

Synthesis

Synthesis 2022, 54, 217–245
DOI: 10.1055/a-1526-8160

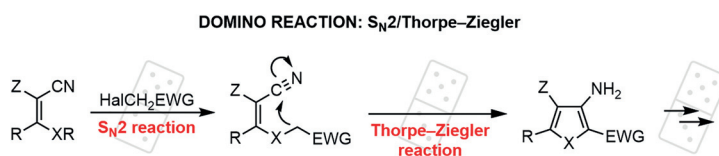
N. A. Larionova*
A. M. Shestopalov
L. A. Rodinovskaya
A. A. Zubarev

N.D. Zelinsky Institute of Organic Chemistry, Russian Federation
University of Greenwich, UK
Imperial College London, UK

Synthesis of Biologically Active Heterocycles via a Domino Sequence Involving an S_N2 /Thorpe–Ziegler Reaction Step

Review

217



Synthesis

Synthesis 2022, 54, 246–254
DOI: 10.1055/a-1589-0150

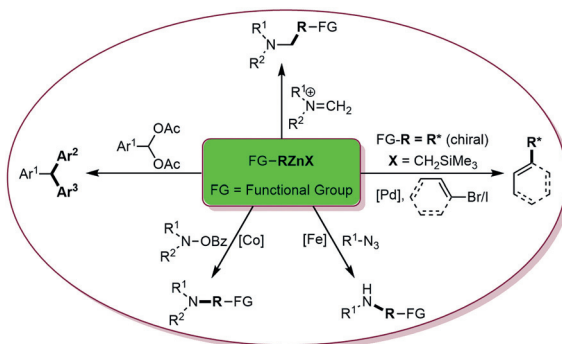
B. Wei*
P. Knochel*

Ludwig-Maximilians-Universität München, Germany

Recent Advances in Cross-Couplings of Functionalized Organozinc Reagents

Short Review

246



Synthesis

Strategies for the Synthesis of Selenocysteine Derivatives

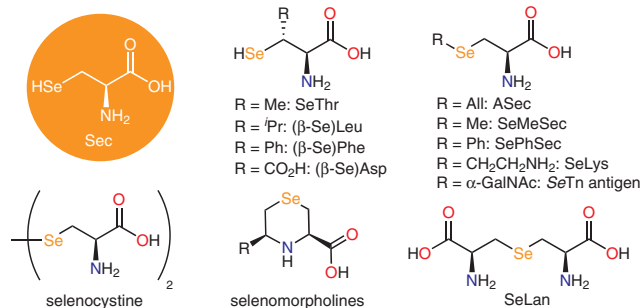
Short Review

255

Synthesis **2022**, *54*, 255–270
DOI: 10.1055/a-1588-9763

P. Oroz
A. Avenzoa
J. H. Busto
F. Corzana
M. M. Zurbano
J. M. Peregrina*

University of La Rioja, Spain



Synthesis

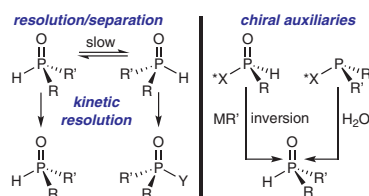
Asymmetric Synthesis of P-Stereogenic Secondary Phosphine Oxides (SPOs)

Short Review

271

Synthesis **2022**, *54*, 271–280
DOI: 10.1055/a-1582-0169

D. S. Glueck*
Dartmouth College, USA



Synthesis

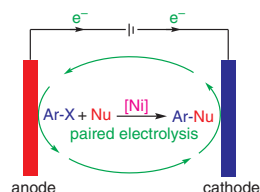
Nickel-Catalyzed Paired Electrochemical Cross-Coupling of Aryl Halides with Nucleophiles

Short Review

281

Synthesis **2022**, *54*, 281–294
DOI: 10.1055/a-1581-0934

Y. Zhang
W. Sun
C. Li*
Tsinghua University,
P. R. of China
National Institute of Biological
Sciences, Beijing, P. R. of China



Synthesis

Synthesis 2022, 54, 295–314
DOI: 10.1055/a-1645-3254

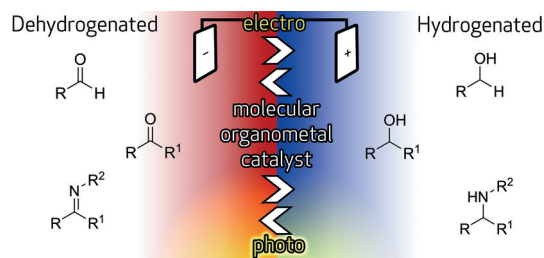
I. Fokin
K.-T. Kuessner
I. Siewert*

Universität Göttingen, Germany

Transition Metal Complex Catalyzed Photo- and Electrochemical (De)hydrogenations Involving C=O and C=N Bonds

