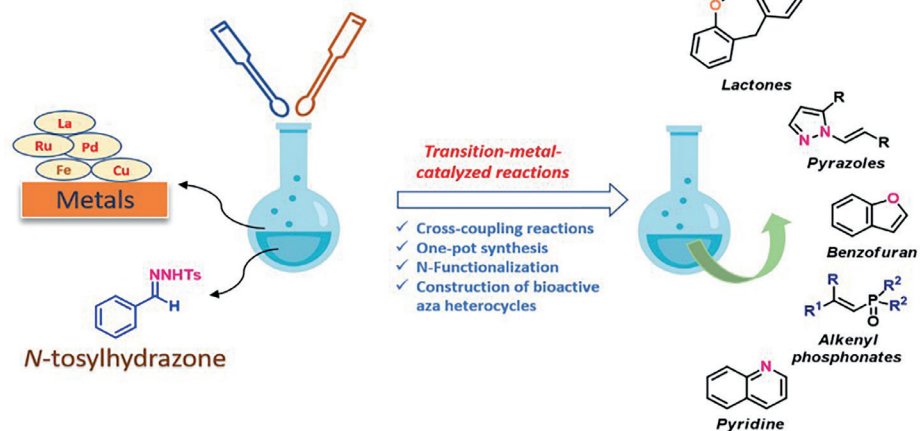


# Synthesis

Reviews and Full Papers in Chemical Synthesis

September 16, 2022 • Vol. 54, 3907–4128



Recent Advances in Transition-Metal-Catalyzed Reactions of N-Tosylhydrazones

V. Vaishya, R. Singhal, T. Kriplani, M. Pilania

18

## Synthesis

## Activation Modes in Asymmetric Anion-Binding Catalysis

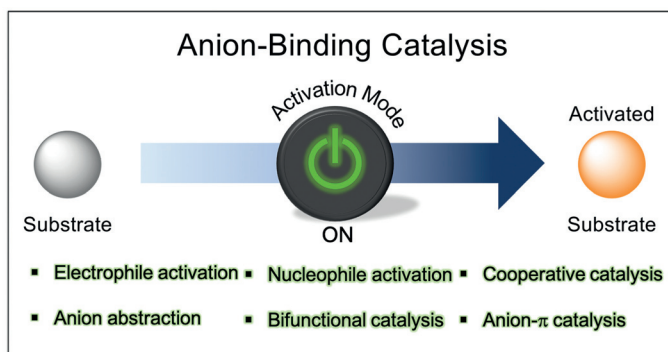
## Review

*Synthesis* 2022, 54, 3907–3927  
DOI: 10.1055/a-1846-6139

L.-M. Entgelmeier  
O. García Mancheño\*

Westfälische Wilhelms-Universität  
Münster, Germany

3907



## Synthesis

## Recent Advances in Thianthrenation/Phenoxathiination Enabled Site-Selective Functionalization of Arenes

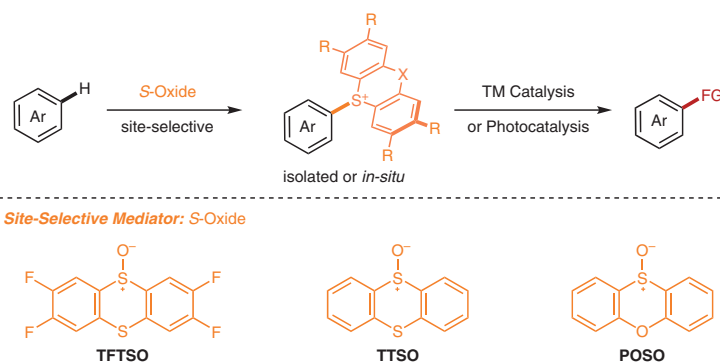
## Short Review

*Synthesis* 2022, 54, 3928–3940  
DOI: 10.1055/s-0041-1737493

X.-Y. Chen  
Y. Wu  
P. Wang\*

Shanghai Institute of Organic  
Chemistry, P. R. of China  
University of Chinese Academy  
of Sciences, P. R. of China

3928



## Synthesis

Synthesis 2022, 54, 3941–3961  
DOI: 10.1055/s-0040-1719930

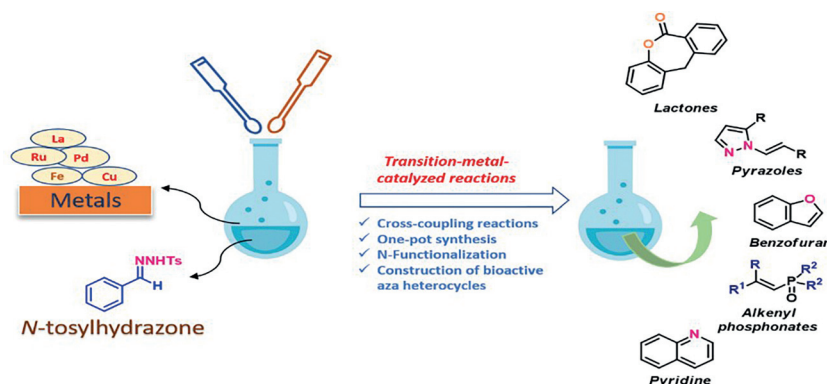
V. Vaishya  
R. Singhal  
T. Kriplani  
M. Pilania\*

