Synthesis

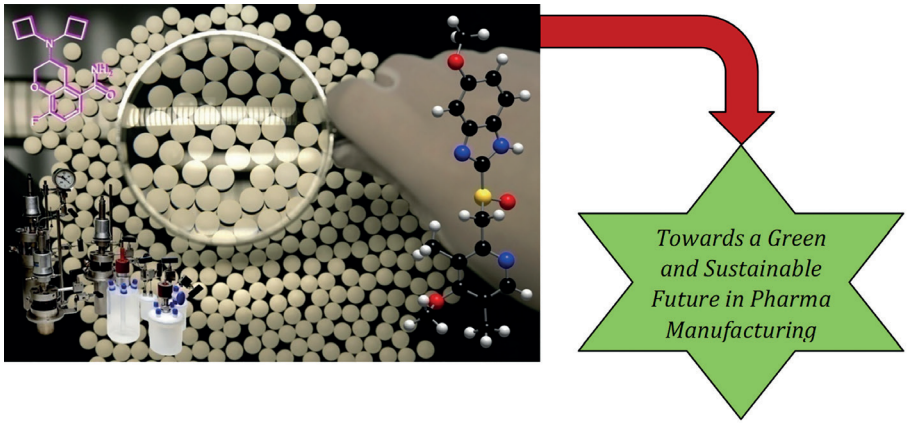
Reviews and Full Papers in Chemical Synthesis

October 5, 2022 • Vol. 54, 4129–4400

Special Topic

SYNTHESIS Conference Special Topic ISySyCat21

Guest editor: Anthony J. Burke



Taking the Green Road Towards Pharmaceutical Manufacturing

H.-J. Federsel

19

Thieme

Synthesis

Reviews and Full Papers in Chemical Synthesis

2022
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Synthesis

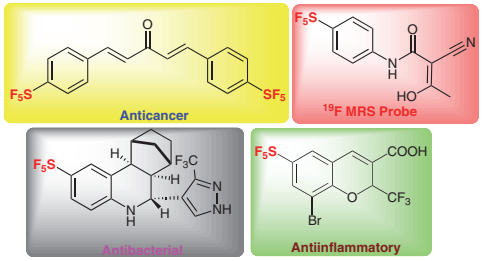
Recent Advances in the Synthesis and Medicinal Chemistry of SF_5 and SF_4Cl Compounds

Short Review

4184

Synthesis **2022**, *54*, 4184–4209
DOI: 10.1055/a-1845-9291

M. Sani*
M. Zanda
CNR-SCITEC, Italy



Synthesis

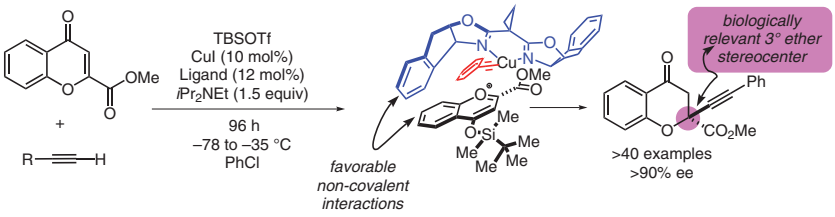
Enantioselective Dearomative Alkynylation of Chromanones: Opportunities and Obstacles

Feature

4210

Synthesis **2022**, *54*, 4210–4219
DOI: 10.1055/a-1811-8075

Y. Guan
T. Buivydas
R. F. Lalisse
R. Ali
C. M. Hadad
A. E. Mattson*
Worcester Polytechnic Institute, USA



Synthesis

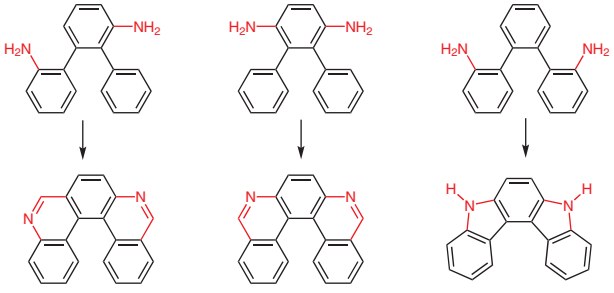
Synthesis of Diaza[5]helicenes by *ortho*,*ortho*′-Fusion of *ortho*-Terphenyls

