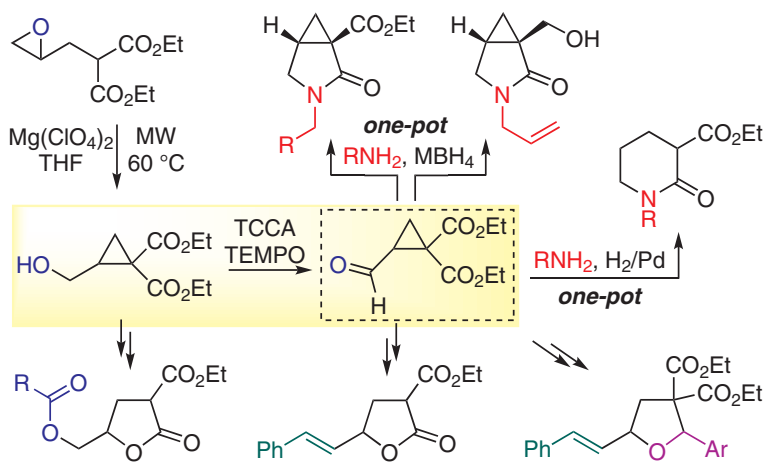


# Synthesis

Reviews and Full Papers in Chemical Synthesis

July 20, 2021 • Vol. 53, 2319–2516



Functionalized Cyclopropanes as Versatile Intermediates for the Diversity-Oriented Synthesis of  $\gamma$ -Lactones,  $\gamma$ -Lactams and  $\delta$ -Lactams

A. P. Maximiano, G. S. Ramos, M. V. Marques, M. M. Sá

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## Synthesis

*Synthesis* 2021, 53, 2319–2341  
DOI: 10.1055/a-1396-8343

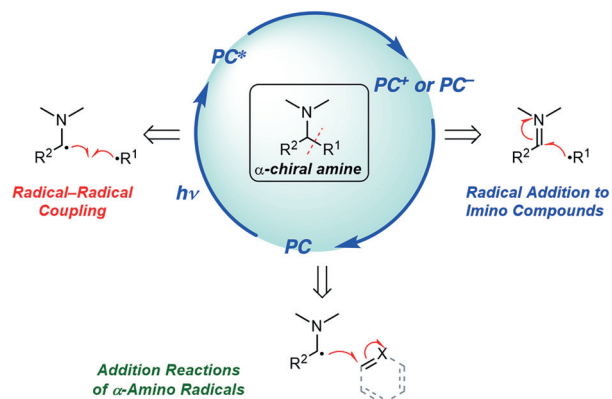
S. T. J. Cullen  
G. K. Friestad\*

University of Iowa, USA

## Synthesis of Chiral Amines by C–C Bond Formation with Photoredox Catalysis

Review

2319



## Synthesis

*Synthesis* 2021, 53, 2342–2366  
DOI: 10.1055/a-1394-7511

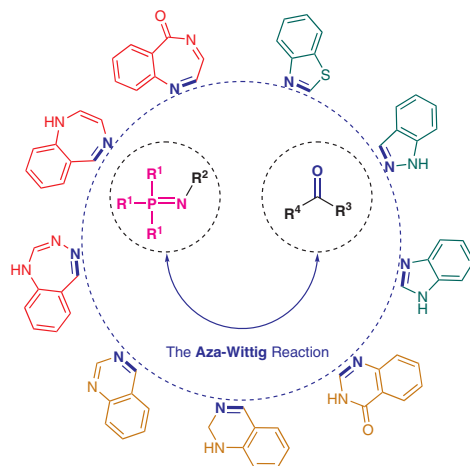
K. Pedrood  
M. N. Montazer  
B. Larijani  
M. Mahdavi\*

Tehran University of Medical Sciences, Iran

## Recent Advances in the Synthesis of Heterocycles by the Aza-Wittig Reaction

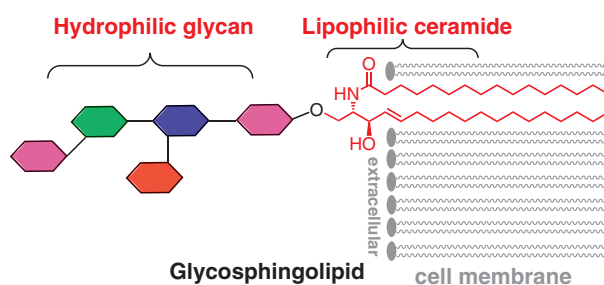
Short Review

2342



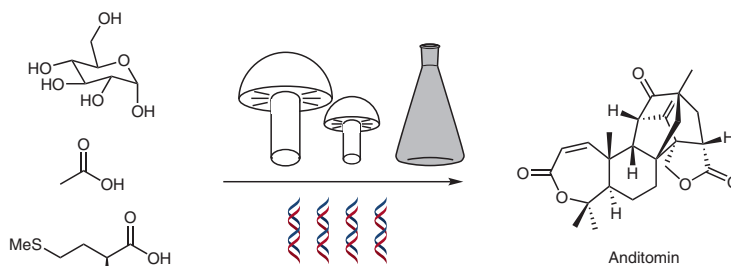
Synthesis 2021, 53, 2367–2380  
DOI: 10.1055/a-1426-4451