Short Review

295



Synthesis

Synthesis 2022, 54, 315–333
DOI: 10.1055/a-1631-1606

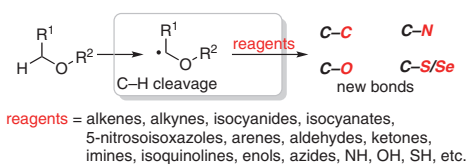
Y. Feng
X. Ye
D. Huang*
S.-r. Guo*

Lishui University, P. R. of China

α -Csp³-H Bond Functionalization of Simple Ethers in Radical Reactions

Short Review

315



Synthesis

Synthesis 2022, 54, 334–340
DOI: 10.1055/s-0037-1610784

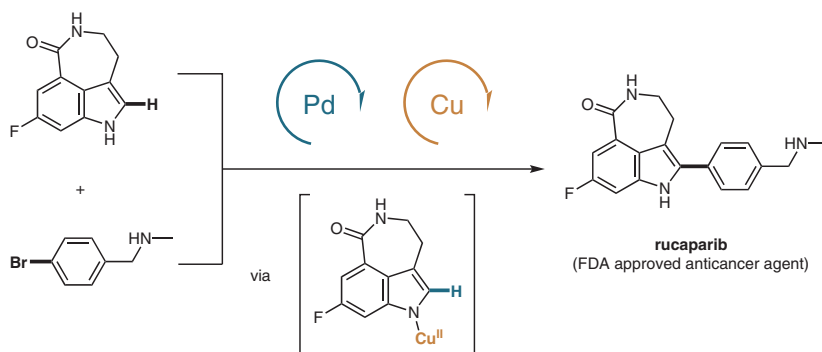
I. Beckers
G. O'Rourke
D. De Vos*

KU Leuven, Belgium

Late-Stage C–H Arylation of Azepinoindole via Pd/Cu Catalysis: A Step Efficient and Convergent Synthesis of Rucaparib

Feature

334



Synthesis

Synthesis 2022, 54, 341–354
DOI: 10.1055/a-1625-9095

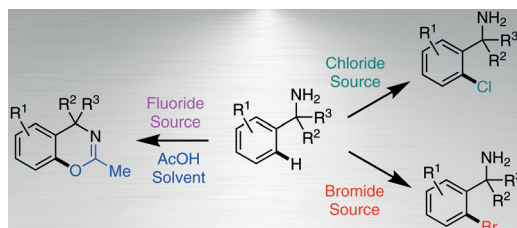
P. Chand-Thakuri
I. Alahakoon
D. Liu
M. Kapoor
J. F. Kennedy
K. W. Jenkins, III
A. M. Rabon
M. C. Young*

The University of Toledo, USA

Native Amine-Directed *ortho*-C–H Halogenation and Acetoxylation /Condensation of Benzylamines

Feature

341



Synthesis

Synthesis 2022, 54, 355–368
DOI: 10.1055/a-1638-2478

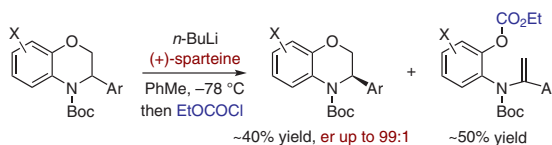
A. El-Tunsi
N. Carter
S.-H. Yeo
J. D. Priest
A. Choi
C. M. Kobras
S. Ndlovu
I. Proietti Silvestri
A. K. Fenton
I. Coldham*

University of Sheffield, UK

Kinetic Resolution by Lithiation: Highly Enantioselective Synthesis of Substituted Dihydrobenzoxazines and Tetrahydroquinoxalines

Feature

355



Synthesis

Synthesis 2022, 54, 369–377
DOI: 10.1055/a-1623-2333

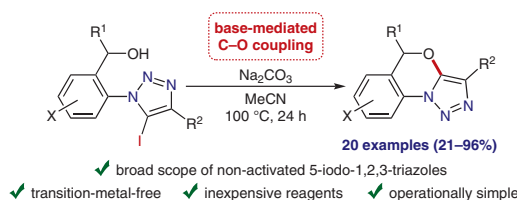
S. S. Tatevosyan
Y. N. Kotovshchikov*
G. V. Latyshev
N. V. Lukashev
I. P. Beletskaya