Feature

4220

Synthesis **2022**, *54*, 4220–4234
DOI: 10.1055/a-1804-8980

S. Herzog
I. Marten
A. Weiß
J. Podlech*
Karlsruher Institut für Technologie (KIT), Germany



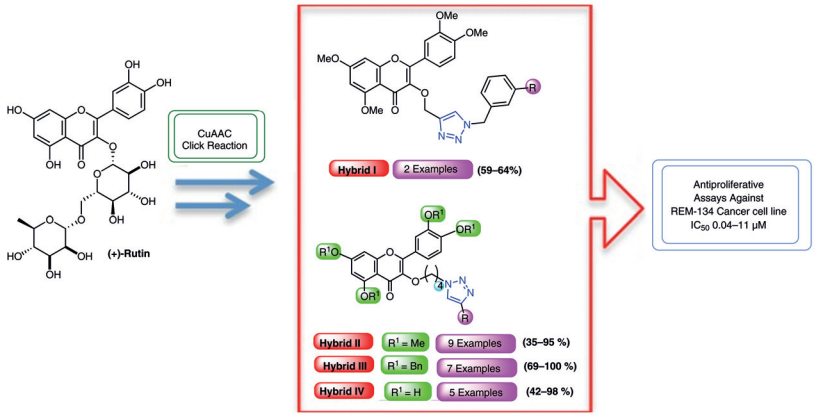
Synthesis

Synthesis and Antiproliferative Activity of Novel Quercetin-1,2,3-Triazole Hybrids using the 1,3-Dipolar Cycloaddition (Click) Reaction

Special Topic

Synthesis **2022**, *54*, 4272–4284
DOI: 10.1055/s-0040-1719928

E. P. Carreiro*
C. M. Gastalho
S. Ernesto
A. R. Costa
C. M. Antunes
A. J. Burke
University of Évora, Portugal



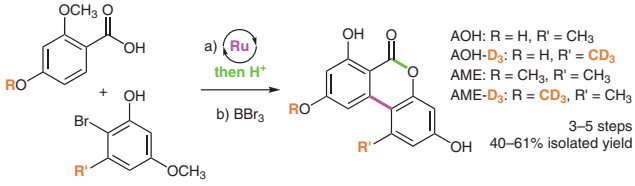
Synthesis

Concise Syntheses of Alternariol, Alternariol-9-monomethyl Ether and Their D_3-Isotopologues

Special Topic

Synthesis **2022**, *54*, 4285–4293
DOI: 10.1055/a-1698-8328

M. A. Sebald*
J. Gebauer
M. Koch
HPC Standards GmbH,
Germany



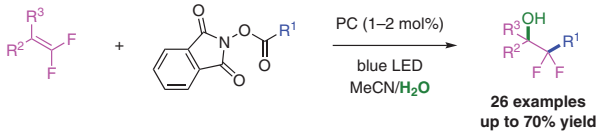
Synthesis

Photocatalytic Approach to α,α-Difluoroalkyl Alcohols

Special Topic

Synthesis **2022**, *54*, 4294–4303
DOI: 10.1055/s-0041-1737546

G. Kachkovskyi
M. Cieślak
P. Graczyk
P. Zawadzki
J. Kalinowska-Tłuścik
M. Werłos*
Selvita SA., Poland
Jagiellonian University, Poland



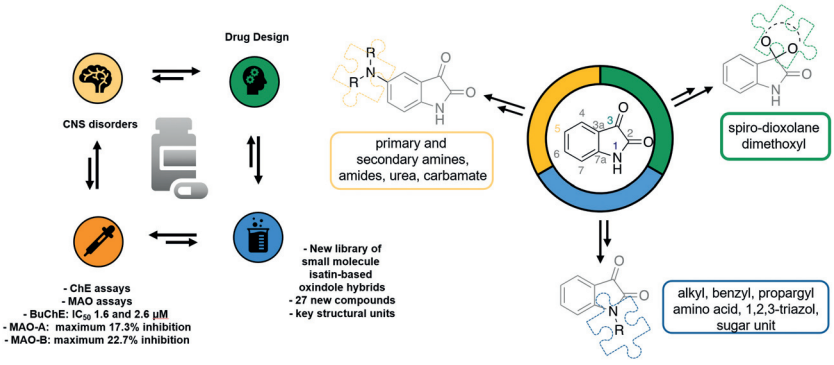
Synthesis

Survey of New, Small-Molecule Isatin-Based Oxindole Hybrids as Multi-Targeted Drugs for the Treatment of Alzheimer's Disease

