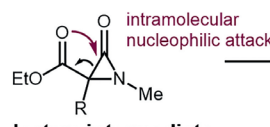
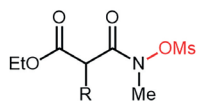


# Synthesis

Reviews and Full Papers in Chemical Synthesis

August 17, 2023 • Vol. 55, 2416–2608

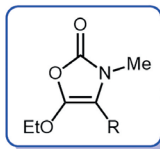
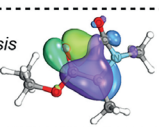
**N-mesyloxyamides**



**α-lactam intermediate**

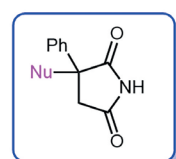
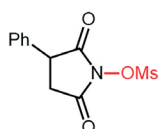
followed by IBO analysis

$$\psi_i(r) = \sum_k^N \psi_k(r) U_{ki}$$



**fully substituted oxazolones**  
up to 94% yield  
masked α-amino acids

**N-mesyloxyimides**



**quaternary succinimides**

Use of the N–O Bonds in *N*-Mesyloxyamides and *N*-Mesyloxyimides To Gain Access to 5-Alkoxy-3,4-dialkyloxazol-2-ones and 3-Hetero-Substituted Succinimides: A Combined Experimental and Theoretical Study

*L. Pfitzer, J. Heitkämper, J. Kästner, R. Peters*

16

## Synthesis

*Synthesis* **2023**, 55, 2415–2426  
DOI: 10.1055/s-0042-1751450

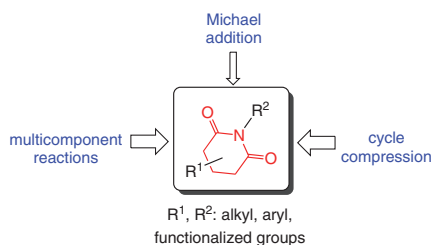
**Y. A. Trukhanova\***  
**N. M. Chernov**  
**E. V. Kuvaeva**  
**I. P. Yakovlev**

Saint Petersburg State Chemical  
and Pharmaceutical University,  
Russian Federation

## Preparation of *N*- and *C*-Functionally-Substituted Glutarimides: A Review

Review

2415



## Synthesis

*Synthesis* **2023**, 55, 2427–2438  
DOI: 10.1055/a-2039-5424

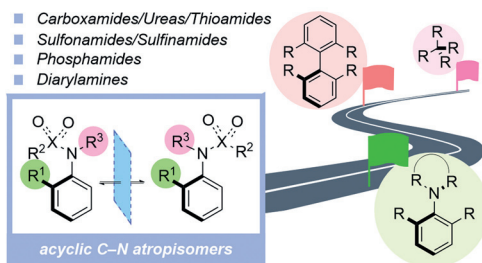
**A. D. G. Campbell**  
**R. J. Armstrong\***

