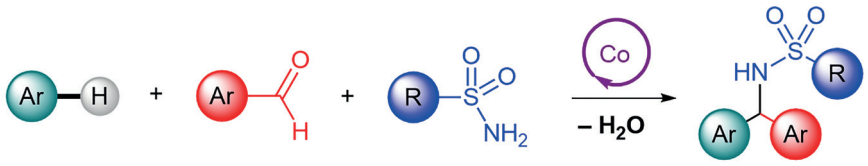
Synthesis

Reviews and Full Papers in Chemical Synthesis

March 4, 2025 • Vol. 57, 891–1080



⊕ *earth-abundant catalyst*

⊕ *atom-economical*

⊕ *highly modular*

⊕ *water as sole byproduct*

⊕ *late-stage diversification of APIs and drug-like scaffolds*

Cobalt-Catalyzed Three-Component Synthesis of α-Substituted *N*-Sulfonyl Amines via C(sp^2)–H Bond Activation

O. A. Olu-Igbiloba, H. Sitzmann, G. Manolikakes

5

Thieme

Synthesis

Reviews and Full Papers in Chemical Synthesis

2025
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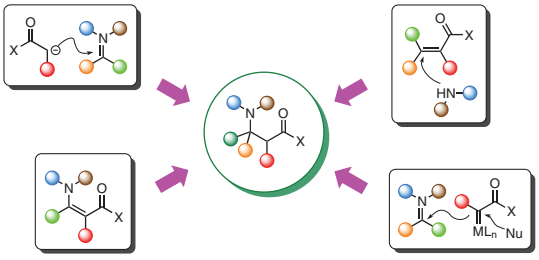
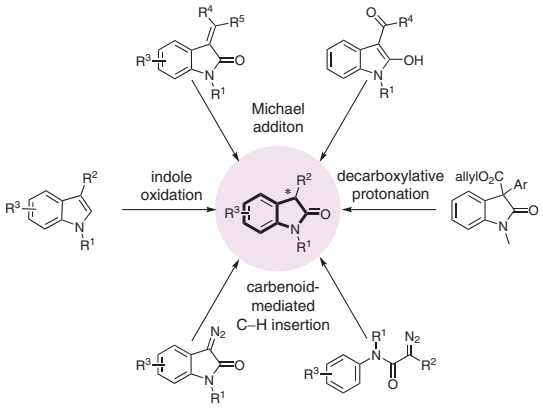




Synthesis

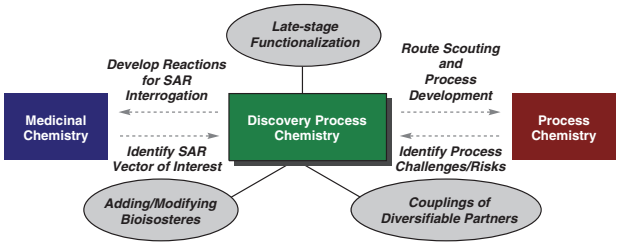
Discovery Process Chemistry: An Innovation Hub at the Interface of Academia, the Pharmaceutical Industry, and Contract Research Organizations

Short Review

925

Synthesis **2025**, 57, 925–936
DOI: 10.1055/a-2380-6425

M. A. Horwitz*
Eurofins Villapharma Research, Spain



Synthesis

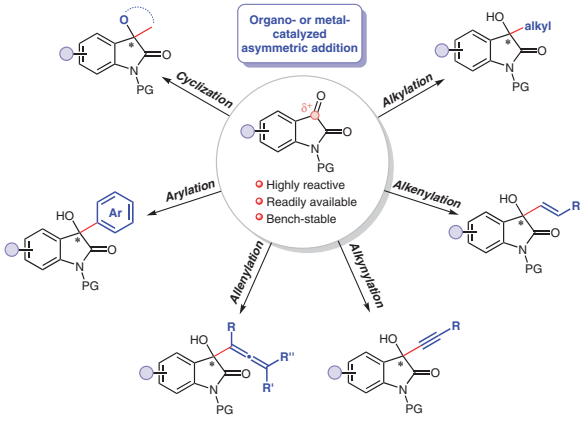
Recent Advances in Asymmetric Addition Reactions to Isatins

