Synthesis

Reviews and Full Papers in Chemical Synthesis

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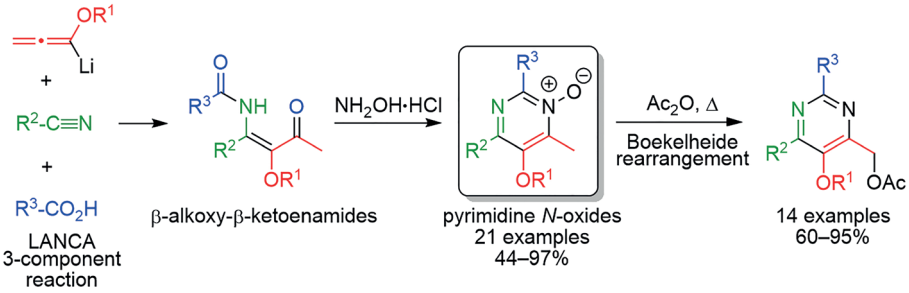

Access to Highly Substituted Pyrimidine *N*-Oxides and 4-Acetoxymethyl-Substituted Pyrimidines via the LANCA Three-Component Reaction–Cyclocondensation Sequence

L. Schefzig, T. Kurzawa, G. Rancan, I. Linder, S. Leisering, M. K. Bera, M. Gart, R. Zimmer, H.-U. Reissig

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Thieme

Synthesis

Reviews and Full Papers in Chemical Synthesis

2021
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June II

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Synthesis

Synthesis **2021**, *53*, 2015–2028
DOI: 10.1055/a-1370-2046

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Isoselenocyanates: Synthesis and Their Use for Preparing Selenium-Based Heterocycles

Short Review

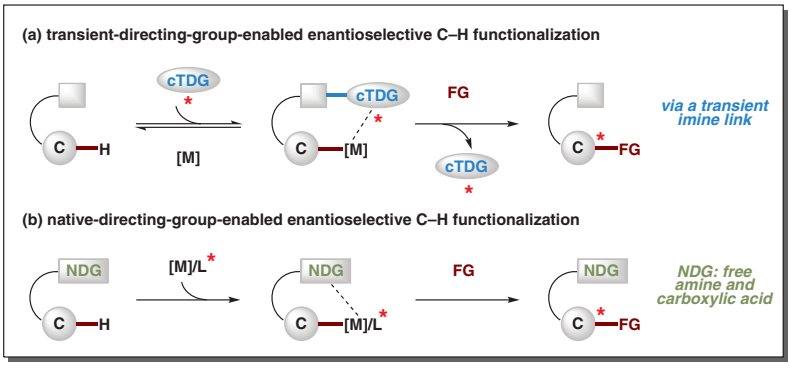
Synthesis

Synthesis **2021**, *53*, 2029–2042
DOI: 10.1055/a-1372-6627

B. Zu
Y. Guo
J. Ke
C. He*
Southern University of Science and Technology, P. R. of China

Transient- and Native-Directing-Group-Enabled Enantioselective C–H Functionalization

Short Review



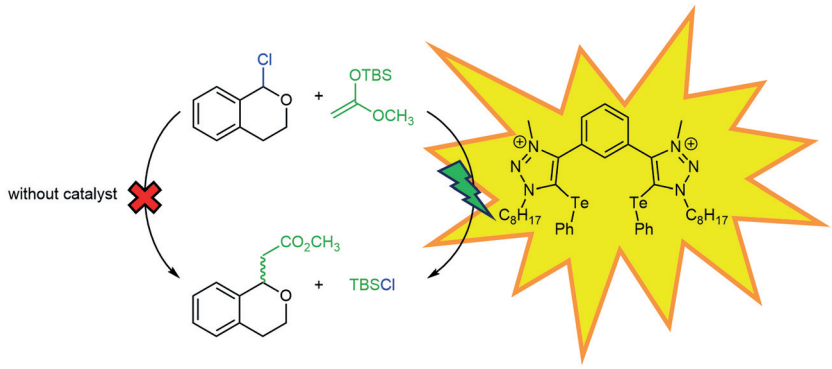
Synthesis

Synthesis **2021**, *53*, 2043–2050
DOI: 10.1055/a-1372-6309

T. Steinke
P. Wonner
E. Engelage
S. M. Huber*
Ruhr-Universität Bochum, Germany

Catalytic Activation of a Carbon–Chloride Bond by Dicationic Tellurium-Based Chalcogen Bond Donors