Newcastle University, UK

## Synthetic Strategies to Control *C*-*N* Atropisomerism in Acyclic Amines and Amides

Short Review

OPEN ACCESS 2427



## Synthesis

Synthesis 2023, 55, 2439–2459  
DOI: 10.1055/a-2085-3410

E. Juaristi\*

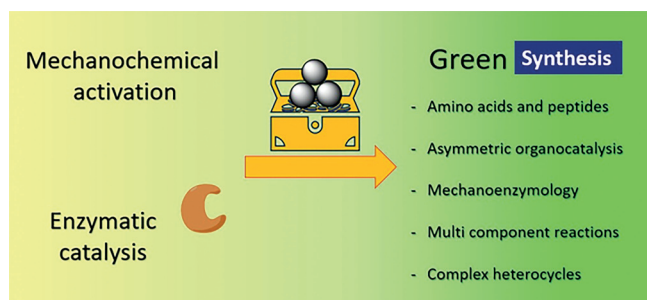
C. G. Avila-Ortiz

Centro de Investigación y de Estudios Avanzados, Mexico

## Salient Achievements in Synthetic Organic Chemistry Enabled by Mechanochemical Activation

Short Review

2439



## Synthesis

Synthesis 2023, 55, 2460–2472  
DOI: 10.1055/s-0042-1751447

L. Pfitzer

J. Heitkämper

J. Kästner

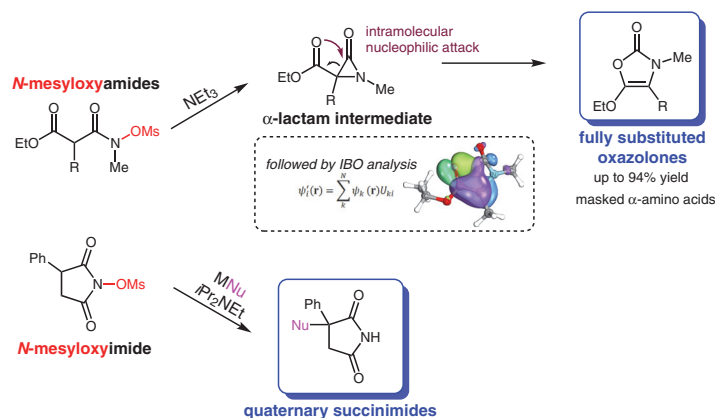
R. Peters\*

Universität Stuttgart, Germany

Use of the N–O Bonds in *N*-Mesyloxyamides and *N*-Mesyloxyimides To Gain Access to 5-Alkoxy-3,4-dialkyloxazol-2-ones and 3-Hetero-Substituted Succinimides: A Combined Experimental and Theoretical Study

Feature

2460



## Synthesis

Synthesis 2023, 55, 2473–2482  
DOI: 10.1055/a-2097-0092

T. Berking

W. Frey

C. Richert\*

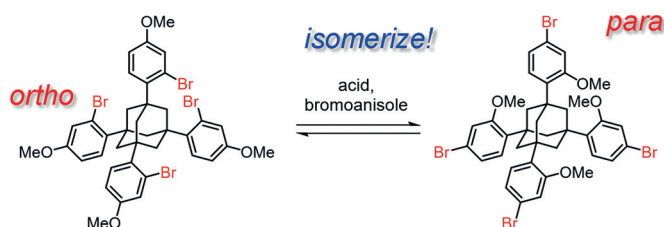
University of Stuttgart, Germany

## Kinetic or Thermodynamic Product? Case Studies on the Formation of Regioisomers of Tetraphenyladamantanes

Feature

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2473



## Synthesis

Synthesis 2023, 55, 2483–2486  
DOI: 10.1055/a-2063-1330

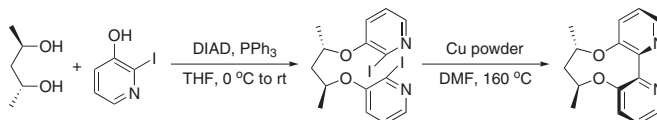
Z. Liu  
S.-M. Lu\*  
B.-Q. Zhao  
H.-D. Chen  
M.-W. Chen  
Y.-G. Zhou\*

Dalian Institute of Chemical  
Physics, P. R. of China  
University of Chinese Academy  
of Sciences, P. R. of China

## An Improved Synthesis of Chiral 2,2'-Bipyridine Ligand C3-ACBP Without Column Chromatography

PSP

2483

**Improvement:**

1. Using  $\text{ZnCl}_2$  to precipitate the intermediate
2. Using  $\text{Na}_2\text{S}$  to coordinate Cu and release the ligand

without column chromatography  
7 gram scale within 3–4 days  
48% overall yield

## Synthesis

Synthesis 2023, 55, 2487–2494  
DOI: 10.1055/a-2065-5802

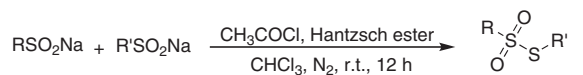
X. Cheng  
M. Zhang  
G. Qiu\*  
D. Zheng\*

Zhejiang Sci-Tech University,  
P. R. of China  
Jiaxing University, P. R. of China  
Nanjing Tech University,  
P. R. of China

## Reductive Coupling of Sodium Sulfonates for the Synthesis of Thiosulfonates

Paper

2487



- *disproportionate coupling*
- *radical pathway, transition-metal-free*
- *extremely mild conditions, gram-scale*

28 examples  
up to 92% yield

## Synthesis

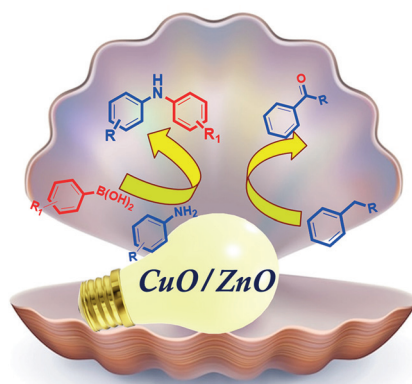
Synthesis 2023, 55, 2495–2502  
DOI: 10.1055/a-2069-4495

