FR901483: Synthetic Efficiency Remains a Challenge

Z. Ruan
C. Li
D. Shen
S.-H. Huang
R. Hong
Shanghai Institute of Organic Chemistry (CAS), P. R of China
Shanghai Institute of Technology, P. R of China

The Chemical Syntheses of Nannocystins

Z. Wang
State University of New York, USA
A New Wave of Amide Bond Formations for Peptide Synthesis

K. Hollanders
B. U. W. Maes*
S. Ballet*
Vrije Universiteit Brussel,
Belgium
University of Antwerp, Belgium

Directed ortho-Metalation of Arenesulfonyl Fluorides and Aryl Fluorosulfates

A. Talko
D. Antoniak
M. Barbasiewicz*
University of Warsaw, Poland

A Graphene Oxide Nanosheet Supported NHC–Palladium Complex as a Highly Efficient and Recyclable Suzuki Coupling Catalyst

Y. Qian
J. So
S.-Y. Jung
S. Hwang
M.-J. Jin*
S. E. Shim*
Inha University, South Korea
Synthesis of 4-Organoselanyl-1H-pyrazoles: Oxone®-Mediated Electrophilic Cyclization of α,β-Alkynyl Hydrazones by Using Diorganyl Diselenides

G. Perin*  
P. C. Nobre  
D. H. Mailahn  
M. S. Silva  
T. Barcellos  
R. G. Jacob  
E. J. Lenardão  
C. Santi  
J. A. Roehrs  
Universidade Federal de Pelotas (UFPel), Brazil

Bioinspired Synthesis of the Central Core of Halichonadin H: The Passerini Reaction in a Hypothetical Biosynthesis of Marine Natural Products

Y. Ichikawa*  
T. Yamasaki  
K. Nakanishi  
Y. Udagawa  
S. Hosokawa  
T. Masuda  
Kochi University, Japan

Regioselective Synthesis of 5-(Trifluoromethyl)[1,2,4]triazolo[1,5-a]pyrimidines from β-Enamino Diketones

V. P. Andrade  
M. Mittersteiner  
H. G. Bonacorso  
P. Frizzo  
M. A. P. Martins  
N. Zanatta*  
Universidade Federal de Santa Maria, Brazil
A New Method for the Preparation of Bis(alkylamino)maleonitriles from Aliphatic Isocyanides with TMSCN and Bi(OTf)$_3$

\[ \text{R} = \text{tert-alkyl} \]

- In a single step
- Highly functional-group tolerant
- Simple and mild conditions

Copper-Catalyzed Three-Component Coupling Reaction of Aryl Iodides, a Disilathiane, and Alkyl Benzoates Leading to a One-Pot Synthesis of Alkyl Aryl Sulfides

Three-component coupling reaction via a single step
utility of a disilathiane as a sulfur source
expansion of an alkyl source to an alkyl benzoate

Trichloroisocyanuric Acid Induced Chlorine Radical Cascade Chlorination/Carbocyclization of Acrylamides: Constructing Chlorinated Oxindoles by C–Cl and C–C Bond-Forming Reactions

- Chlorine-radical-induced cyclization
- Without metal or additional oxidant
- Efficient C–Cl and C–C bond formation

This document was downloaded for personal use only. Unauthorized distribution is strictly prohibited.
### High-Efficient, Catalyst-Free, Diastereoselective, Diversity-Oriented Synthesis of Dihydrocoumarin–Pyrrolidine–Spirooxindoles Bearing Three Contiguous Stereocenters

X. Zuo  
S. Chen  
S.-W. Xu  
S.-Q. Chang  
X.-L. Liu*  
Y. Zhou  
W.-C. Yuan  
Guizhou University,  
P. R. of China

Highly efficient, catalyst-free, diastereoselective, diversity-oriented synthesis of dihydrocoumarin–pyrrolidine–spirooxindoles bearing three contiguous stereocenters.