Short Review

937

Synthesis **2025**, 57, 937–952
DOI: 10.1055/a-2376-6463

K. Xie
A. Li
B.-R. Kong
Z.-C. Chen*
W. Du
Y.-C. Chen*
West China School of Pharmacy, Sichuan University, P. R. of China



Synthesis

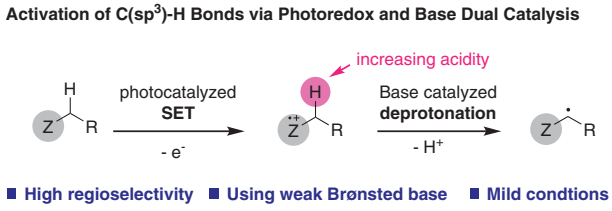
Harnessing Photoredox and Weak Brønsted Base Dual Catalysis for Selective C(sp^3)–H Bond Activation

Short Review

953

Synthesis **2025**, 57, 953–964
DOI: 10.1055/s-0043-1775423

S. R. Atriardi
Y. Anita*
S. K. Woo*
Pusan National University, Korea
National Research and Innovation Agency, Indonesia



Synthesis

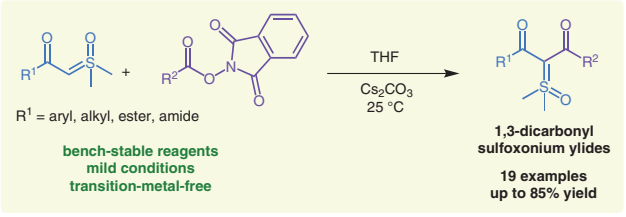
The Acylation of α-Carbonyl Sulfoxonium Ylides with *N*-Hydroxyphthalimide Esters

Feature

965

Synthesis **2025**, *57*, 965–972
DOI: 10.1055/a-2412-9549

E. F. Mizobuchi
A. C. Burtoloso*
Universidade de São Paulo, Brazil



Synthesis

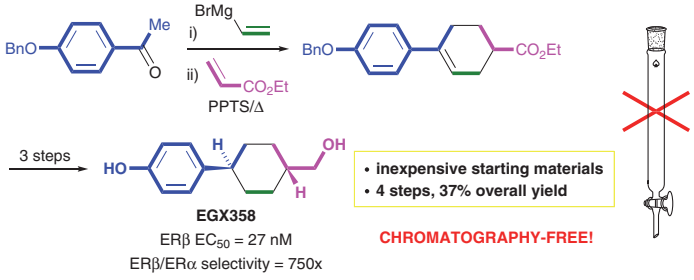
A Scalable, Chromatography-Free Synthesis of the Potent and Highly Selective ERβ Agonist EGX358

PSP

973

Synthesis **2025**, *57*, 973–977
DOI: 10.1055/s-0043-1775433

S. Chaudhury
D. Thennakoon
E. A. Wetzel
W. A. Donaldson*
Marquette University, USA



Synthesis

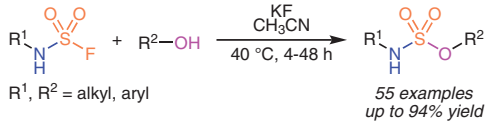
$RNHSO_2F$ as Reliable Azasulfene Precursors for the Construction of Sulfamates

Paper

978

Synthesis **2025**, *57*, 978–990
DOI: 10.1055/a-2508-3355

T. Guo
W. Wang
L. Xu*
J. Dong*
Shanghai Jiao Tong University, P. R. of China



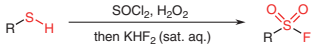
- **Catalyst-free**
- **Mild reaction conditions**
- **Moderate to excellent yields**
- **Wide substrate scope**

