

# Synthesis

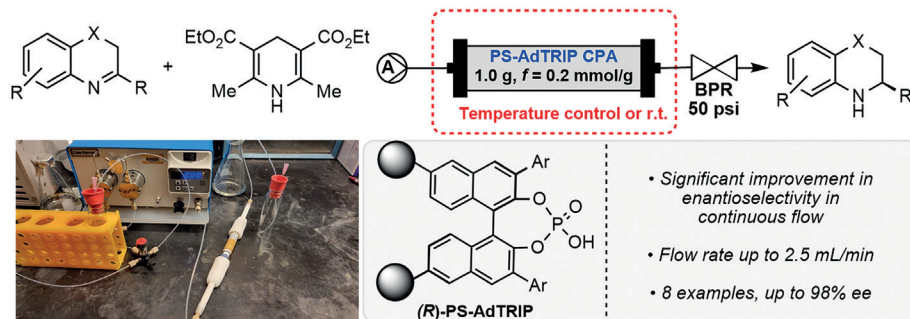
Reviews and Full Papers in Chemical Synthesis

August 1, 2023 • Vol. 55, 2261–2414

## Special Issue

dedicated to Prof. David A. Evans

Editors: Corinna Schindler, Mark Lautens



Asymmetric Transfer Hydrogenation of Heterocyclic Compounds in Continuous Flow Using an Immobilized Chiral Phosphoric Acid as the Catalyst

O. Zhelavskyi, Y.-J. Jhang, P. Nagorny

15

## Synthesis

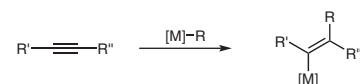
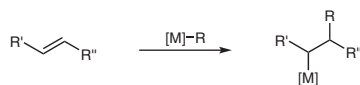
*Synthesis* **2023**, 55, 2261–2272  
DOI: 10.1055/s-0042-1751362

**Y. Liu**  
**K. A. Woerpel\***  
New York University, USA

## Uncatalyzed Carbometallation Involving Group 13 Elements: Carboboration and Carboalumination of Alkenes and Alkynes

Short Review

2261



- [M] = B or Al
- no catalyst needed

## Synthesis

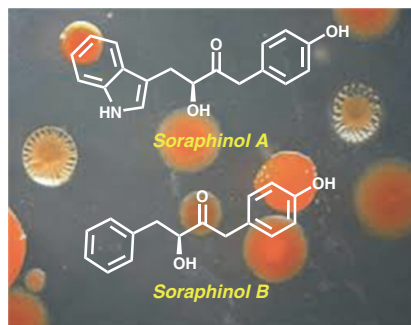
*Synthesis* **2023**, 55, 2273–2284  
DOI: 10.1055/a-2004-1228

**M. Rizzacasa\***  
**M. Ricca**  
University of Melbourne,  
Australia

## Chemistry and Biology of Acyloin Natural Products

Short Review

2273



## Synthesis

Synthesis 2023, 55, 2285–2303  
DOI: 10.1055/a-2017-4868

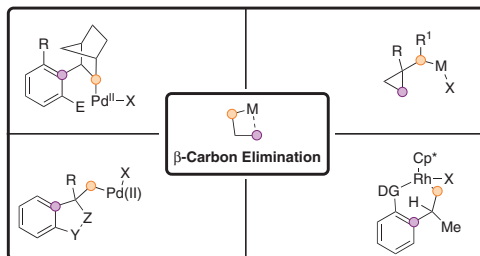
A. D. Marchese  
B. Mirabi  
M. Lautens\*

University of Toronto, Canada

Recent Developments of Palladium- and Rhodium-Catalyzed  $\beta$ -Carbon Elimination Strategies

## Short Review

2285



## Synthesis

Synthesis 2023, 55, 2304–2310  
DOI: 10.1055/a-2085-4089

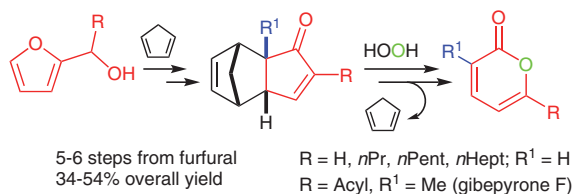
D. Dobler  
M. Leitner  
P. Kreitmeier  
O. Reiser\*

University of Regensburg,  
Germany

## Synthesis of 2-Pyrones from Renewable Resources

## Paper

2304



## Synthesis

Synthesis 2023, 55, 2311–2318  
DOI: 10.1055/s-0042-1751442

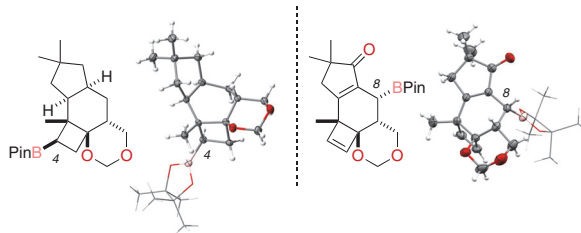
J. Proessdorf  
C. Jandl  
T. Pickl  
T. Bach\*

