

Synthesis

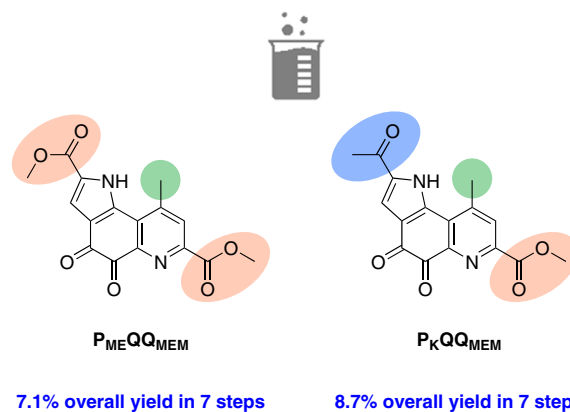
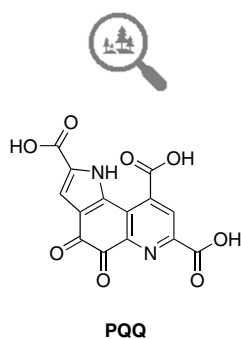
Reviews and Full Papers in Chemical Synthesis

March 16, 2023 • Vol. 55, 857–1006

Special Topic

Synthetic Advancements Enabled by Phosphorus Redox Chemistry

Editor: Corinna Schindler, Guest Editor: Valerie Schmidt



Modular Synthesis of New Pyrroloquinoline Quinone Derivatives

R. Janßen, V. A. Vetsova, D. Putz, P. Mayer, L. J. Daumann

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Synthesis

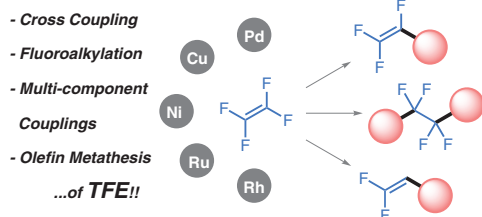
Synthesis **2023**, 55, 857–867
DOI: 10.1055/a-1983-5059

R. Doi
Y. Zhou
S. Ogoshi*
Osaka University, Japan

Transformation of Tetrafluoroethylene Using Transition-Metal Complexes

Short Review

857



Synthesis

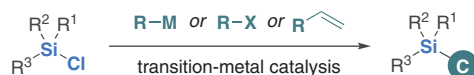
Synthesis **2023**, 55, 868–876
DOI: 10.1055/s-0042-1751398

Y.-H. Yang
X. Pang
X.-Z. Shu*
Lanzhou University,
P. R. of China

Transition-Metal-Catalyzed Cross-Coupling of Chlorosilanes

Short Review

868



Synthesis

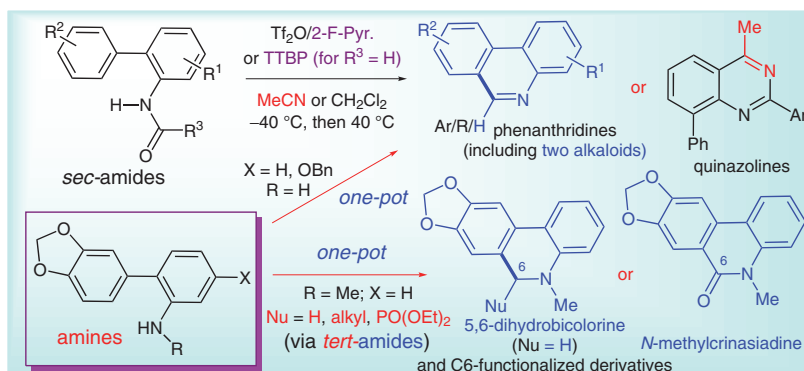
Tf₂O-Promoted Morgan–Walls Reaction: From a Flexible Approach to Functionalized Phenanthridines and Quinazolines to the Short and Divergent Total Syntheses of Alkaloids