Synthesis

Synthesis **2025**, *57*, 991–998
DOI: 10.1055/s-0043-1775384

G. Tao
E. Fayad
O. A. Abu Ali
B. Oyom
H.-L. Qin*
Wuhan University of Technology, P. R. of China

A Convenient One-Pot Process for Converting Thiols into Sulfonyl Fluorides Using H_2O_2 as an Oxidant



R = aryl, alkyl

33 examples, up to 94% yield

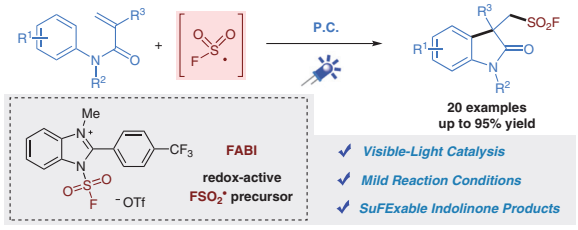
- Organic-solvent-free
- Operational simplicity
- One-pot process
- Applications in drug synthesis

Synthesis

Synthesis **2025**, *57*, 999–1006
DOI: 10.1055/a-2409-5678

N. Yang
G. Pei
H. Li
J. Han
P. Wang
L. Xie
S. Liao*
Fuzhou University, P. R. of China

Synthesis of FSO_2-Functionalized Oxindoles via a Radical Fluorosulfonylation/Intramolecular Arylation Cascade

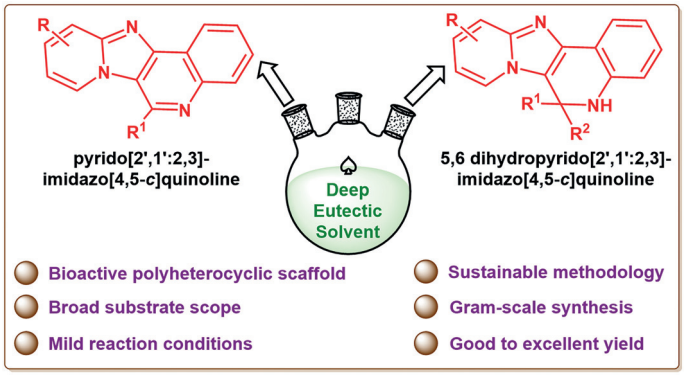


Synthesis

Synthesis **2025**, *57*, 1007–1014
DOI: 10.1055/a-2499-2469

U. Dasmahapatra
B. Choudhury
M. G. Ahmad
B. Maiti*
K. Chanda*
Vellore Institute of Technology, India
Rabindranath Tagore University, India

Direct Access to 5,6-Dihydropyrido[2′,1′:2,3]pyrido-Fused Imidazo[4,5-*c*]quinolines via Consecutive C–N and C–C Bond Formation in Deep Eutectic Solvent under Microwave Irradiation



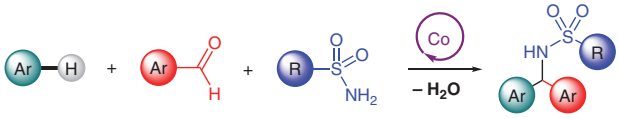
Synthesis

Synthesis **2025**, *57*, 1015–1024
DOI: 10.1055/a-2501-4947

O. A. Olu-Igbiloba
H. Sitzmann
G. Manolikakes*
RPTU Kaiserslautern-Landau, Germany

Cobalt-Catalyzed Three-Component Synthesis of α-Substituted *N*-Sulfonyl Amines via C(sp^2)–H Bond Activation

Paper



⊕ *earth-abundant catalyst*
⊕ *atom-economical*
⊕ *highly modular*
⊕ *water as sole byproduct*
⊕ *late-stage diversification of APIs and drug-like scaffolds*

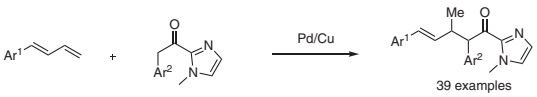
Synthesis

Synthesis **2025**, *57*, 1025–1033
DOI: 10.1055/a-2457-0319

M. Wang
W. Zi*
Nankai University, P. R. of China

Synergistic Pd/Cu-Catalyzed Asymmetric Csp^3–Csp^3 Coupling of 1,3-Dienes with 2-Acylimidazoles