Special Topic

Synthesis **2022**, *54*, 4304–4319
DOI: 10.1055/s-0041-1737343

C. S. Marques*
Ó. López
L. Leitzbach
J. G. Fernández-Bolaños
H. Stark
A. J. Burke
University of Évora, Portugal



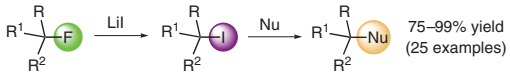
Synthesis

Selective Csp^3–F Bond Functionalization with Lithium Iodide

Paper

Synthesis **2022**, *54*, 4320–4328
DOI: 10.1055/s-0041-1738383

K. Balaraman
S. Kyriazakos
R. Palmer
F. Y. Thanzeel
C. Wolf*
Georgetown University, USA



> C–F Activation with a commercially available, inexpensive reagent
> Wide scope: 1°, 2°, 3°, benzylic, allylic, propargylic, and α-functionalized fluorides
> Solvent choices: CH_2Cl_2, toluene or neat conditions
> Reduced waste production
> In situ C–C, C–N and C-S bond formation

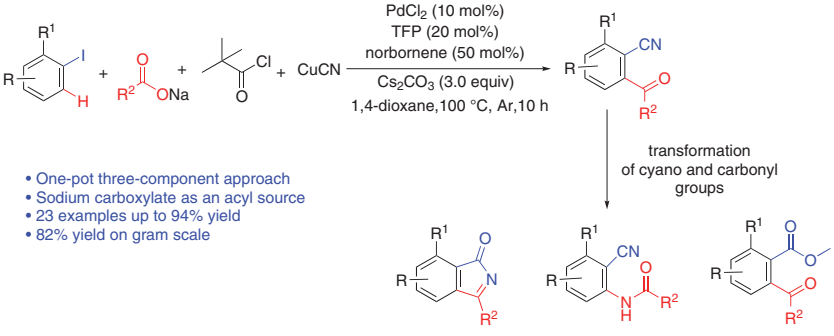
Synthesis

Palladium/Norbornene-Cocatalyzed Three-Component Synthesis of *ortho*-Acylated Benzonitriles

Paper

Synthesis **2022**, *54*, 4329–4338
DOI: 10.1055/a-1866-7737

L. Wang
G. Song
Q. Wu
J. Qin
X. Yu*
N. Chen*
C. Li*
East China University of Science & Technology, P. R. of China
Hainan Medical University, P. R. of China
Beijing Institute of Petrochemical Technology, P. R. of China



- One-pot three-component approach
- Sodium carboxylate as an acyl source
- 23 examples up to 94% yield
- 82% yield on gram scale

Synthesis

Synthesis **2022**, *54*, 4339–4346
DOI: 10.1055/a-1863-3494

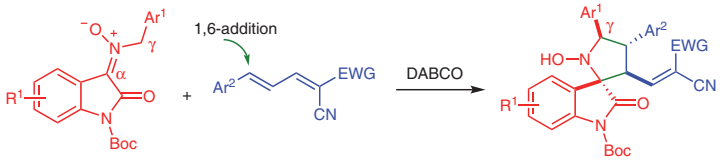
Z. Luo
Z. Wang*
W. Yao*

Zhejiang Sci-Tech University, P. R. of China
Chongqing University, P. R. of China

DABCO-Catalyzed [3+2] Cycloaddition of Isatin-Derived Nitrones and Electron-Deficient Dienes *via* a 1,6-Addition Reaction

Paper

4339



γ-regioselective

- remote 1,6-addition
- excellent γ-regioselectivity
- up to 82% yield, >20:1 d.r.
- 21 examples

Synthesis

Synthesis **2022**, *54*, 4347–4352
DOI: 10.1055/s-0040-1719933

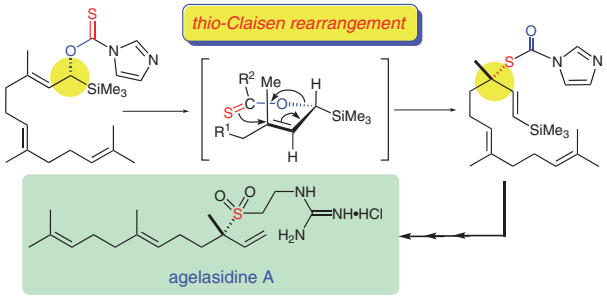
Y. Ichikawa*
R. Ochi
T. Masuda

Kochi University, Japan

Enantioselective Synthesis of (+)-Agelasidine A Using Thio-Claisen Rearrangement

Paper

4347



Synthesis

Synthesis **2022**, *54*, 4353–4360
DOI: 10.1055/a-1838-9491

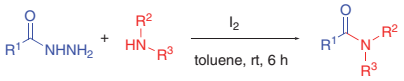
L. Tian
Q. Zhang
K. Ablajan*

Xinjiang University, P. R. of China

Iodine-Promoted N-Acylation of Amines with Hydrazide: An Efficient Metal-Free Amidation

