *epi*-Mutisianthol and *epi*-Jungianol

Paper



Synthesis

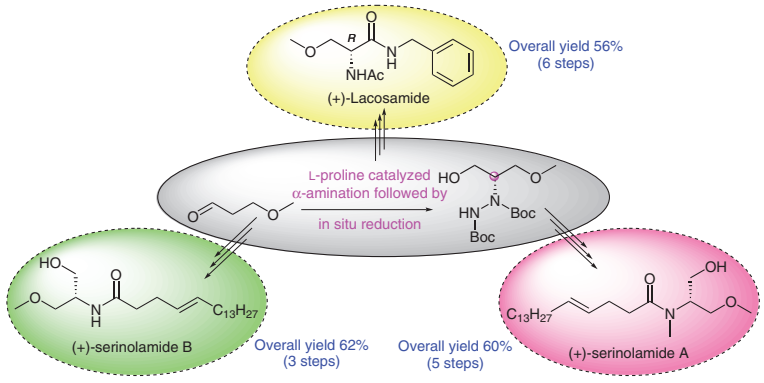
Synthesis **2024**, *56*, 1407–1414
DOI: 10.1055/a-2222-3822

A. R. Jadhao
S. B. Waghmode*

Savitribai Phule Pune University, India

Organocatalytic Approach to the Enantioselective Total Synthesis of (+)-Serinolamides A and B and (+)-Lacosamide

Paper



Synthesis

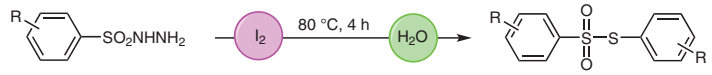
Synthesis **2024**, *56*, 1415–1421
DOI: 10.1055/a-2248-5438

Q. Chen
Z.-H. Chen
Y.-T. Liang
Y. Zeng
S.-W. Yu*
K. Yang*
Z.-Y. Wang*

South China Normal University, P. R. of China
Gannan Medical University, P. R. of China

Iodine-Promoted Disproportionate Coupling Reaction of Arylsulfonyl Hydrazides: A Simple and Green Access to Thiosulfonates

Paper



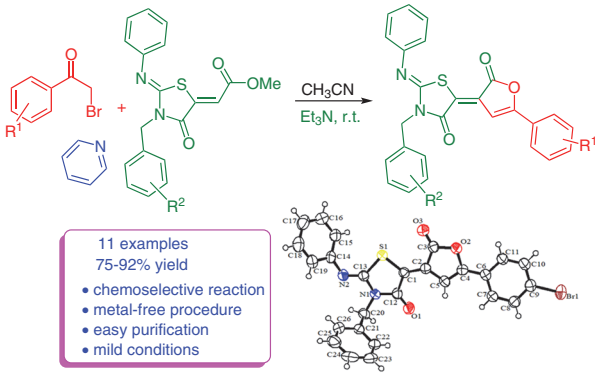
- Safe and available substrates
- Metal-free
- Mild conditons
- Gram-scale synthesis
- Green solvent
- Yield up to 96%

Synthesis

Efficient Synthesis of (2*Z*,5*Z*)-3-Benzyl/alkyl-5-(2-oxo-5-aryl-3 (2*H*)-furanylidene)-2-(phenylimino)-1,3-thiazolidin-4-ones via a One-Pot Three-Component Reaction