Synthesis 2023, 55, 877–891
DOI: 10.1055/a-1957-4343

X.-Y. Su

P.-Q. Huang*

Xiamen University, P. R. of China



Synthesis

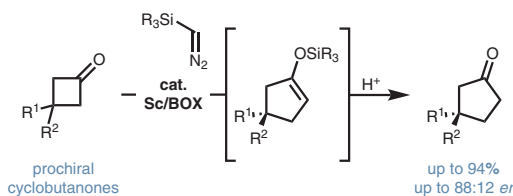
Lewis Acid Catalysed Asymmetric One-Carbon Ring-Expansion of Prochiral Cyclobutanones

Synthesis 2023, 55, 892–898
DOI: 10.1055/s-0042-1751386

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Germany



Synthesis

Phosphine-Catalyzed Z-Selective Carbonyl Fluorination of Alkynoates Bearing an N-Heteroarene Unit

Synthesis 2023, 55, 899–906
DOI: 10.1055/a-1948-3234

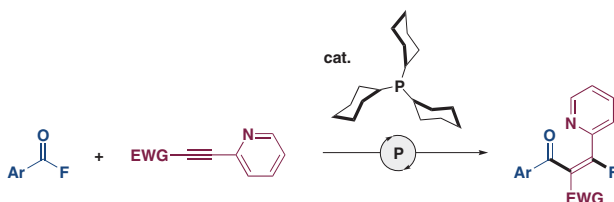
H. Fujimoto

S. Yamamura

N. Takenaka

M. Tobisu*

Osaka University, Japan



Synthesis

Synthesis 2023, 55, 907–918
DOI: 10.1055/a-1959-2742

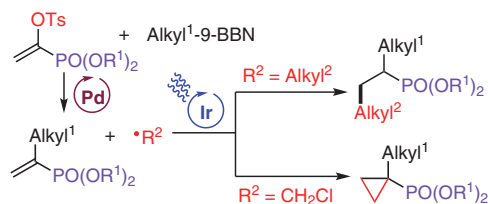
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J. Shi
Y. Fang*

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Ningbo University of Technology, P. R. of China

An Alternative to the Arbuzov Reaction: Generation and Transformation of α -Dialkyl-Substituted Methylphosphonate Carbanions via an SET Reduction Process

Special Topic

907



Synthesis

Synthesis 2023, 55, 919–926
DOI: 10.1055/a-1994-2301

D. Picthall
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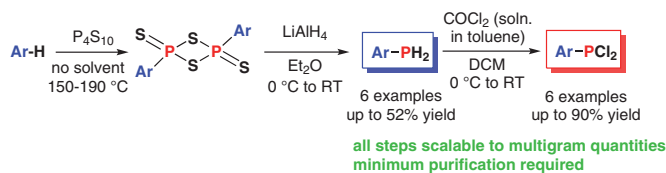
University of St. Andrews, UK

Convenient and Scalable Synthesis of Aryldichlorophosphines and Primary Arylphosphines via Perthiophosphonic Anhydrides

Special Topic

OPEN ACCESS

919



Synthesis

Synthesis 2023, 55, 927–933
DOI: 10.1055/a-1902-5592

C. R. Woof
T. G. Linford-Wood
M. F. Mahon
R. L. Webster*

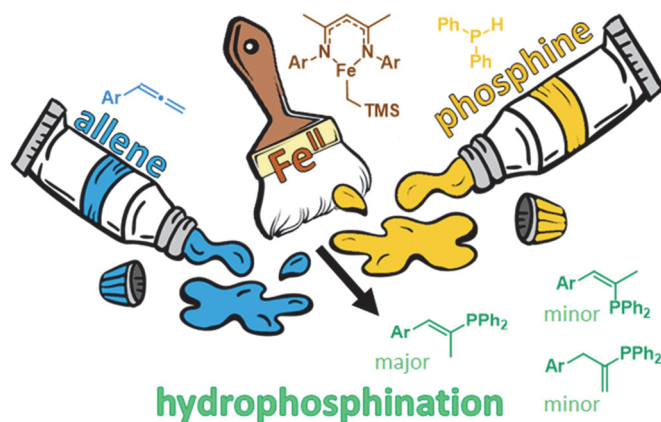
University of Bath, UK

Catalytic Hydrophosphination of Allenes Using an Iron(II) β -Diketiminato Complex