Feature



Synthesis

Synthesis **2021**, *53*, 2051–2056
DOI: 10.1055/s-0040-1706644

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Z. Wang
Y. Chen
G. Zhang*
Y. Yu*
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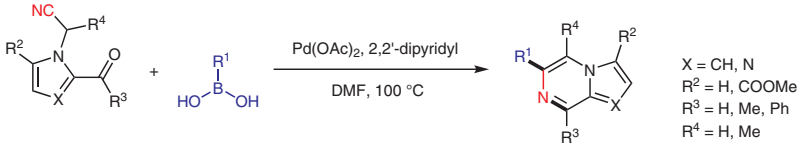
Palladium(II)-Catalyzed C(sp)–C(sp^2) Coupling: A Direct Approach to Multi-Substituted Pyrrolo[1,2-*a*]pyrazines

Paper



- C–C and C–N coupling cascade
- easy operation
- broad substrate scope

19 examples
up to 90% yield

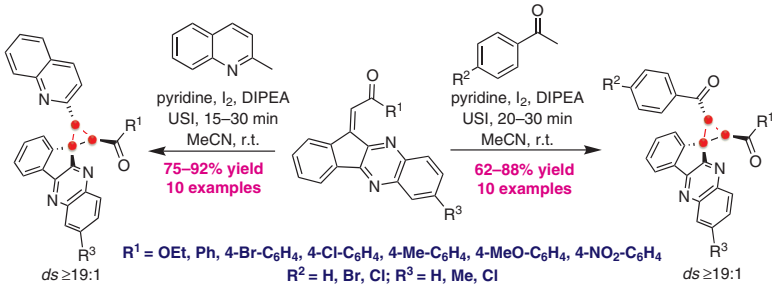
Synthesis

Synthesis **2021**, *53*, 2057–2066
DOI: 10.1055/a-1370-1884

I. Yavari*
S. Sheikhi
J. Sheykhahmadi
Z. Taheri
M. R. Halvagar
Tarbiat Modares University, Iran

Ultrasound-Promoted Synthesis of Spirocyclopropanes from Switchable Starting Materials *via* Azomethine Ylide [3+2]-Cycloaddition

Paper



R^1 = OEt, Ph, 4-Br-C_6H_4, 4-Cl-C_6H_4, 4-Me-C_6H_4, 4-MeO-C_6H_4, 4-NO_2-C_6H_4
R^2 = H, Br, Cl; R^3 = H, Me, Cl

• Efficient and Short Reactions • Easily Accessible Substrates • Remarkable Stereocontrol • Operationally Simple

Synthesis

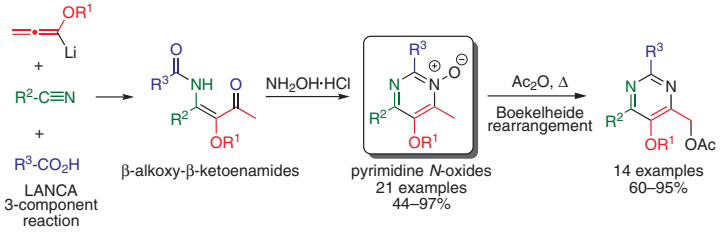
Synthesis **2021**, *53*, 2067–2080
DOI: 10.1055/s-0040-1706020

Access to Highly Substituted Pyrimidine *N*-Oxides and 4-Acetoxymethyl-Substituted Pyrimidines via the LANCA Three-Component Reaction–Cyclocondensation Sequence

