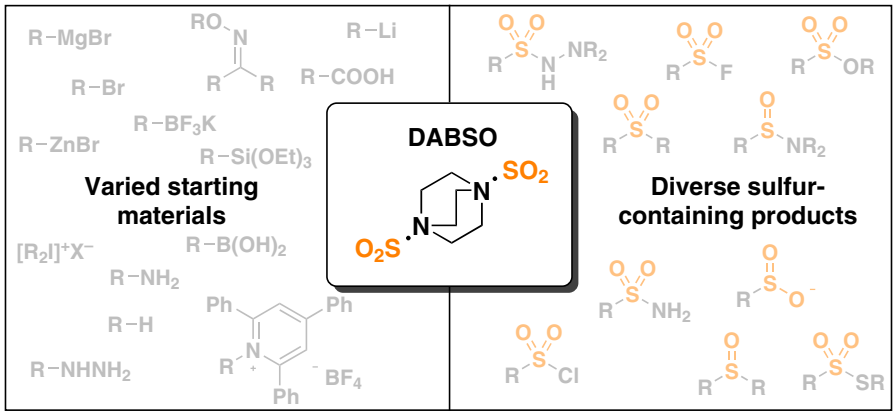
Synthesis

Reviews and Full Papers in Chemical Synthesis

April 1, 2022 • Vol. 54, 1671–1876



DABSO – A Reagent to Revolutionize Organosulfur Chemistry

J. A. Andrews, M. C. Willis

7

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Synthesis

Reviews and Full Papers in Chemical Synthesis

2022
Vol. 54, No. 7
April I

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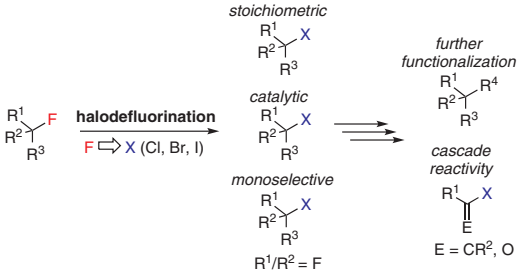
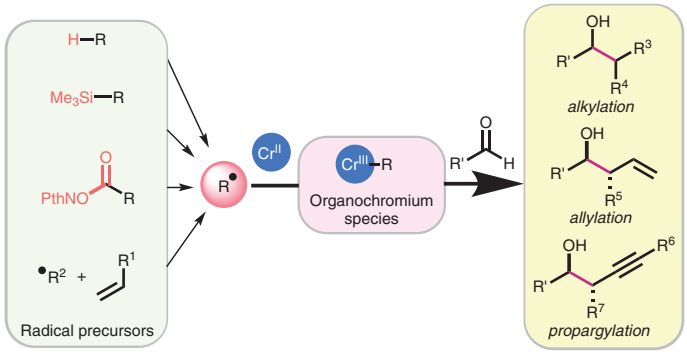




Synthesis

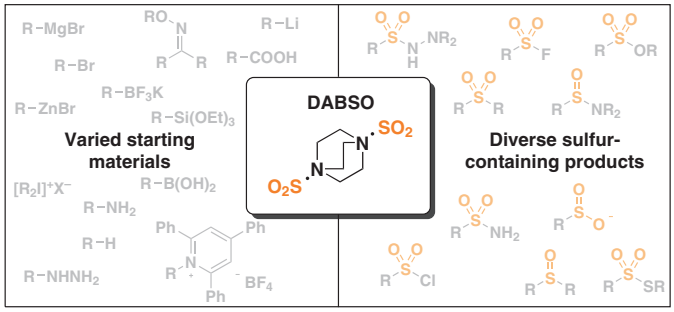
DABSO – A Reagent to Revolutionize Organosulfur Chemistry

Short Review

1695

Synthesis **2022**, *54*, 1695–1707
DOI: 10.1055/s-0040-1719864

J. A. Andrews
M. C. Willis*
University of Oxford, UK



Synthesis

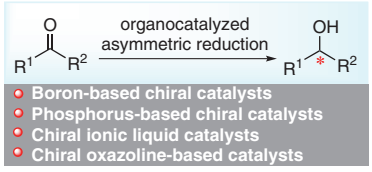
Recent Advances in Organocatalyzed Asymmetric Reduction of Prochiral Ketones: An Update