Synthesis **2024**, *56*, 1422–1428
DOI: 10.1055/s-0042-1751557

A. Alizadeh*
R. Moterassed
Tarbiat Modares University, Iran

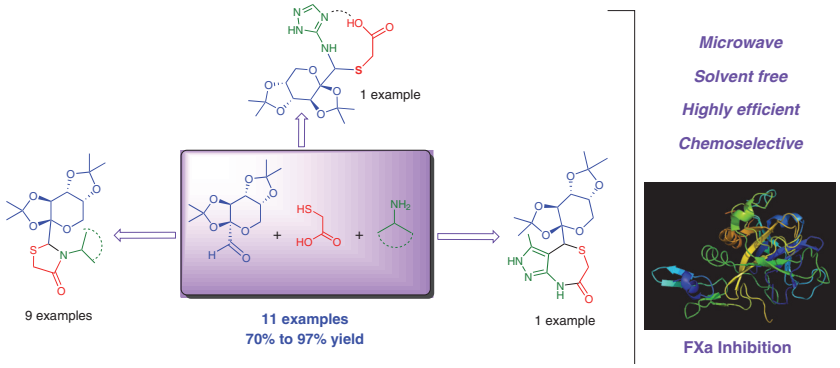


Synthesis

Solvent-Free Efficient Synthesis of New 4-Thiazolidinones with a Fructose Scaffold through a Microwave-Assisted Cascade Multicomponent Reaction

Synthesis **2024**, *56*, 1429–1437
DOI: 10.1055/a-2231-4922

F. Lorenzo
R. Ocampo*
D. F. Rodríguez
F. Santana-Romo
A. Galdamez
F. C. Zacconi
R. A. Burrow
S. Mandolesi*
N. D'Accorso
Universidad Nacional del Sur, Argentina

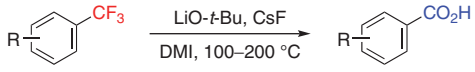


Synthesis

LiO-*t*-Bu/CsF-Mediated Formal Hydrolysis of Trifluoromethyl Arenes

Synthesis **2024**, *56*, 1438–1448
DOI: 10.1055/a-2236-0209

M. Shigeno*
M. Kiriyama
K. Izumi
K. Sasaki
O. Sasamoto
K. Nozawa-Kumada
Y. Kondo
Tohoku University, Japan



√ *Non-anionically activated CF_3 group*
√ *Single-electron transfer process*
√ *Various substrates containing (hetero)aryl, t-Bu, Me, amide, and alkenyl functionalities*

Synthesis

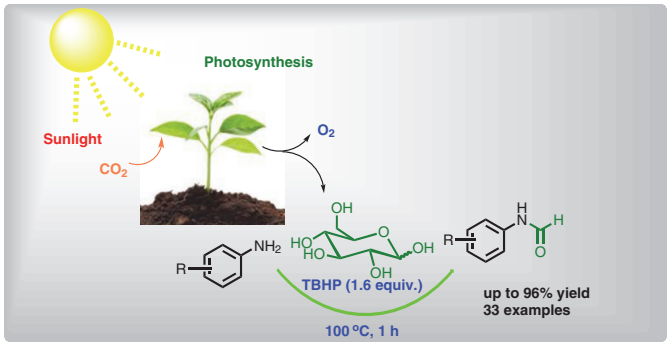
Synthesis **2024**, *56*, 1449–1459
DOI: 10.1055/a-2241-6697

S. Atpadkar
M. S. Gill*
National Institute of Pharmaceutical Education and Research (NIPER) S.A.S., India

Metal-Free *N*-Formylation of Amines Using Carbohydrates as C1 Synthon via C–C Bond Cleavage

Paper

1449



- Use of renewable bio-based feedstock as a C1 synthon
- Broad substrate scope
- Environment friendly
- Easy operation and scalability
- Metal-free reaction conditions

Synthesis

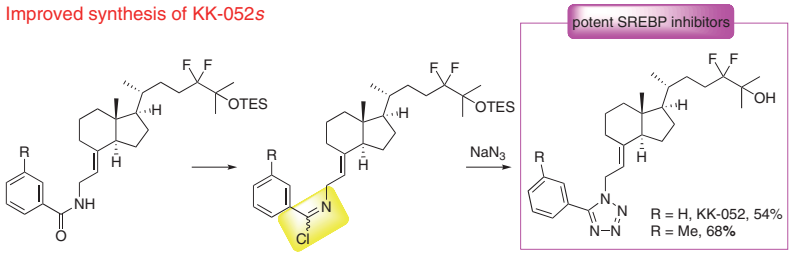
Synthesis **2024**, *56*, 1460–1464
DOI: 10.1055/a-2236-0413