Technische Universität  
München, Germany

## Synthesis of Boronates with a Protoilludane Skeleton

## Paper

2311



## Synthesis

*Synthesis* **2023**, *55*, 2319–2324  
DOI: 10.1055/s-0042-1751413

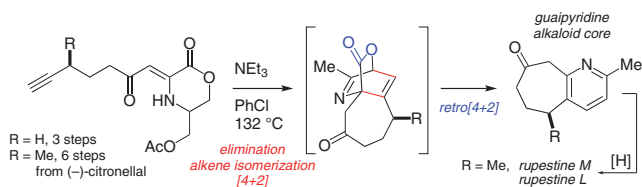
**J. R. Scheerer\***  
**E. B. Leeth**  
**J. A. Sprow**

Department of Chemistry, William & Mary, USA

### Synthesis of Guaipyrindine Alkaloids Rupestine M and L by Cycloaddition/Cycloreversion of an Intermediate 1,4-Oxazinone

Paper

2319



## Synthesis

*Synthesis* **2023**, *55*, 2325–2332  
DOI: 10.1055/s-0042-1752404

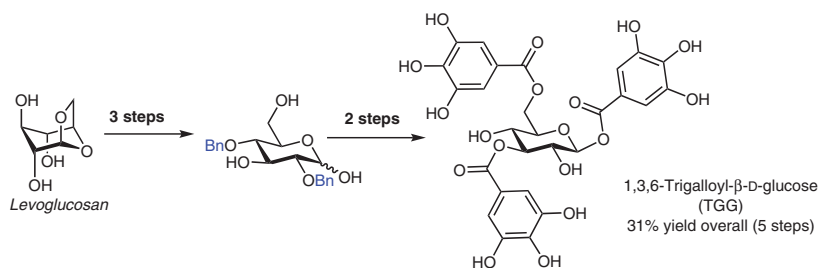
**Y. Pauvert**  
**R. Gaudreault**  
**A. B. Charette\***

Université de Montréal, Canada

### Improved Total Synthesis of 1,3,6-Trigalloyl-β-D-glucose from Glucose

Paper

2325



## Synthesis

*Synthesis*, **2023**, 2333–2342  
DOI: 10.1055/a-2022-1809

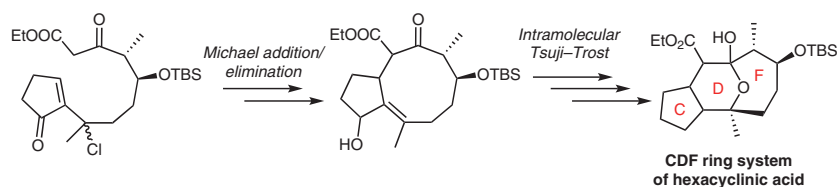
**A. Audic**  
**J. Prunet\***

University of Glasgow, UK

### Synthesis of the CDF Ring System of Hexacyclinic Acid

Paper

2333



## Synthesis

Synthesis 2023, 55, 2343–2352  
DOI: 10.1055/a-2022-1511

S. Dutta  
K. Bhatt  
F. Cuffel  
D. Seidel\*

University of Florida, USA

### Synthesis of Polycyclic Imidazoles via $\alpha$ -C–H/N–H Annulation of Alicyclic Amines

Paper

2343



## Synthesis

Synthesis 2023, 55, 2353–2360  
DOI: 10.1055/s-0041-1738430

J. T. Liu  
D. S. Brandes  
N. S. Greenwood  
J. A. Ellman\*

Yale University, USA

### Synthesis of *N*-Acylsulfenamides from Amides and *N*-Thiosuccinimides

Paper

2353



## Synthesis

Synthesis 2023, 55, 2361–2369  
DOI: 10.1055/a-2085-5256

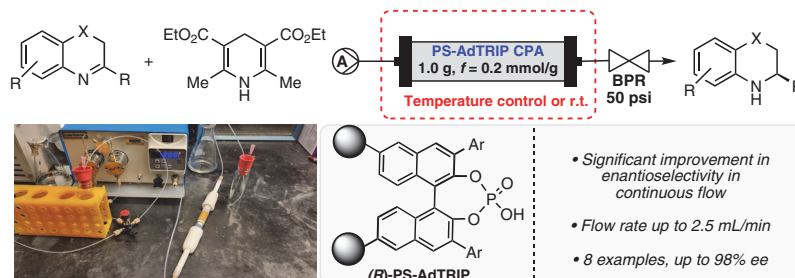
O. Zhelavskiy  
Y.-J. Jhang  
P. Nagorny\*