Short Review

1708

Synthesis **2022**, *54*, 1708–1720
DOI: 10.1055/a-1697-7758

X.-L. Qin
L.-J. Xu
F.-S. Han*
Changchun Institute of Applied Chemistry, P. R. of China
University of Science and Technology of China, P. R. of China



Synthesis

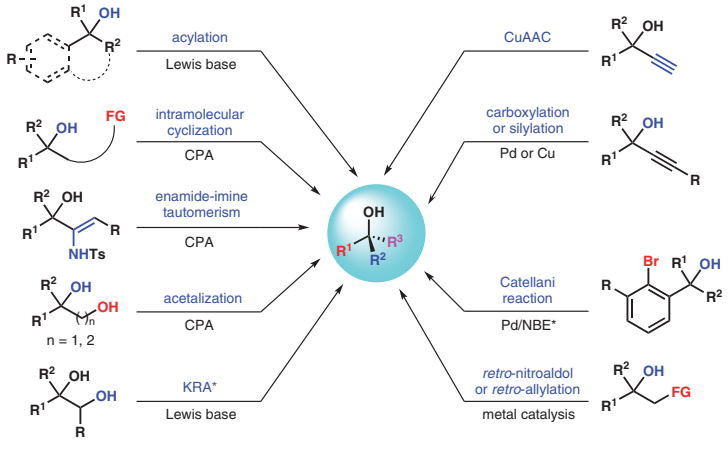
Recent Advances in Catalytic Nonenzymatic Kinetic Resolution of Tertiary Alcohols

Short Review

1721

Synthesis **2022**, *54*, 1721–1732
DOI: 10.1055/a-1712-0912

B. Ding
Q. Xue
S. Jia
H.-G. Cheng*
Q. Zhou*
Wuhan University, P. R. China



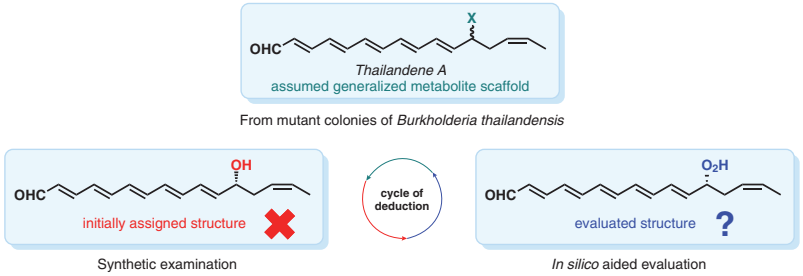
Synthesis

Synthesis **2022**, *54*, 1733–1744
DOI: 10.1055/s-0041-1737242

K. G. Primdahl
Å. Kaupang
J.-D. Park
M. R. Seyedsayamdost
J. M. J. Nolsøe
M. Aursnes*
University of Oslo, Norway

On the Structure of Thailandene A: Synthetic Examination of the Cryptic Natural Product Aided by a Theoretical Approach

Feature



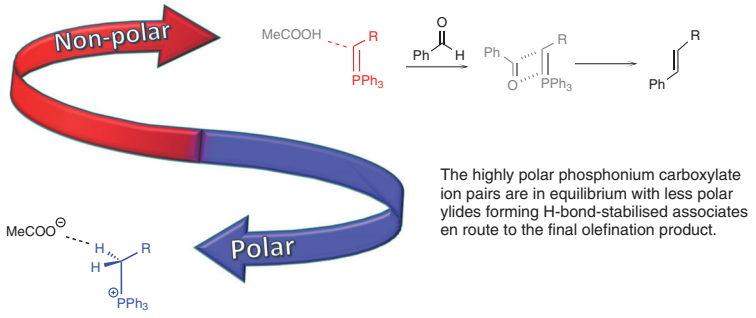
Synthesis

Synthesis **2022**, *54*, 1745–1752
DOI: 10.1055/s-0037-1610788

A. C. Vetter
H. Müller-Bunz
J. Muldoon
K. Nikitin*
University College Dublin, Ireland

Quaternary Phosphonium Carboxylates: Structure, Dynamics and Intriguing Olefination Mechanism