F. Kawagoe
S. Mototani
Y. Takemoto
M. Uesugi
A. Kittaka*
Teikyo University, Japan

An Improved and Scalable Synthesis of the Potent SREBP Inhibitor KK-052 via [3+2] Cycloaddition

Paper

1460



Synthesis

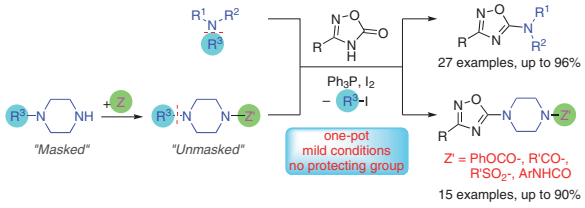
Synthesis **2024**, *56*, 1465–1475
DOI: 10.1055/s-0042-1751555

M. Alfliadhi
M. Pattarawarapan
S. Hongsibsong
N. Wiriya
W. Phakhodee*
Chiang Mai University, Thailand

Tertiary Amines as Temporary Masked Secondary Amines: A Direct Access to 5-Dialkylamino-1,2,4-oxadiazoles from 1,2,4-Oxadiazol-5(4*H*)-ones

Paper

1465



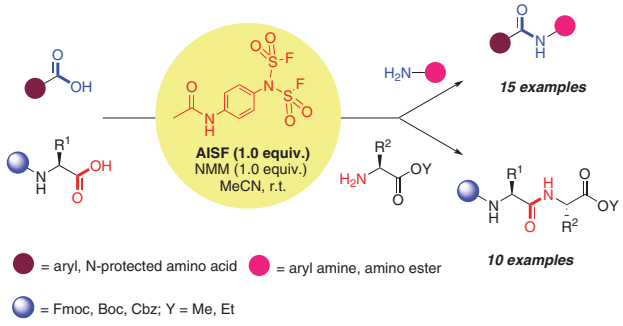
Synthesis

Synthesis **2024**, *56*, 1476–1484
DOI: 10.1055/s-0043-1763675

S. Bharamawadeyar
E. Chetankumar
C. Srinivasulu
V. V. Sureshbabu
Bangalore University, India

Synthesis of Amides and Peptides by Employing [4-(Acetylamino) phenyl]imidodisulfuryl Difluoride (AISF) as a Coupling Reagent

Paper



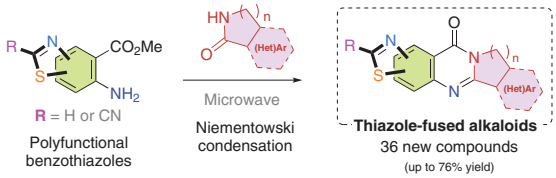
Synthesis

Synthesis **2024**, *56*, 1485–1497
DOI: 10.1055/a-2243-4727

N. Broudic
C. Layec
C. Fruit
T. Besson*
Université de Rouen-Normandie, France

Synthesis of Thiazole-fused Tricyclic Quinazolinone Alkaloids and Their Derivatives

Paper



- First example of thiazole-fused natural alkaloids
- Late-stage divergent step using commercially available lactams
- Scaled up to gram

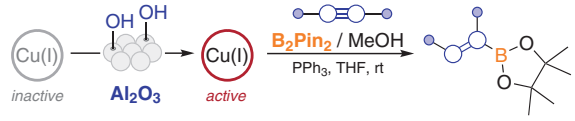
Synthesis

Synthesis **2024**, *56*, 1498–1504
DOI: 10.1055/a-2236-8874

X. A. Barashkova
M. J. Parulava
Y. N. Kotovshchikov
G. V. Latyshev*
N. V. Lukashev
I. P. Beletskaya
M. V. Lomonosov Moscow State University, Russian Federation

Alumina-Promoted Copper-Catalyzed Hydroboration of Alkynes

Paper



- Base-free
- Simplified procedure
- 28 examples
- Terminal and internal alkynes