Q. Li  
Z. Guo\*  
University of Florida, USA



Synthesis 2021, 53, 2381–2394  
DOI: 10.1055/a-1401-2716

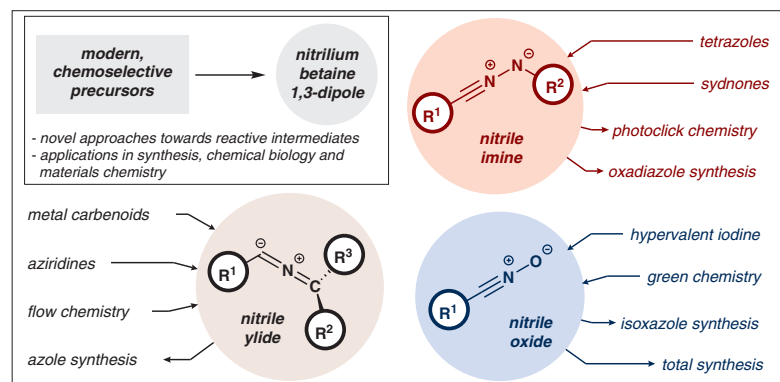
L. Kahlert  
C. Schotte  
R. J. Cox\*  
Leibniz University of Hannover,  
Germany



Total Synthesis of Known and New Fungal Natural Products by Pathway Expression

Synthesis 2021, 53, 2395–2407  
DOI: 10.1055/a-1389-1281

K. Livingstone  
G. Little  
C. Jamieson\*  
University of Strathclyde, UK

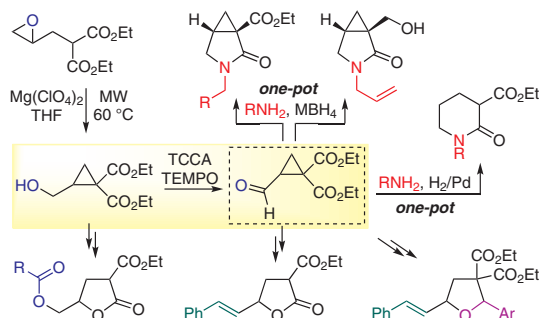


## Synthesis

Synthesis 2021, 53, 2408–2421  
DOI: 10.1055/a-1389-1203

A. P. Maximiano  
G. S. Ramos  
M. V. Marques  
M. M. Sá\*

Universidade Federal de Santa  
Catarina, Brazil

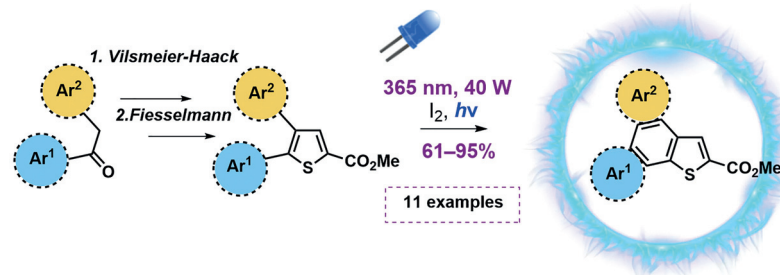
Functionalized Cyclopropanes as Versatile Intermediates for the Diversity-Oriented Synthesis of  $\gamma$ -Lactones,  $\gamma$ -Lactams and  $\delta$ -Lactams

## Synthesis

Synthesis 2021, 53, 2422–2434  
DOI: 10.1055/a-1416-4924

E. B. Ulyankin  
A. S. Kostyuchenko  
S. A. Chernenko  
M. O. Bystrushkin  
A. L. Samsonenko  
A. L. Shatsauskas  
A. S. Fisyuk\*

Omsk F. M. Dostoevsky State  
University, Russian Federation  
Omsk State Technical University,  
Russian Federation