Feature



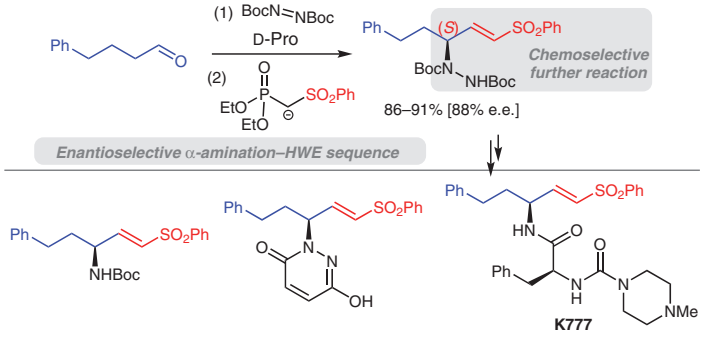
Synthesis

Synthesis **2022**, *54*, 1753–1764
DOI: 10.1055/s-0041-1737764

W. Shen
L. Cunningham
P. Evans*
University College Dublin, Ireland

Asymmetric Synthesis of γ-Amino-Functionalised Vinyl Sulfones: *De Novo* Preparation of Cysteine Protease Inhibitors

Feature



Synthesis

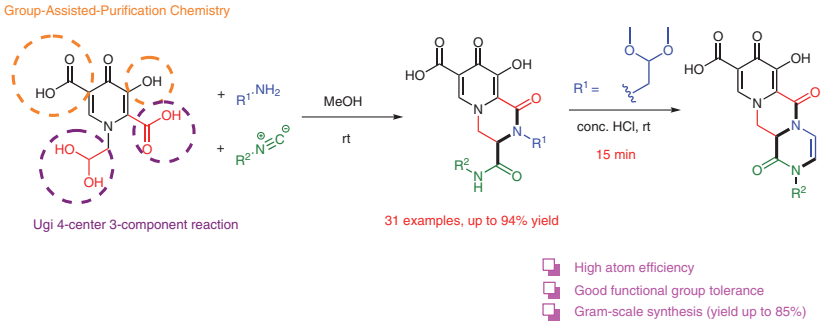
Synthesis **2022**, *54*, 1765–1774
DOI: 10.1055/a-1628-5304

D. Ke
Y. Wu
L. Zhang
J. Shao
Y. Yu
W. Chen*
Zhejiang University,
P. R. of China

Group-Assisted-Purification Chemistry Strategy for the Efficient Assembly of Cyclic Fused Pyridinones

Paper

1765



Synthesis

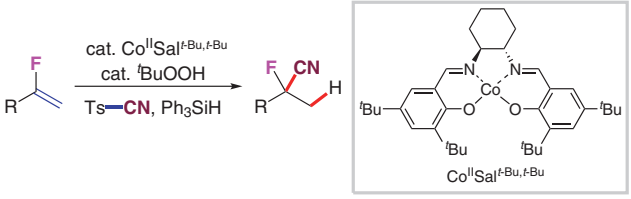
Synthesis **2022**, *54*, 1775–1784
DOI: 10.1055/s-0040-1719841

Y. Li
R. Cui
T.-R. Wu
X.-S. Wang*
University of Science and Technology of China, P. R. of China

Facile Synthesis of Quaternary α-Fluoronitriles by Cobalt-Catalyzed Hydrocyanation of Monofluoroalkenes

Paper

1775



** Co-catalyzed hydrocyanation of monofluoroalkenes*
** 19 new examples, up to 82% yield*
** good substrate scope and wide functional group compatibilities*

Synthesis

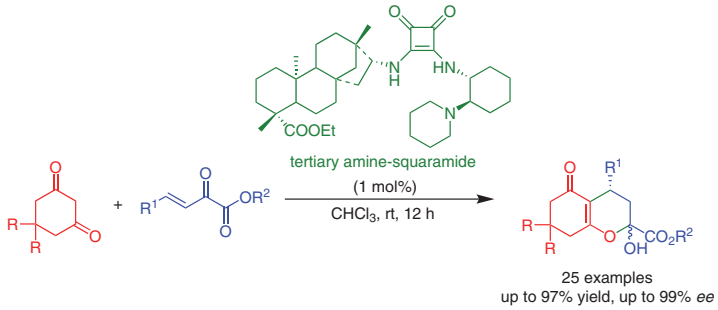
Synthesis **2022**, *54*, 1785–1792
DOI: 10.1055/s-0040-1719863

Z.-W. Ma*
C.-C. Wang
X.-P. Chen
A.-Q. Li
J.-C. Tao
Q.-J. Lv*
Henan University of Animal Husbandry and Economy,
P. R. of China