M. R. Daneshvar  
M. Tavakolian  
M. Hosseini-Sarvari\*  
Shiraz University, I. R. Iran

Visible-Light-Responsive Nano CuO/ZnO Photocatalyst for Chan–Lam Coupling Reaction and Aerobic C(sp<sup>3</sup>)–H Bond Oxidation

Paper

2495



## Synthesis

Synthesis 2023, 55, 2503–2516  
DOI: 10.1055/a-2063-0303

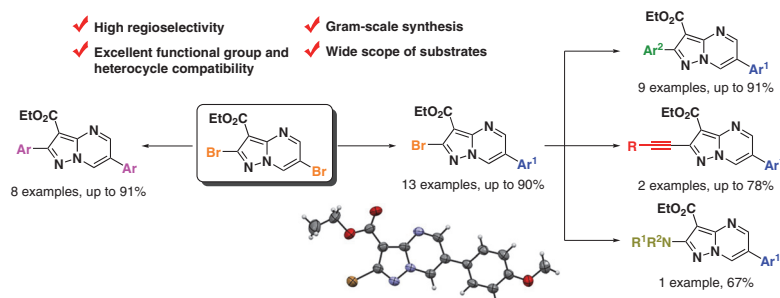
B. Jismy\*  
C. Messaoudi  
H. Allouchi  
A. Tikad  
H. M'Rabet  
M. Abarbri\*

Université de Tours, France  
Université de Tunis El Manar,  
Tunisia  
Université Moulay Ismail,  
Morocco

Regioselective Suzuki–Miyaura Reactions of Ethyl 2,6-Dibromopyrazolo[1,5-*a*]pyrimidine-3-carboxylate

Paper

2503



## Synthesis

Synthesis 2023, 55, 2517–2525  
DOI: 10.1055/a-2055-7678

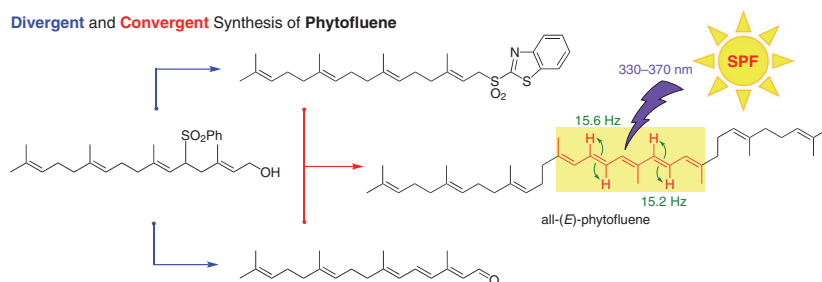
C. Boo  
H. Kim  
H. Yang  
S. Han  
H. Yeo  
C. Seo  
S. Koo\*

Myongji University,  
Republic of Korea

## Preparation of Divergent Intermediates and Convergent Synthesis of Phytofluene

Paper

2517



## Synthesis

Synthesis 2023, 55, 2526–2536  
DOI: 10.1055/a-2053-2811

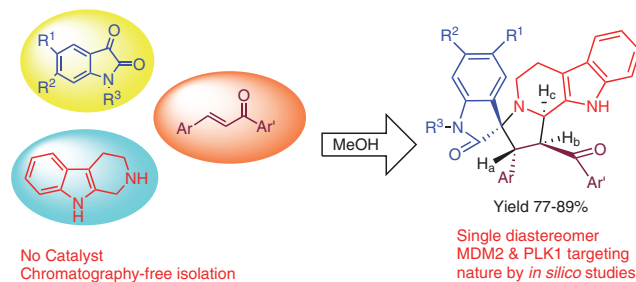
M. Mohan  
S. P. Eldhose  
A. Sudheendranath  
E. G. Jayasree  
A. Deepthi\*

University of Kerala, India  
Cochin University of Science and  
Technologie, India

Green Stereoselective Synthesis and *In Silico* Anticancer Evaluation of Tetrahydro- $\beta$ -carboline-Derived Spiro Heterocycles