M. V. Lomonosov Moscow State
University, Russian Federation

Facile Access to Triazole-Fused 3,1-Benzoxazines Enabled by Metal-Free Base-Promoted Intramolecular C–O Coupling

Feature

369



Synthesis

Synthesis 2022, 54, 378–382
DOI: 10.1055/a-1628-7586

I. Janicki*

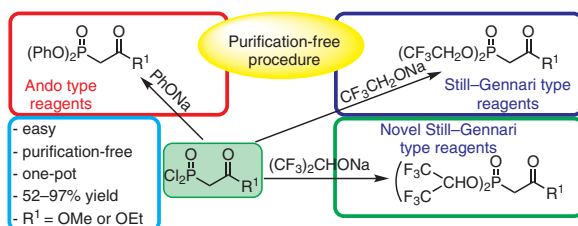
P. Kielbasiński

Centre of Molecular and Macromolecular Studies, Polish Academy of Sciences, Poland

A Straightforward, Purification-Free Procedure for the Synthesis of Ando and Still–Gennari Type Phosphonates

PSP

378



Synthesis

Synthesis 2022, 54, 383–392
DOI: 10.1055/a-1560-4791

M. R. Islam

T. Nishinaga

K. Hirabayashi

T. Shimizu

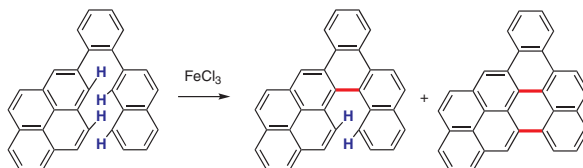
K.-i. Sugiura*

Tokyo Metropolitan University, Japan

Oxidative Intramolecular C–C Bond Formation Reactions of 1,2-Diarylbenzenes: Syntheses of Highly Conjugated Double-Bridged Polycyclic Aromatic Hydrocarbons

Paper

383



Synthesis

Synthesis 2022, 54, 393–402
DOI: 10.1055/a-1589-7548

S. Ghora

C. Sreenivasulu

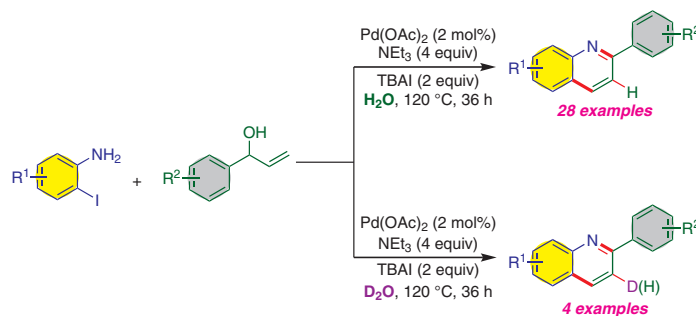
G. Satyanarayana*

Indian Institute of Technology, Hyderabad, India

A Domino Heck Coupling–Cyclization–Dehydrogenative Strategy for the One-Pot Synthesis of Quinolines

Paper

393



Synthesis

Synthesis 2022, 54, 403–410
DOI: 10.1055/a-1587-8859

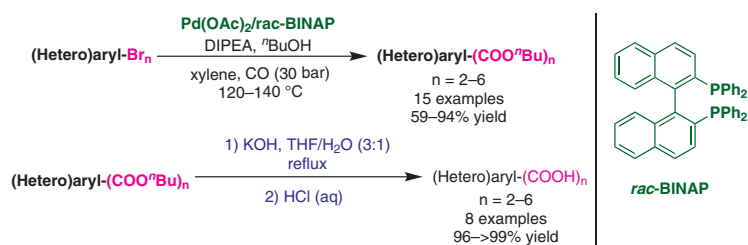
W. Wu
Y. Jing
D. Zhang
X. Yan
R. Liang
Z. Lu
B. Ji*

Luoyang Normal University,
P. R. of China

Palladium-Catalyzed Butoxycarbonylation of Polybromo(hetero)arenes: A Practical Method for the Preparation of (Hetero)arenepolycarboxylates and -carboxylic Acids

Paper

403



Synthesis

Synthesis 2022, 54, 411–420
DOI: 10.1055/s-0040-1719833

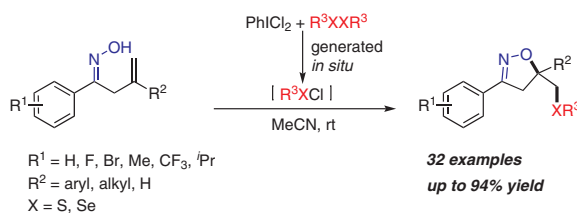
D. Zhang
J. Zhang
X. Li
Z. Yu
Y. Li
F. Sun*
Y. Du*