Highly Enantioselective Michael Addition of Cyclic Diketones to β,γ-Unsaturated α-Keto Esters Catalyzed by Squaramide Organocatalyst

Paper

1785



Synthesis

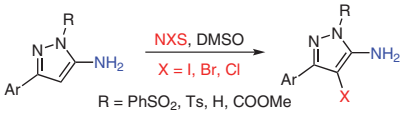
Halogenations of 3-Aryl-1*H*-pyrazol-5-amines

Paper

1793

Synthesis **2022**, *54*, 1793–1802
DOI: 10.1055/a-1684-0308

J. He
Y. Wei
Y. Feng
C. Li
B. Dai*
P. Liu*
Shihezi University, P. R. of China



- Mild reaction conditions
- Broad substrate scope (39 examples)
- Gram-scale synthesis
- Diversified transformations of products

Synthesis

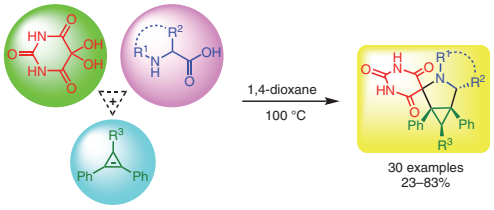
An Experimental and Theoretical Study of the 1,3-Dipolar Cycloaddition of Alloxan-Derived Azomethine Ylides to Cyclopropenes

Paper

1803

Synthesis **2022**, *54*, 1803–1816
DOI: 10.1055/a-1700-3115

A. S. Filatov
S. I. Selivanov
S. V. Shmakov
A. G. Larina
V. M. Boitsov*
A. V. Stepakov*
Saint-Petersburg State University, Russian Federation
Saint Petersburg National Research Academic University of the Russian Academy of Sciences, Russian Federation
Saint-Petersburg State Institute of Technology,
Russian Federation



Synthesis

[1,3]-Dithiolo-[4,5-*d*][1,3-dithiole]-2,5-dione

PSP

OPEN ACCESS

1817

Synthesis **2022**, *54*, 1817–1822
DOI: 10.1055/s-0040-1720891

H. Müller*
L. Bourcet
ESRF – The European Synchrotron, France

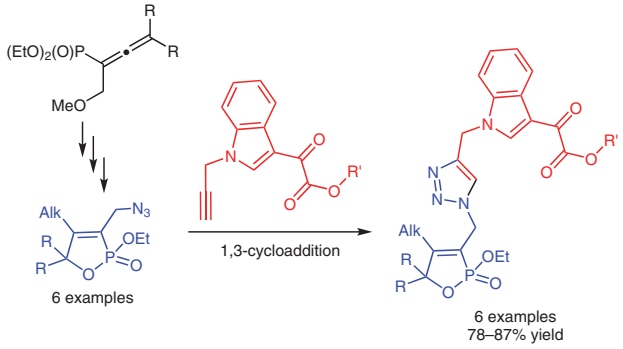
- No safety hazards
- Mild conditions
- Inexpensive reagents
- Eco-friendly
- Product of excellent purity

Synthesis

Synthesis **2022**, *54*, 1823–1832
DOI: 10.1055/s-0040-1720922

V. K. Brel*
E. P. Alekseychuk
O. I. Artyushin
L. V. Anikina
Nesmeyanov Institute of Organoelement Compounds Russian Academy of Sciences, Russian Federation

4-Alkyl-3-azidomethyl-2-ethoxy-2,5-dihydro-5*H*-1,2-oxaphosphole 2-Oxides: Synthesis and 1,3-Cycloaddition

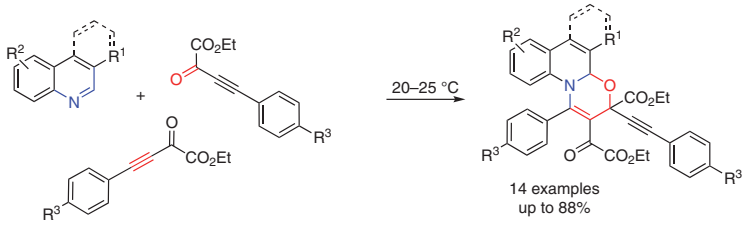


Synthesis

Synthesis **2022**, *54*, 1833–1842
DOI: 10.1055/a-1644-2930

K. V. Belyaeva
L. P. Nikitina
V. S. Gen'
A. V. Afonin
B. A. Trofimov*
A. E. Favorsky Irkutsk Institute of Chemistry, Russian Federation