Paper

2526



## Synthesis

## Palladium/Azaphos-Catalyzed Asymmetric Suzuki–Miyaura Coupling

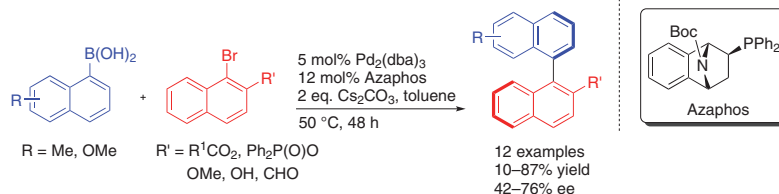
Paper

2537

*Synthesis* **2023**, *55*, 2537–2542  
DOI: 10.1055/a-2069-4665

Y. Jiang  
K. W. Cheng  
H. Zhang  
Z. Yang\*  
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P. R. of China  
Southern University of Science  
and Technology, P. R. of China



## Synthesis

## Hectogram-Scale Synthesis of Indobufen from Diludine-Triggered Metal-Free Cascade

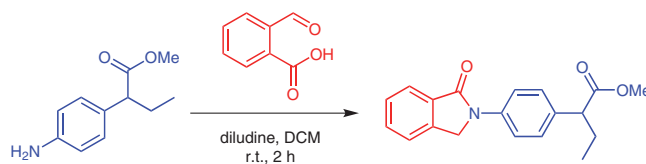
Paper

2543

*Synthesis* **2023**, *55*, 2543–2546  
DOI: 10.1055/a-2044-9772

Y. Hua  
B. Liu  
J. Cai  
T. Wang  
M. Cheng\*

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versity, P. R. of China



## Synthesis

## Pd-Catalyzed MIA-Directed Methoxylation of Phenylalanines: A Combined Experimental and Computational Study

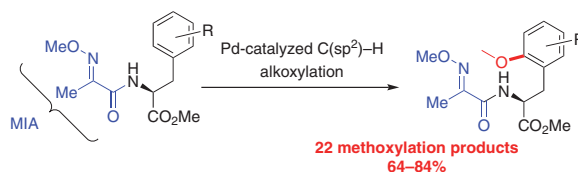
Paper

2547

*Synthesis* **2023**, *55*, 2547–2553  
DOI: 10.1055/a-2055-2313

W.-J. Tang  
S.-M. Dai  
Y. Yuan  
S. Wang  
Y.-P. He  
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sity, P. R. of China



## Synthesis

*Synthesis* **2023**, *55*, 2554–2560  
DOI: 10.1055/a-2051-0933

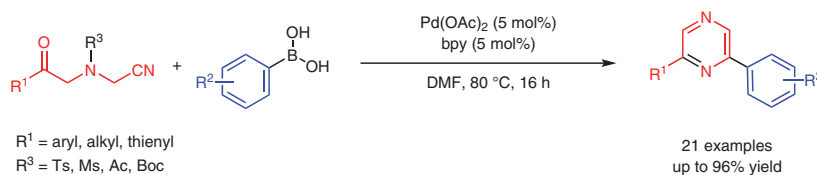
**Y. Chen**  
**Q. Zhu**  
**H. Wang**  
**Y. Yu**  
**W. Chen\***  
**G. Zhang\***

Zhejiang University,  
P. R. of China

### Palladium(II)-Catalyzed Intramolecular Tandem Cyclization Reaction for the Assembly of Unsymmetrical 2,6-Disubstituted Pyrazines

Paper

2554



## Synthesis

*Synthesis* **2023**, *55*, 2561–2569  
DOI: 10.1055/a-2065-3169

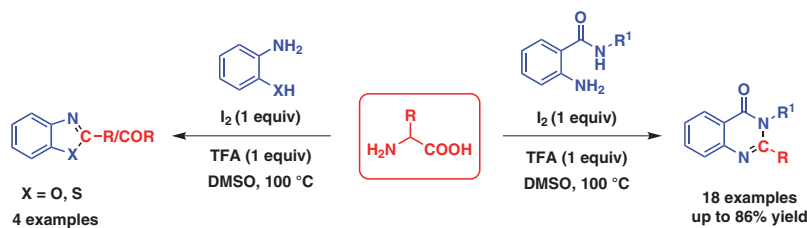
**S. K. Samanta**  
**M. K. Bera\***

Indian Institute of Engineering  
Science and Technology (IIEST),  
Shibpur, India