Tianjin University, P. R. of China
Hebei University of Science and
Technology, P. R. of China

Intramolecular Chalcogenylation of Isooxazolines Mediated by PhCl_2 and Diorganyl Disulfides or Diselenides

Paper

411



Synthesis

Synthesis 2022, 54, 421–428
DOI: 10.1055/a-1643-8526

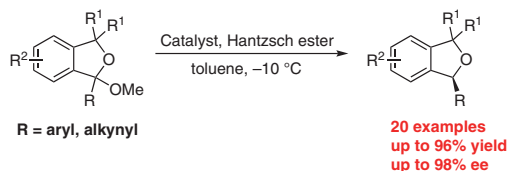
L. Zhou
K. Jia
X. Liu*
L. Liu*

Shandong University,
P. R. of China

Enantioselective Transfer Hydrogenation of Oxocarbenium Ions Enables Asymmetric Access to α -Substituted 1,3-Dihydroisobenzofurans

Paper

421



Synthesis

A Catalyst-Free Synthesis of Fused Perfluoroalkylated 2,3-Dihydroisoxazoles via Oxa-Michael-Aldol Annulation

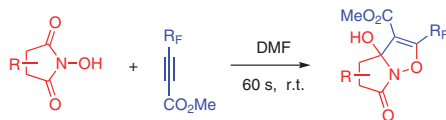
Paper

429

Synthesis 2022, 54, 429–438
DOI: 10.1055/a-1625-9538

W. Zhou
L. Yao
Y. Liu
L. Shen
J. Chen
H. Deng
M. Shao
H. Zhang*
X. Tang*
W. Cao*

Shanghai University,
P. R. of China
Shanghai Institute of Organic
Chemistry, P. R. of China



19 examples, up to 97% yield

Synthesis

Synthesis of Methylene-Bridged Trifluoromethyl Azoles Using 5-(1,2,3-Triazol-1-yl)enones

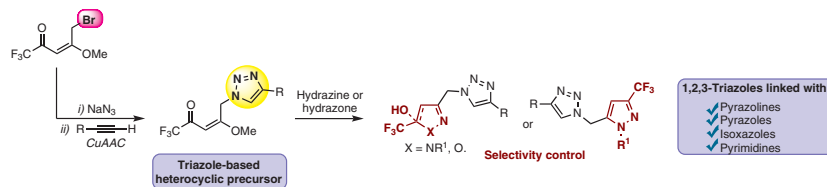
Paper

439

Synthesis 2022, 54, 439–450
DOI: 10.1055/s-0040-1719837

M. Mittersteiner
E. C. Aquino
T. Budragchaa
L. A. Wessjohann
H. G. Bonacorso
M. A. P. Martins
N. Zanatta*

Universidade Federal de Santa
Maria, Brazil



Synthesis

Facile and Straightforward Synthesis of Racemic Version of Substituted 3-[3-(2-Hydroxyphenyl)-3-oxo-1-arylpropyl]-4-hydroxycoumarins: Easy Access to a Series of Biorelevant Warfarin Analogues

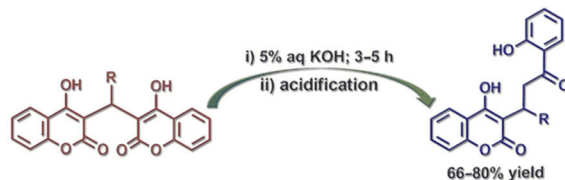
Paper

451

Synthesis 2022, 54, 451–464
DOI: 10.1055/a-1624-2176

G. Brahmachari*
M. Mandal
I. Karmakar

Visva-Bharati (a Central University), India



- ✓ operationally simple
- ✓ water as solvent
- ✓ no column chromatography
- ✓ clean reaction profiles
- ✓ warfarin analogues
- ✓ good to excellent yields
- ✓ gram-scale applications
- ✓ green synthesis

Synthesis

Synthesis 2022, 54, 465–474
DOI: 10.1055/a-1628-7972

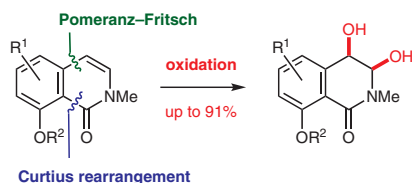
M. J. B. Heinemann
T. Voigt
D. Menche*

Kekulé-Institut für Organische
Chemie und Biochemie der Uni-
versität Bonn, Germany