Oxalylacetylenes as Dielectrophiles for Annulation of Quinoline Rings: Synthesis of Highly Functionalized 1,3-Oxazinoquinolines



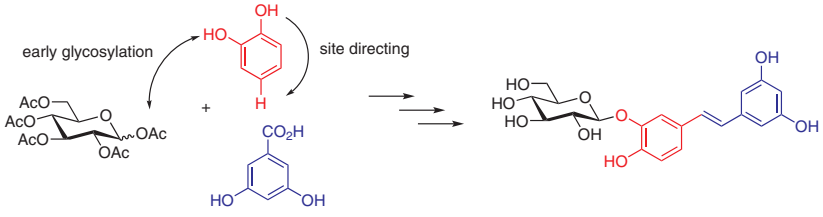
R^1 = H, Me
R^2 = H, 6-Me, 6-Cl, 6-MeO, 5-MeS, 5-Ph-CH=N, 6-O_2N
R^3 = H, Me, Cl, MeO, EtO

Synthesis

Synthesis **2022**, *54*, 1843–1849
DOI: 10.1055/a-1639-0648

J. Li*
X. Wang
R.-P. Zhang*
L. Chen
Yunnan University of Traditional Chinese Medicine, P. R. of China

Scalable Total Synthesis of Piceatannol-3′-*O*-β-D-glucopyranoside and the 4′-Methoxy Congener Thereof: An Early Stage Glycosylation Strategy



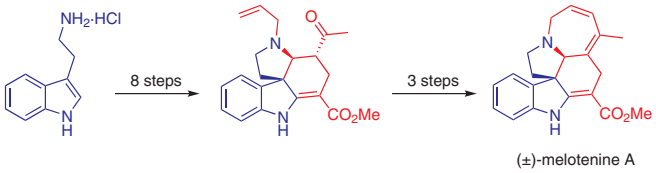
Synthesis

Synthesis **2022**, *54*, 1850–1856
DOI: 10.1055/a-1633-8333

A. Thanetchaiyakup
H. Rattanarat
S. Aree
T. Duangthongyou
T. Nanok
N. Chuanopparat
P. Ngernmeesri*
Kasetsart University, Thailand

Protecting-Group-Free Total Synthesis of Anticancer (±)-Melotenine A

Paper



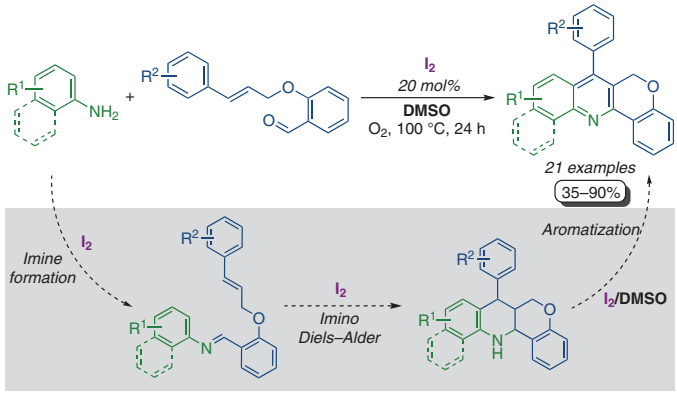
Synthesis

Synthesis **2022**, *54*, 1857–1869
DOI: 10.1055/a-1638-5030

A. Peñaranda Gómez
C. E. Puerto Galvis
M. A. Macías
C. Ochoa-Puentes
V. V. Kouznetsov*
Universidad Industrial de Santander, Colombia

I_2/DMSO-Promoted Synthesis of Chromeno[4,3-*b*]quinolines through an Imine Formation/Aza-Diels–Alder/Aromatization Tandem Reaction under Metal-Catalyst- and Photosensitizer-Free Conditions

Paper



Synthesis

Synthesis **2022**, *54*, 1870–1876
DOI: 10.1055/s-0041-1737817

I. Yavari*
P. Ravaghi
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Tarbiat Modares University, Iran

Diastereoselective Synthesis of Spirocyclopentene-Indanediones from Isocyanides, Acetylenic Esters, and NH-Acidic Compounds

Paper