Manipal University Jaipur, India

Recent Advances in Transition-Metal-Catalyzed Reactions of *N*-Tosylhydrazones

## Short Review

3941



## Synthesis

Synthesis 2022, 54, 3962–3976  
DOI: 10.1055/a-1794-0770

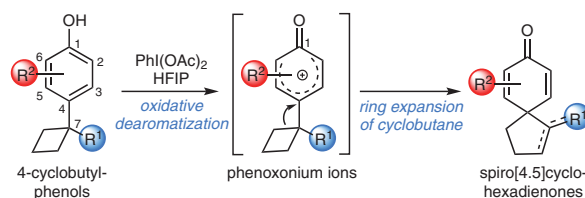
S. Xi  
J. Zhang  
Z. Guo  
Y. Zu  
Y. Liu  
G. Wang  
Y. Tang\*

Tsinghua University,  
P. R. of China

## Facile Access to Spiro[4.5]decanes through Oxidative Dearomatization-Induced Ring Expansion of Cyclobutanes

## Feature

3962



## Synthesis

Synthesis 2022, 54, 3977–3988  
DOI: 10.1055/s-0040-1719919

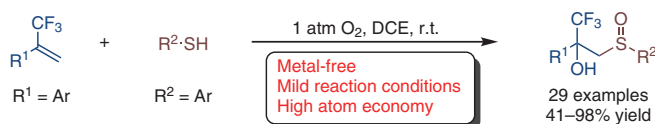
J. Niu  
B. Liu  
C. Zhang\*

Tianjin University, P. R. of China  
Haihe Laboratory of Sustainable  
Chemical Transformations,  
P. R. of China

Metal-Free Thiolation and Hydroxylation of  $\text{CF}_3$ -Substituted Alkenes: A Practical Method to Synthesize Trifluoromethyl Tertiary Alcohols

## Feature

3977



## Synthesis

Synthesis 2022, 54, 3989–3998  
DOI: 10.1055/a-1824-6352

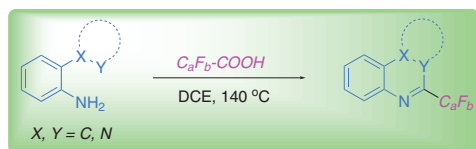
S. Li  
X. Lv  
J. Ren  
L. Feng  
C. Ma\*

Shandong University,  
P. R. of China

## A Direct Method for Synthesis of Fluorinated Quinazolines and Quinoxalines Using Fluorinated Acids without Metals or Additives

Paper

3989



- ✓ metal-free
- ✓ two categories
- ✓ high-economy
- ✓ broad scope

## Synthesis

Synthesis 2022, 54, 3999–4004  
DOI: 10.1055/s-0041-1737490

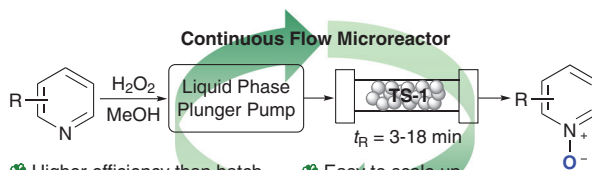
S. Chen  
S. Yang  
H. Wang  
Y. Niu  
Z. Zhang\*  
B. Qian\*

Northwest Normal University,  
P. R. China  
Lanzhou Institute of Chemical  
Physics, P. R. China

Continuous Flow Microreactor Promoted the Catalytic *N*-Oxidation Reaction of Pyridine Derivatives

Paper

3999



- ✪ Higher efficiency than batch
- ✪ Easy to scale up
- ✪ Green and safe process
- ✪ Convenient operation
- ✪ 19 Examples, up to 99% yield
- ✪ Continuously run over 800 hours

## Synthesis

Synthesis 2022, 54, 4005–4014  
DOI: 10.1055/a-1828-1767

L. Guo  
Y. Gao  
Y. Li  
Y. Wang  
W. Li  
S. Chen\*

Inner Mongolia University,  
P. R. of China

## CsF-Promoted Iodocyclization of Allenylphosphonates: A Convenient Approach to Highly Functionalized Oxaphospholenes

Paper

4005



- 🔍 29 examples, yield up to 86%
- 🔍 FG = ferrocenyl, aromatic and alkyl groups
- 🔍 novel ferrocene-containing oxaphospholenes