Paper

2067

L. Schefzig
T. Kurzawa
G. Rancan
I. Linder
S. Leisering
M. K. Bera
M. Gart
R. Zimmer*
H.-U. Reissig*
Freie Universität Berlin, Germany



Synthesis

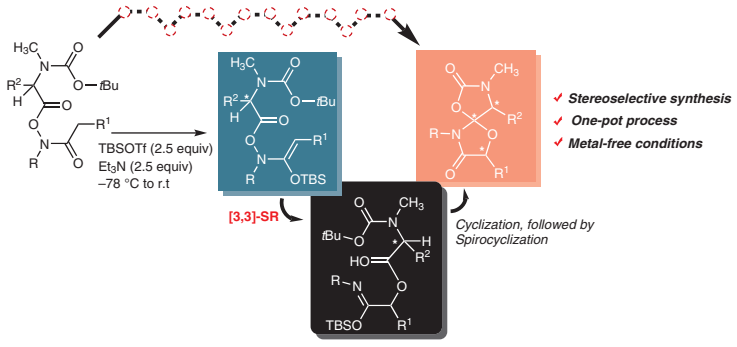
Synthesis **2021**, *53*, 2081–2091
DOI: 10.1055/s-0040-1706660

A Cascade Process of Hydroxamates Renders 1,6-Dioxa-3,9-diazaspiro[4.4]nonane-2,8-diones

Paper

2081

Z. Nazarian*
C. M. Forsyth*
Monash University, Australia



Synthesis

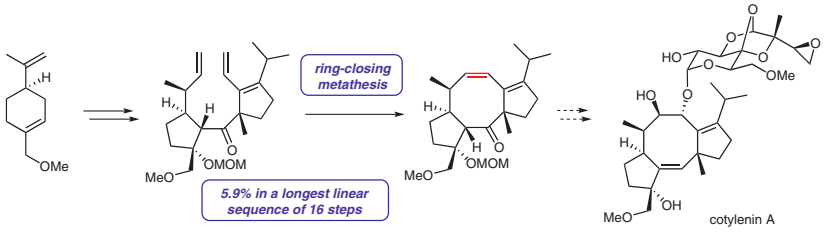
Synthesis **2021**, *53*, 2092–2102
DOI: 10.1055/s-0040-1706684

Stereoselective Convergent Synthesis of Carbon Skeleton of Cotylenin A Aglycone

Paper

2092

M. Kuwabara
A. Matsuo
S. Kamo
A. Matsuzawa
K. Sugita*
Hoshi University, Japan



Synthesis

Synthesis **2021**, *53*, 2103–2113
DOI: 10.1055/a-1364-9308

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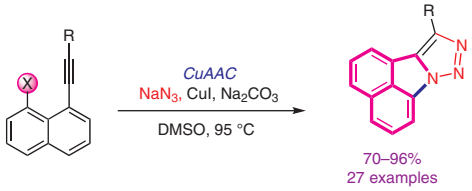
Jinan University, P. R. of China

Synthesis of 1,2,3-Triazole-Fused Indole Derivatives via Copper-Catalyzed Cascade Reaction

Paper



Synthesis

Synthesis **2021**, *53*, 2114–2132
DOI: 10.1055/a-1360-9716

S. Wang
A. S. Filatov
S. V. Lozovskiy
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O. V. Khoroshilova
A. G. Larina
S. I. Selivanov
V. M. Boitsov*
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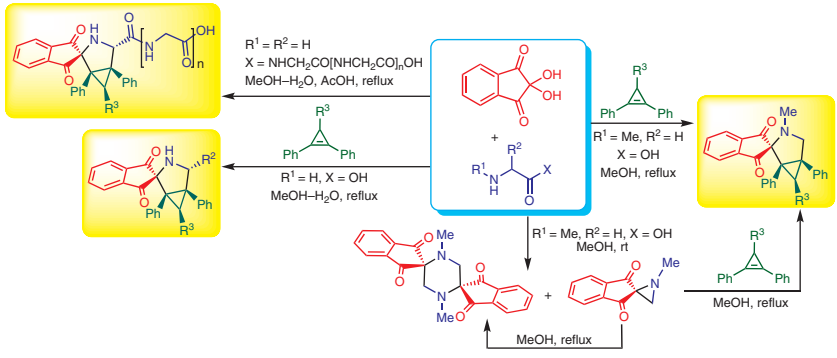
Saint Petersburg State University, Saint Petersburg Academic University Nanotechnology Research and Education Centre RAS, Pavlov First Saint Petersburg State Medical University, and Saint Petersburg State Institute of Technology, Russian Federation