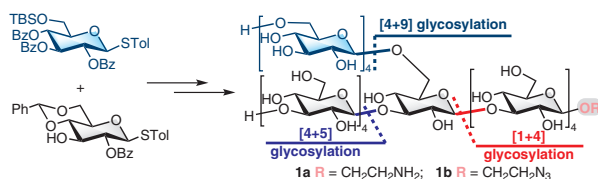
A Simple and Efficient Synthesis of Fused Benzo[*b*]thiophene Derivatives

## Synthesis

Synthesis 2021, 53, 2435–2448  
DOI: 10.1055/a-1440-9386

X. Zhou  
Q. Long  
D. Li  
J. Gao  
Q. Sun  
S. Sun  
Y. Su  
P. Wang  
W. Peng\*  
M. Li\*

Ocean University of China, P. R.  
of China  
Shanghai Jiao Tong University,  
P. R. of China  
Laboratory for Marine Drugs and  
Bioproducts, P. R. of China

Convergent Synthesis of Branched  $\beta$ -Glucan Tridecasaccharides Ready for Conjugation

- convergent synthesis based on catalytic glycosylation of glycosyl trichloroacetimidates
- in 4.7% and 3.9% overall yield and in the longest linear sequence of 16 and 17 steps
- gram-scale access to the nonasaccharide main chain
- installation of the tetrasaccharide branch via orthoester rearrangement

## Synthesis

Synthesis 2021, 53, 2449–2456  
DOI: 10.1055/a-1396-8123

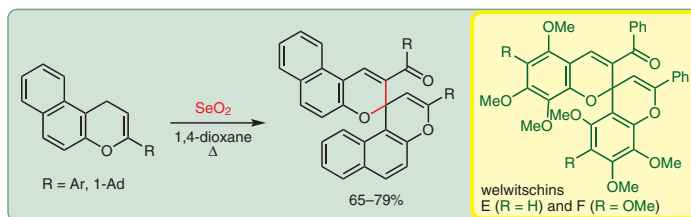
M. R. Demidov  
V. A. Osyanin\*  
D. V. Osipov  
Y. N. Klimochkin

Samara State Technical University,  
Russian Federation

### Oxidative Dimerization of 1*H*-Benzo[*f*]chromenes: Synthesis of Benzannulated Analogues of Spirobiflavonoids Welwitschins E and F

Paper

2449



## Synthesis

Synthesis 2021, 53, 2457–2468  
DOI: 10.1055/a-1401-2795

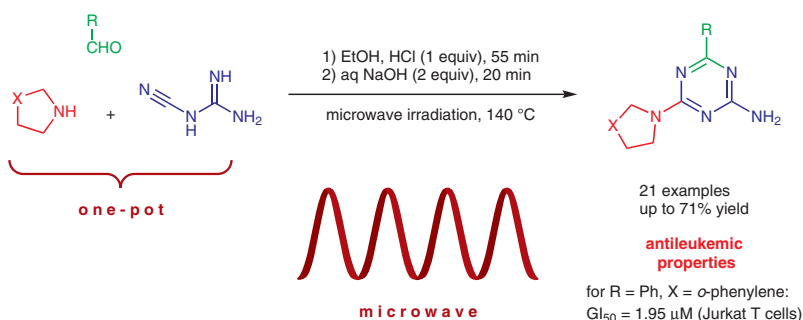
M. S. Bin Shahari  
A. Junaid  
E. R. T. Tiekink  
A. V. Dolzhenko\*

Monash University Malaysia,  
Malaysia  
Curtin University, Australia

### A New One-Pot Three-Component Synthesis of 4-Aryl-6-cycloamino-1,3,5-triazin-2-amines under Microwave Irradiation

Paper

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## Synthesis

Synthesis 2021, 53, 2469–2476  
DOI: 10.1055/a-1396-8198

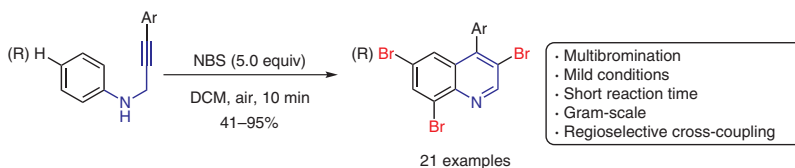
S. Deng  
W. Ouyang  
J. Bai  
X.-R. Song  
R. Yang\*  
Q. Xiao\*

Jiangxi Science & Technology  
Normal University,  
P. R. of China

### Synthesis of Multibromo-Substituted Quinolines by NBS-Mediated Cascade Electrophilic Bromination/Cyclization of *N*-(3-Phenylprop-2-ynyl)anilines