### An Efficient Route towards Quinazolinone Derivatives via $I_2$ /DMSO-Promoted Oxidative Decarboxylation of $\alpha$ -Amino Acids and Subsequent Oxidative Annulation Reaction

Paper

2561



## Synthesis

*Synthesis* **2023**, *55*, 2570–2580  
DOI: 10.1055/a-2058-0119

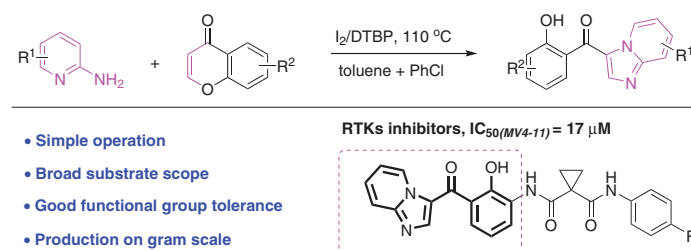
**Q. Huang**  
**L. Wu**  
**J. Shi**  
**J. Li**  
**W. Lu**  
**F. Tang**  
**L. Zhu**  
**W. Zhong\***  
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Zunyi Medical University, Zunyi,  
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Chongqing Medical and Pharma-  
ceutical College, P. R. of China

### $I_2$ /DTBP Promoted Synthesis of C3-Carbonylated Imidazopyridines from Chromones and 2-Aminopyridines via (3+2) Cycloaddition

Paper

2570



Synthesis

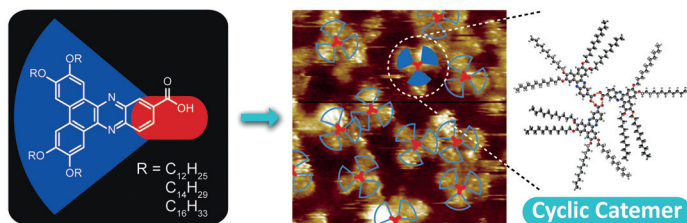
Synthesis 2023, 55, 2581–2585  
DOI: 10.1055/a-2085-5125

Y.-R. Chen  
Y.-Y. Zhang  
C. W. Ong\*  
M.-C. Yeh  
K.-s. Ye  
S.-C. Hsieh  
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Hierarchical Supramolecular Nanostructures of Cyclic Hydrogen-Bonding Catemers in Dibenzo[*a,c*]phenazinecarboxylic Acid Discotic Liquid Crystals

Paper  
2581



Synthesis

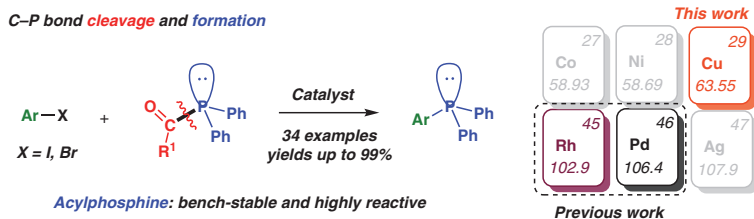
Synthesis 2023, 55, 2586–2594  
DOI: 10.1055/a-2067-4165

M. Xu  
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Beijing University of Chemical  
Technology, P. R. of China

Synthesis of Triarylphosphines via Cu-Catalyzed Coupling of Aryl Halides and Acylphosphines

Paper  
2586



Synthesis

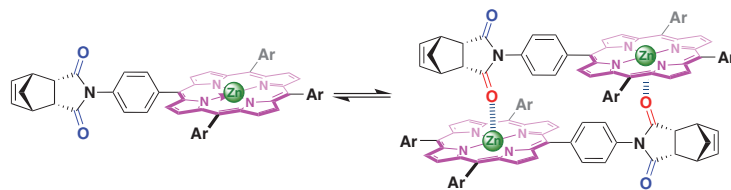
Synthesis 2023, 55, 2595–2601  
DOI: 10.1055/a-2079-3865

Y. Ke\*  
H.-W. Wang  
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Zhejiang Normal University,  
China  
National Taiwan University,  
Taiwan  
Westlake University, and West-  
lake Institute for Advanced  
Study, China

Self-Complementary Dimer of Zinc(II) Porphyrins through Coordination with Oxygen Ligands

Paper  
2595





Synthesis 2023, 55, 2602–2608  
DOI: 10.1055/a-2058-0355

K. Gao  
H. Ma  
T. C. Yip  
H. Zhao  
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