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927



Synthesis

Synthesis 2023, 55, 934–944
DOI: 10.1055/a-1948-3003

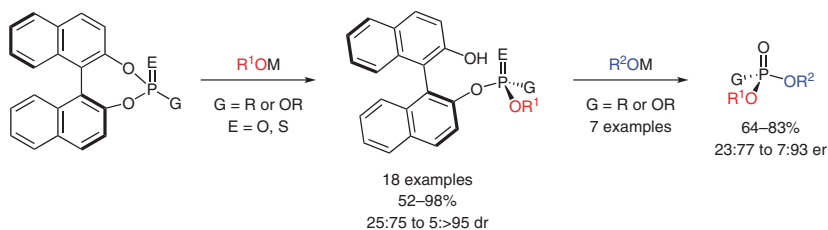
C. Endo
Y. Inoue
T. Maruyama
M. Minoura
T. Murai*

Gifu University, Japan

Two-Step Transesterification of Phosphates, Phosphorothioates, and Phosphonates with a Binaphthyl Group for the Synthesis of *P*-Chirogenic Phosphates and Phosphonates

Special Topic

934



Synthesis

Synthesis 2023, 55, 945–958
DOI: 10.1055/a-1961-8504

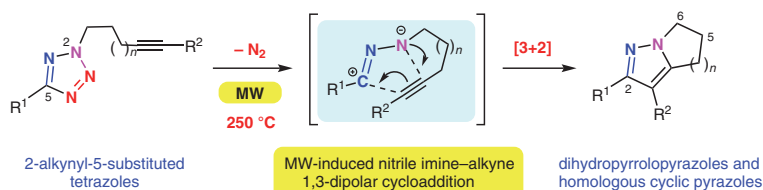
H. Yoneyama
M. Adachi
A. Morita
M. Nakagawa
M. Baba
K. Yamawaki
N. Hayama
S. Harusawa
Y. Usami*

Osaka Medical and Pharmaceutical University, Japan

Synthesis of 5,6-Dihydro-4*H*-pyrrolo[1,2-*b*]pyrazoles and Homologs from 5-Substituted 2-(Alkynyl)tetrazoles via Microwave-Induced Intra-molecular Nitrile-Imine–Alkyne 1,3-Dipolar Cycloaddition

Paper

945



Synthesis

Synthesis 2023, 55, 959–966
DOI: 10.1055/s-0042-1751389

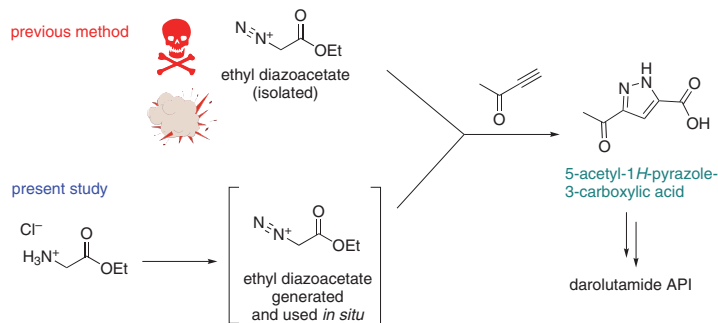
B. Szilágyi
A. Egyed
I. Mándity
T. Nagy
K. Kátai-Fadgyas
B. Volk*
G. M. Keserű*

Research Centre for Natural Sciences, Hungary
Egis Pharmaceuticals Plc., Hungary

Safe and Efficient Continuous-Flow Synthesis and Batchwise Hydrolysis of Ethyl 5-Acetyl-1*H*-pyrazole-3-carboxylate: A Key Synthon of Darolutamide