## Synthesis

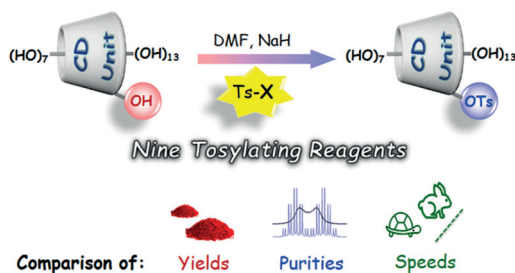
Synthesis 2022, 54, 4015–4024  
DOI: 10.1055/s-0040-1719927

G. G. Kordopati  
N.-M. Konstantinou  
G. M. Tsivgoulis\*  
University of Patras, Greece

Comparison of Various Tosylating Reagents for the Synthesis of Mono-2-O-tosyl- $\beta$ -cyclodextrin

Paper

4015



## Synthesis

Synthesis 2022, 54, 4025–4032  
DOI: 10.1055/a-1838-8958

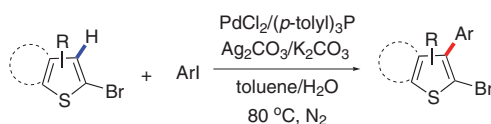
C.-X. Wang  
F.-F. Sheng  
K.-H. Liu  
J.-G. Gu  
K. Shen  
Z.-Y. Sun  
K. Hong  
H.-H. Zhang\*

Nanjing Tech. University (Nanjing Tech.), P. R. of China

Bromide as the Directing Group for  $\beta$ -Arylation of Thiophenes

Paper

4025



## Synthesis

Synthesis 2022, 54, 4033–4048  
DOI: 10.1055/a-1820-6160

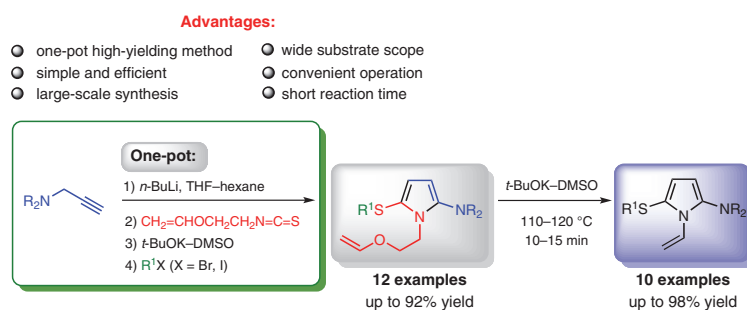
O. A. Tarasova  
N. A. Nedolya\*  
A. I. Albanov  
B. A. Trofimov\*

A. E. Favorsky Irkutsk Institute of Chemistry, Russian Federation

## An Efficient One-Pot Synthesis of 5-Sulfanyl-1-[2-(vinyloxy)ethyl]-1H-pyrrol-2-amines as Precursors of 1-Vinylpyrroles

Paper

4033



## Synthesis

Synthesis 2022, 54, 4049–4058  
DOI: 10.1055/a-1828-5837

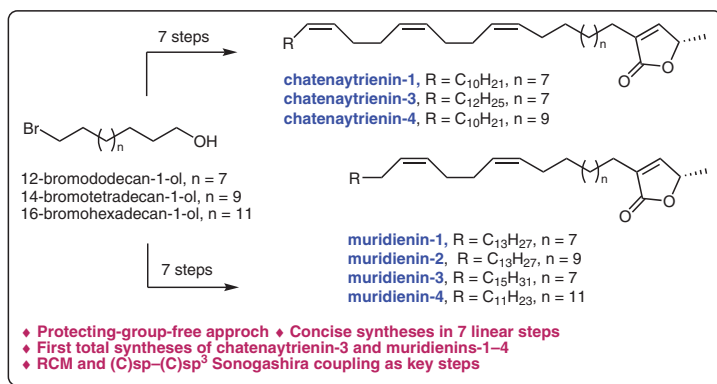
N. Chandra  
R. A. Fernandes\*

Indian Institute of Technology-  
Bombay, India

### Total Synthesis of Chatenaytrienins-1, -3 and -4 and Muridienins-1–4 Enabled by C(sp)–C(sp<sup>3</sup>) Sonogashira Coupling