Dihydroxylation Studies of Isoquinolinones: Synthesis of the EF-Ring of Lysolipin I

Paper

465



Synthesis

Synthesis 2022, 54, 475–482
DOI: 10.1055/a-1645-6040

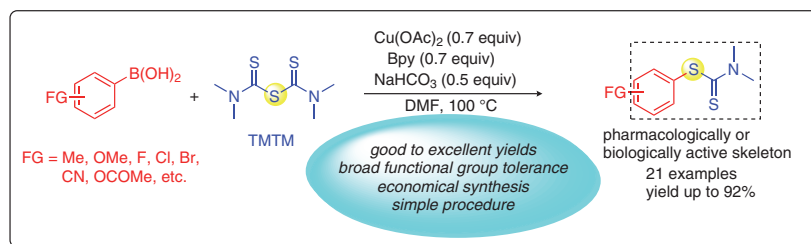
X.-L. Xia
Q.-L. Zhu
J.-Q. Chen
Z. Shi
Z.-B. Dong*

Wuhan Institute of Technology,
P. R. of China

Synthesis of Aryl Dithiocarbamates from Tetramethylthiuram Monosulfide (TMTM) and Aryl Boronic Acids: Copper-Catalyzed Construction of C(sp²)–S Bonds

Paper

475



Synthesis

Synthesis 2022, 54, 483–489
DOI: 10.1055/s-0040-1719832

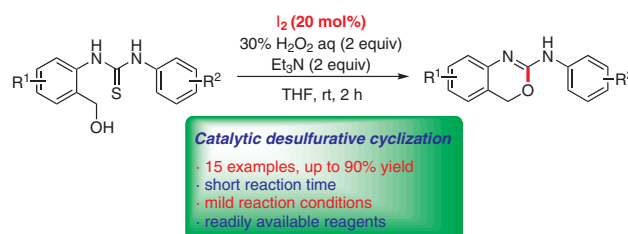
A. Fuchiya
T. Miyamura
H. Nariki
S. Noda
K. Makiyama
M. Sonoda
S. Tanimori*

Osaka Prefecture University,
Japan

A Facile Synthesis of 2-Aminobenzoxazines Based on Iodine-Catalyzed Desulfurative Cyclization

Paper

483



Synthesis

Synthesis 2022, 54, 490–498
DOI: 10.1055/a-1592-6394

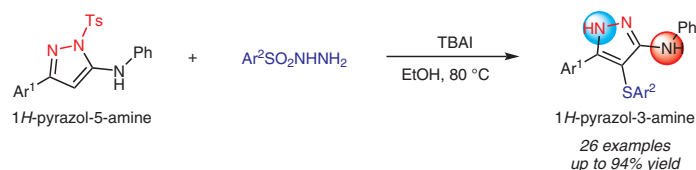
J. He
Y. Wei
X. Li
B. Dai*
P. Liu*

Shihezi University, P. R. of China

Tetrabutylammonium Iodide Mediated Sulfenylation of Polysubstituted 1*H*-Pyrazol-5-amines with Arylsulfonyl Hydrazides

Paper

490



Synthesis

Synthesis 2022, 54, 499–505
DOI: 10.1055/a-1561-5557

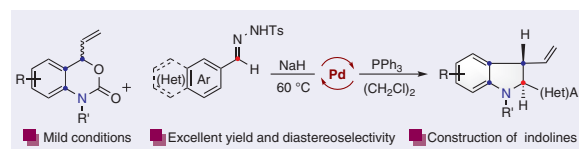
Y.-H. Ma*
F.-X. Meng
R.-N. Wang
Y.-X. Fan
Q.-Q. Su
J.-Y. Du*

Liaocheng University,
P. R. of China

Diastereoselective Palladium-Catalyzed [4+1] Cycloadditions of 4-Vinyl-1,4-dihydro-2*H*-3,1-benzoxazin-2-ones with In Situ Formed Carbenes

Paper

499



Synthesis

Synthesis 2022, 54, 506–516
DOI: 10.1055/a-1643-7642

I. B. Krylov
S. A. Paveliev
A. S. Budnikov
O. O. Segida
V. M. Merkulova
V. A. Vil'
G. I. Nikishin
A. O. Terent'ev*

N. D. Zelinsky Institute of Organic Chemistry of the Russian Academy of Sciences, Russian Federation

Hidden Reactivity of Barbituric and Meldrum's Acids: Atom-Efficient Free-Radical C–O Coupling with *N*-Hydroxy Compounds

Paper

506