Construction of Spiro[3-azabicyclo[3.1.0]hexanes] via 1,3-Dipolar Cycloaddition of 1,2-Diphenylcyclopropenes to Ninhydrin-Derived Azomethine Ylides

Paper



Synthesis

Synthesis **2021**, *53*, 2133–2141
DOI: 10.1055/a-1360-9852

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A. Hrebonkin
P. S. Lebed
G. P. Grabchuk
D. M. Volochnyuk*
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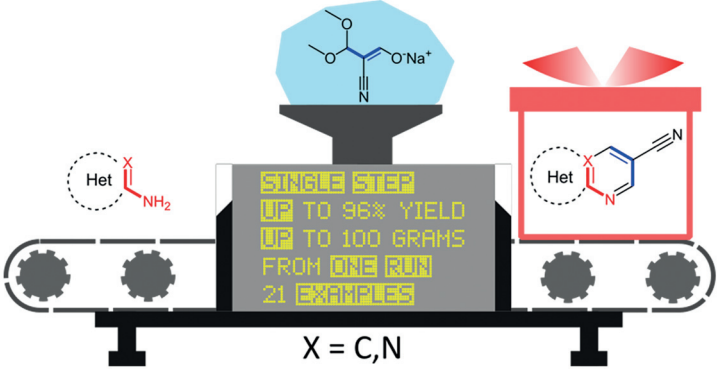
Enamine Ltd., Ukraine
Taras Shevchenko National University of Kyiv, Ukraine
Institute of Organic Chemistry, National Academy of Sciences, Ukraine

Efficient Route for the Synthesis of Diverse Heteroannelated 5-Cyanopyridines

Paper



Synthesis

Synthesis **2021**, *53*, 2142–2154
DOI: 10.1055/s-0040-1705993

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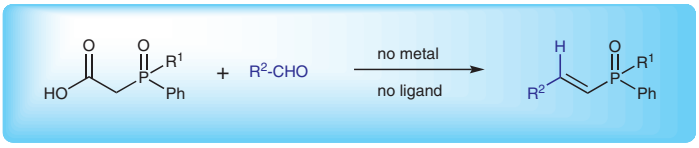
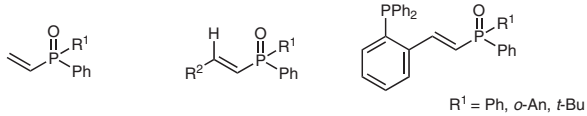
S. Frynas
K. Szwaczko*
Marie Curie-Sklodowska University in Lublin, Poland

Knoevenagel Condensation of Phosphinoylacetic Acids with Aldehydes: An Efficient One-Pot Strategy for the Synthesis of P-Functionalized Alkenyl Compounds

Paper
2142

Transition-metal-free approach to alkenylphosphine oxides





R^1 = Ph, *o*-An, *t*-Bu

>30 examples, yields up to 93%, excellent regioselectivity *E*/*Z* up to 99:1

Synthesis

Synthesis **2021**, *53*, 2155–2166
DOI: 10.1055/a-1348-9031

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M. Krasavin*
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Immanuel Kant Baltic Federal University, Russian Federation

Continued Exploration of Trifunctional Alkyl 4-Chloro-2-diazo-3-oxobutanoates: Streamlined Entry into [1,2,3]Triazolo[5,1-*c*][1,4]-benzoxazines and [1,2,3]Triazolo[5,1-*c*][1,4]benzoxazepines

Paper
2155