Paper

959



Synthesis

Synthesis 2023, 55, 967–976
DOI: 10.1055/a-1953-1849

W. C. de Souza

R. N. Lima

I. S. de Jesus

J. T. M. Correia*

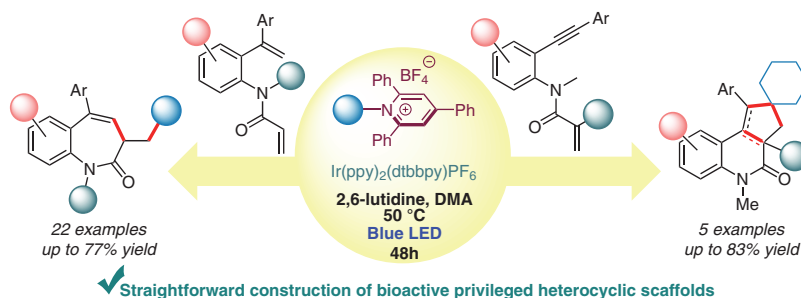
M. W. Paixão*

Federal University of São Carlos,
Brazil

Synthesis of Benzoazepinone Derivatives via Photoredox Deaminative Radical Cascade Alkylation of 1,7-Dienes and 1,7-Enynes

Paper

967



Synthesis

Synthesis 2023, 55, 977–988
DOI: 10.1055/s-0042-1751382

N. T. Pokhodylo*

M. A. Tupyach

E. A. Goreschnik

M. D. Obushak

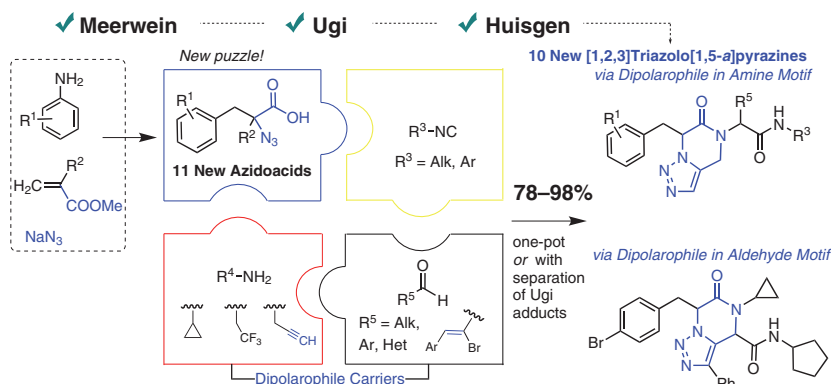
Ivan Franko National University
of Lviv, Ukraine

The Synthesis of Novel 7-(Substituted benzyl)-4,5-dihydro[1,2,3]-triazolo[1,5-a]pyrazin-6(7H)-ones via Tandem Ugi–Huisgen Reactions

Paper

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977



Synthesis

Synthesis 2023, 55, 989–999
DOI: 10.1055/a-1975-4377

Z. Huang

L. Dai

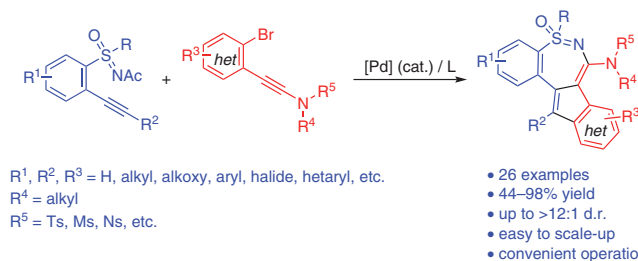
Z. Chen*

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P. R. of China

Palladium-Catalyzed Double Carbopalladation/*syn*-Insertion Cascade toward a Pragmatic Synthesis of Aminated Polyheterocyclic 1,2-Benzothiazepine 1-Oxides

Paper

989



Synthesis 2023, 55, 1000–1006
DOI: 10.1055/s-0041-1738426

1000

R. Janßen

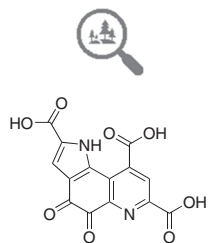
V. A. Vetsova

D. Putz

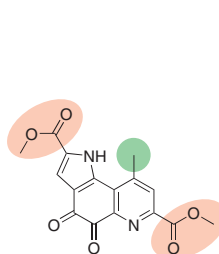
P. Mayer

L. J. Daumann*

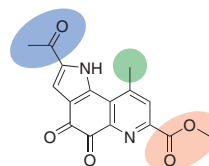
Ludwig-Maximilians-Universität
München, Germany



PQQ

P_{ME}QQ_{MEM}

7.1% overall yield in 7 steps

P_KQQ_{MEM}

8.7% overall yield in 7 steps