Paper

2469



## Synthesis

*Synthesis* 2021, 53, 2477–2484  
DOI: 10.1055/a-1396-8607

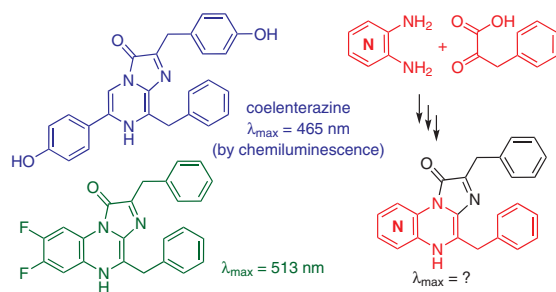
G. Gagnot  
P. Legrand  
A. Tadros  
F. Ezzahra Hibti  
A. Quatela  
Y. L. Janin\*

Unité de Chimie et Biocatalyse,  
Institut Pasteur, France  
Université de Paris, France

## On Pyridopyrazinol Chemistry: Synthesis of Chemiluminescent Substances

Paper

2477



## Synthesis

*Synthesis* 2021, 53, 2485–2493  
DOI: 10.1055/a-1430-5100

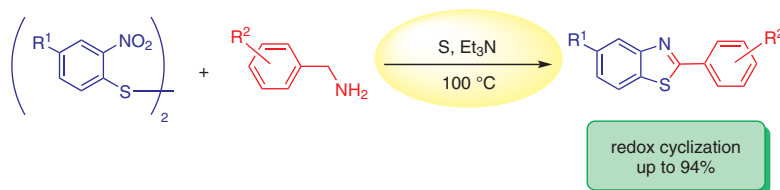
M. Teramoto\*  
M. Imoto  
M. Takeda  
T. Mizuno\*  
A. Nomoto  
A. Ogawa

Seika Corporation, Japan  
Osaka Prefecture University,  
Japan

## Sulfur-Promoted Redox Cyclization of 2,2'-Dinitrodiphenyl Disulfides and Benzylamines

Paper

2485



## Synthesis

*Synthesis* 2021, 53, 2494–2502  
DOI: 10.1055/a-1399-3823

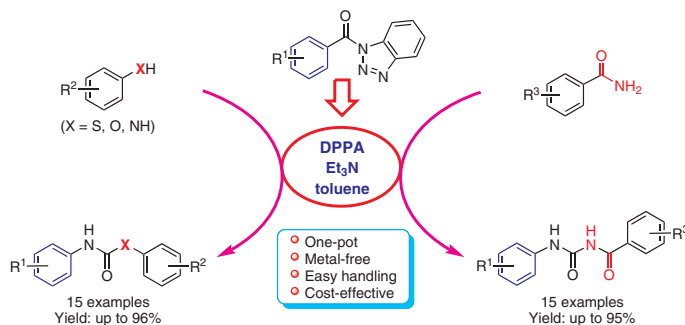
M. S. Yadav  
S. K. Singh  
A. K. Agrahari  
A. S. Singh  
V. K. Tiwari\*

Banaras Hindu University, India

*N*-Acylbenzotriazoles as Proficient Substrates for an Easy Access to Ureas, Acylureas, Carbamates, and Thiocarbamates *via* Curtius Rearrangement Using Diphenylphosphoryl Azide (DPPA) as Azide Donor

Paper

2494



## Synthesis

Synthesis 2021, 53, 2503–2511  
DOI: 10.1055/a-1404-5079

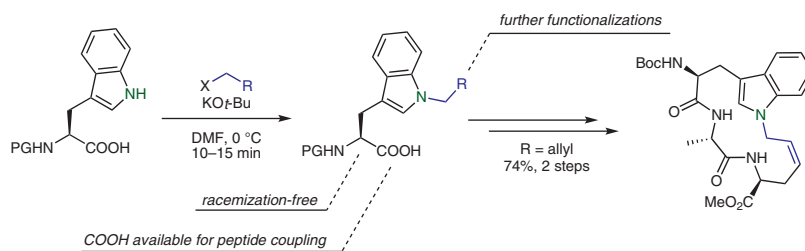
L. Junk\*  
E. Papadopoulos  
U. Kazmaier

Saarland University, Germany

## Tryptophan *N*<sup>1</sup>-Alkylation: Quick and Simple Access to Diversely Substituted Tryptophans

Paper

2503



## Synthesis

Synthesis 2021, 53, 2512–2516  
DOI: 10.1055/a-1404-4966

B. M. Gross  
M. Oestreich\*

Technische Universität Berlin,  
Germany

## The Trityl Cation Embedded into a [7]Helicene-Like Backbone: Preparation and Application as a Lewis Acid Catalyst

Paper

2512