University of Michigan, USA

### Asymmetric Transfer Hydrogenation of Heterocyclic Compounds in Continuous Flow Using an Immobilized Chiral Phosphoric Acid as the Catalyst

Paper

2361



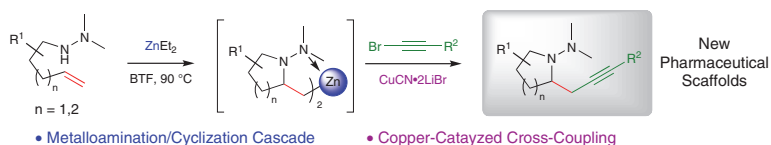
Synthesis

Synthesis 2023, 55, 2370–2376  
DOI: 10.1055/s-0042-1751467

C. Frabitore  
T. Livinghouse\*  
Montana State University, USA

On the Copper(I)-Catalyzed Cross-Coupling of 1-Bromoalkynes with N-Heterocyclic Organozinc Reagents: Substrate Scope and Catalyst Evaluation

Paper  
2370



14 Examples with 5 R Groups | Up To 92% Yield | Scalability | Wide Functional Group Tolerance

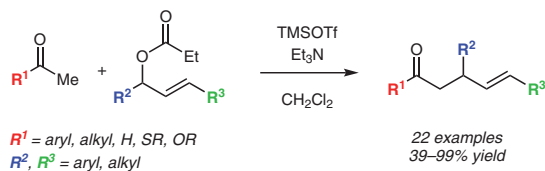
Synthesis

Synthesis 2023, 55, 2377–2389  
DOI: 10.1055/a-1959-2505

E. D. Heafner  
X. Lin  
A. H. Connors  
H. Zhong  
R. J. Coyle  
Y. Liu  
C. W. Downey\*  
University of Richmond, USA

One-Pot Enol Silane Formation–Allylation of Ketones Promoted by Trimethylsilyl Trifluoromethanesulfonate

Paper  
2377



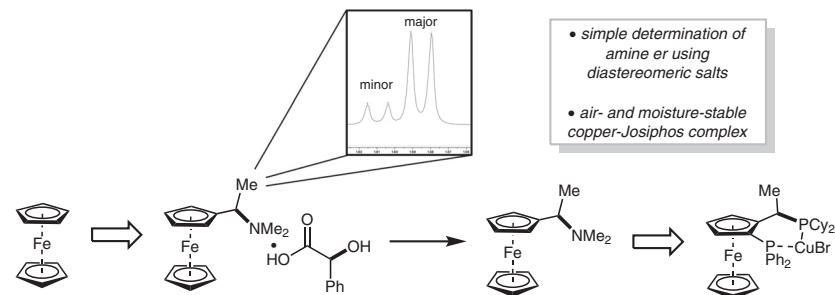
Synthesis

Synthesis 2023, 55, 2390–2396  
DOI: 10.1055/s-0042-1751393

E. C. Murphy  
J. S. Johnson\*  
University of North Carolina at  
Chapel Hill, USA

Simplified Synthesis of an Air-Stable Copper-Complexed Josiphos Ligand via Ugi's Amine: Complete Preparation and Analysis from Ferrocene

Paper  
2390



## Synthesis

*Synthesis* 2023, 55, 2397–2405  
DOI: 10.1055/a-1989-2633

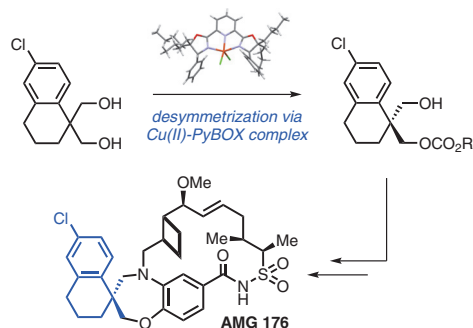
P. K. Ananthoji  
A. Arunachalampillai  
M. G. Beaver  
Y.-Q. Fang  
S. J. Hedley  
B. S. Lucas  
J. S. Tedrow  
M. M. Faul\*

Process Development, Amgen  
Inc., USA

## Desymmetrization of a Propane-1,3-diol to Introduce the Quaternary Chiral Center of an AMG 176 Drug Substance Intermediate

Paper

2397



## Synthesis

*Synthesis* 2023, 55, 2406–2414  
DOI: 10.1055/a-2004-1093

E. K. Burke  
E. N. Welsh  
K. N. Robertson  
A. W. Speed\*

Dalhousie University, Canada

Efficient Synthesis and Functionalization of 3-Bromonaphtho[2,3-*b*]thiophene

Paper

2406