Paper

4049



## Synthesis

Synthesis 2022, 54, 4059–4094  
DOI: 10.1055/a-1830-3962

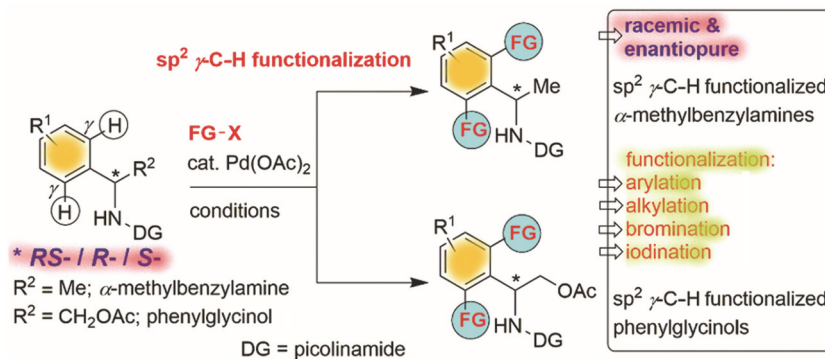
N. Bisht  
P. Singh  
S. A. Babu\*

Indian Institute of Science Edu-  
cation and Research (IISER) Mo-  
hali, India

### Pd(II)-Catalyzed, Picolinamide-Aided $\gamma$ -(sp<sup>2</sup>)-C–H Functionalization of Racemic and Enantiopure $\alpha$ -Methylbenzylamine and Phenylglycinol Scaffolds

Paper

4059



## Synthesis

Synthesis 2022, 54, 4095–4103  
DOI: 10.1055/a-1835-2188

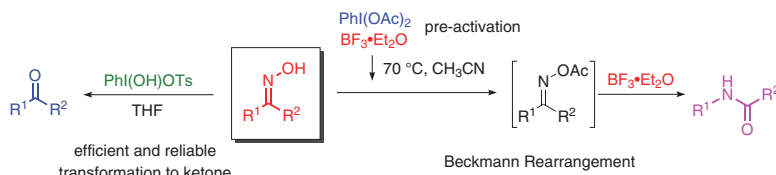
T. Maegawa\*  
R. Oishi  
A. Maekawa  
K. Segi  
H. Hamamoto  
A. Nakamura  
Y. Miki\*

Kindai University, Japan

### The Reaction of Ketoximes with Hypervalent Iodine Reagents: Beckmann Rearrangement and Hydrolysis to Ketones

Paper

4095



## Synthesis

Synthesis 2022, 54, 4104–4110  
DOI: 10.1055/a-1817-2079

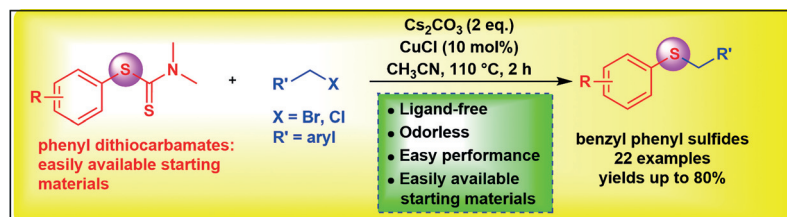
Y. Zhou  
C.-L. Yang  
L. Ye  
Z.-B. Dong\*

Wuhan Institute of Technology,  
P. R. of China  
Hubei Minzu University,  
P. R. of China

## Copper-Catalyzed C–S Formation for the Synthesis of Benzyl Phenyl Sulfides from Dithiocarbamates

Paper

4104



## Synthesis

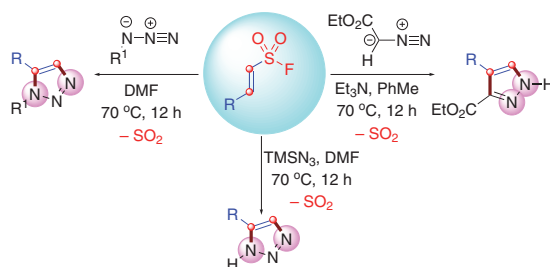
Synthesis 2022, 54, 4111–4119  
DOI: 10.1055/s-0041-1737485

K. Sandeep  
A. Sanjeeva Kumar  
A. A. Qureshi  
K. C. Kumara Swamy\*  
University of Hyderabad, India

(3+2) Cycloadditions of Vinyl Sulfonyl Fluorides with Ethyl Diazoacetate or Azides: Metal-Free Synthesis of Pyrazole and Triazole Scaffolds via  $\text{SO}_2$  Elimination

Paper

4111



## Synthesis

Synthesis 2022, 54, 4120–4128  
DOI: 10.1055/a-1823-3604

M. Kirihara\*  
S. Yamahara  
T. Okada  
H. Matsumuro  
Y. Kinoshita  
A. Kitajima  
Y. Takamura  
T. Odagiri  
T. Asawa  
Y. Sugiyama  
Y. Kimura\*

Shizuoka Institute of Science and  
Technology, Japan  
Iharanikkei Chemical Industry  
Co. Ltd., Japan

Synthesis of Sulfonyl Halides from Disulfides or Thiols Using Sodium Hypochlorite Pentahydrate ( $\text{NaOCl}\cdot 5\text{H}_2\text{O}$ ) Crystals

Paper

4120