Paper



39 examples
up to 95% ee
15:1 dr

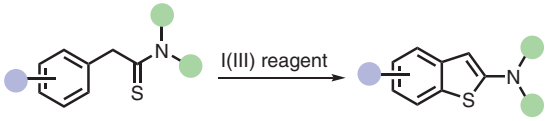
Synthesis

Synthesis **2025**, *57*, 1034–1042
DOI: 10.1055/a-2500-6460

D. I. Bugaenko*
A. V. Karchava*
Moscow State University, Russian Federation

Synthesis of 2-Aminobenzo[*b*]thiophenes via an Intramolecular Dehydrogenative C–S Bond Formation Effected by Iodine(III) Reagents

Paper



- Metal-free
- Short reaction time
- Easily available substrates
- 1°, 2°, and 3° amines

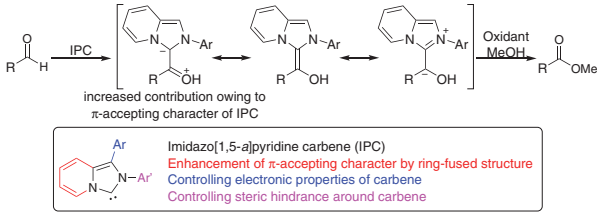
20 examples
62–96% yields

Synthesis

Synthesis **2025**, *57*, 1043–1049
DOI: 10.1055/a-2500-6556

K. Endo
F. Shibahara*
Gifu University, Japan

Imidazo[1,5-*a*]pyridin-3-ylidene-Catalyzed Oxidative Esterification of Aldehydes: Remarkable Electronic Effect Regarding π-Accepting Character of Ring-Fused N-Heterocyclic Carbene

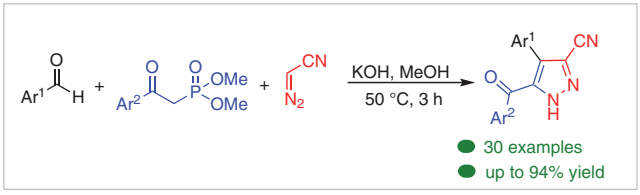


Synthesis

Synthesis **2025**, *57*, 1050–1058
DOI: 10.1055/a-2497-1767

R. Singroha
P. Onen
U. Yadav
R. Kant
K. Mohanan*
CSIR-Central Drug Research Institute, India

Three-Component Synthesis of Cyanopyrazoles Employing Diazoacetonitrile

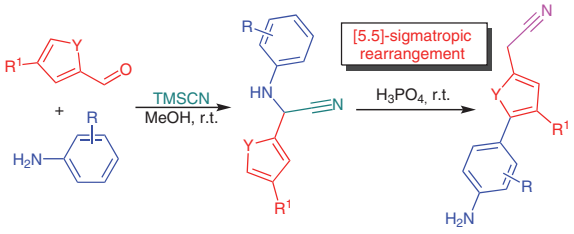


Synthesis

Synthesis **2025**, *57*, 1059–1071
DOI: 10.1055/s-0043-1775403

O. V. Buravov
V. O. Tomak
S. V. Shishkina
V. A. Chebanov*
National Academy of Sciences of Ukraine, Ukraine

First Example of Aryl–Hetaryl Cross-Coupling via [5,5]-Sigmatropic Rearrangement



Synthesis

Synthesis **2025**, *57*, 1072–1080
DOI: 10.1055/a-2500-6392

Divergent Synthetic Strategy To Access the Polyketide Subunits of Aurilides: Synthesis of the Southern Fragment of Lagunamides D and D′

S. Michon
M. Garcia
F. Cavelier
X. J. Salom-Roig*
Université de Montpellier, CNRS, ENSCM, France