Paper

4353



Metal-free
Broad substrate scope

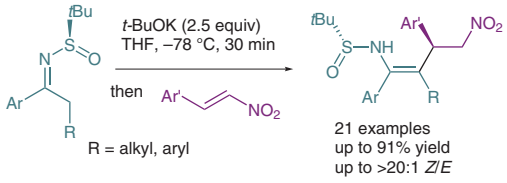
32 examples
up to 92% yield

Synthesis

Stereoselective Conjugate Addition-Enamination of α-Linear *N*-*tert*-Butanesulfinyl Ketimines with Nitroolefins

Synthesis **2022**, *54*, 4361–4370
DOI: 10.1055/s-0040-1719925

N. Yisimayili
L.-F. Chu
J. Feng
C.-D. Lu*
Xinjiang Technical Institute of Physics and Chemistry, P. R. of China

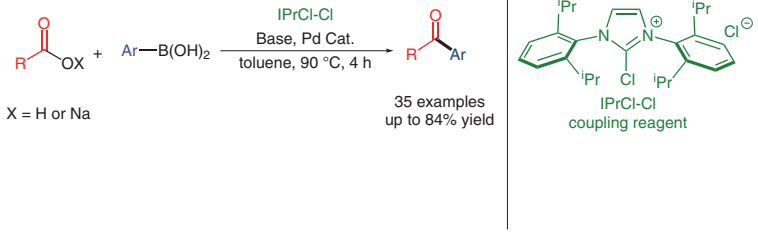


Synthesis

Palladium-Catalyzed Synthesis of Aryl Ketones from Carboxylic Acids and Arylboronic Acids Using 2-Chloroimidazolium Chloride as a Coupling Reagent

Synthesis **2022**, *54*, 4371–4380
DOI: 10.1055/a-1848-3399

W.-X. Zheng
J. Zhong
Y.-T. Yang
M. Luobu
Y. Zhang*
Y.-H. Wang*
Q.-W. Wang*
University of Chinese Academy of Sciences, P. R. of China
Xihua University, P. R. of China
Sichuan University, P. R. of China

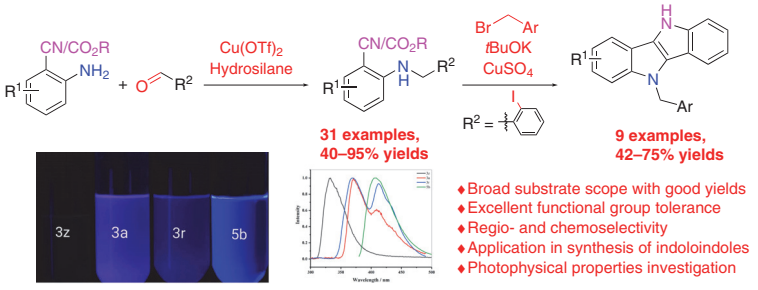


Synthesis

The Synthesis and Application of 2-Cyano and -Ester Containing Anilines: Selective Copper-Catalyzed Reductive Amination, *N*-Benzylation, and Cyclization Reactions

Synthesis **2022**, *54*, 4381–4391
DOI: 10.1055/a-1840-5768

Z. Huang
Z. Lin
J. Mai
S. Lv
F. Xie*
Y. Yuan
W. Zhang
F. Qian
B. Li*
Wuyi University, P. R. China

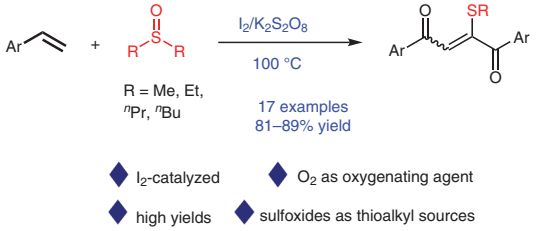


Synthesis

Synthesis **2022**, *54*, 4392–4400
DOI: 10.1055/s-0041-1737494

Iodine-Catalyzed Synthesis of Alkylthio-Substituted 1,4-Enediones from Styrenes and Dialkyl Sulfoxides

G. K. Rastogi
M. L. Deb*
P. K. Baruah*
Gauhati University, India



- I_2-catalyzed
- O_2 as oxygenating agent
- high yields
- sulfoxides as thioalkyl sources