15 examples, up to 87% yield and 19:1 dr  
18 examples, up to 92% yield and >20:1 dr

### Synthesis of 2-Fluoroacetoacetic Acid and 4-Fluoro-3-hydroxybutyric Acid

S. J. Mattingly  
F. Wuest*  
R. Schirrmacher*  
University of Alberta, Canada

Synthesis of 2-fluoroacetoacetic acid and 4-fluoro-3-hydroxybutyric acid.

### Palladium-Catalyzed Decarboxylative [4+2] Cycloaddition of Vinyl Benzoxazinanones with Cyclic N-Sulfimines: Stereoselective Synthesis of Benzosulfamidate-Fused Tetrahydroquinazolines

D. Mun  
E. Kim  
S.-G. Kim*  
Kyonggi University,  
Republic of Korea


- up to 98% yield  
- up to >30:1 dr  
- 46–87% yield  
- up to >30:1 dr  
- 98% ee
#### Vinylation of Carboxyl Oxygen in 4-Hydroxycoumarin: Synthesis of Heteroarylated Vinyl Ethers

**Authors:** R. Chatterjee, S. Santra, G. V. Zyryanov, A. Majee
**Affiliation:** Visva-Bharati (A Central University), India

**Abstract:**
O-Vinylation of 4-Hydroxycoumarin

**Conditions:**
- BF₃·OEt₂ (20 mol%), neat, 80 °C, 10 min

**Yields:**
- 19 examples
- 73–86% yields

**Key Features:**
- R = aryl, alkyl, heteroaryl
- 12–18 examples
- 35–95% yields

#### Palladium-Catalyzed C–P Cross-Coupling between (Het)aryl Halides and Secondary Phosphine Oxides

**Authors:** G. G. Zakirova, D. Y. Mladentsev, N. E. Borisova
**Affiliation:** Lomonosov Moscow State University, Russian Federation

**Abstract:**
Pd-catalyzed cross-coupling

**Yields:**
- 12 examples
  - 35–95%
- 9 examples
  - 35–91%
- 7 examples
  - 68–98%

**Key Features:**
- R = alkyl, aryl; X = I, Br, Cl
- R' = EWG, EDG

#### Activation of Primary Amines by Copper(I)-Based Lewis Acid Promoters in the Solventless Synthesis of Secondary Propargylamines

**Authors:** C. Cimarelli, F. Navazio, F. V. Rossi, F. Del Bello, E. Marcantoni
**Affiliation:** University of Camerino, Italy

**Abstract:**
Method A and Method B

**Yields:**
- Method A: 9 examples up to 62% yield
  - i) CuSO₄ (30 mol%)/NaI (60 mol%), PhCOOH (5 mol%), solventless, N₂, 80 °C
- Method B: 20 examples up to 85% yield
  - i) MgSO₄, CoCl₂·6H₂O (30 mol%), solventless, N₂, r.t., 0.25 h
  - ii) CuI (30 mol%), solventless, N₂, 40 °C

**Key Features:**
- PhNH₂
- Method A & Method B
- 9 examples up to 62% yield
- 20 examples up to 85% yield
A Facile and Efficient Approach for the Synthesis of 3-Aryl-4-hydroxy-1,3-thiazolidin-2-ones

Y. Zhu§
Q. Wang§
H. Luo
Z. Wang
G. Zhang*
Y. Yu*
Zhejiang University,
P. R. of China

One-Pot Three-Component Synthesis of Pyrrolidin-2-ones via a Sequential Wittig/Nucleophilic Addition/Cyclization Reaction

Z.-R. Guan
S. Liu
Z.-M. Liu
M.-W. Ding*
Central China Normal University,
P. R. of China

The Quest for Double Vicinal C–H Bond Activation on the \((\eta^5:\eta^5\text{-Fulvalene})\text{diiridium Platform: Syntheses and Structures of \((\eta^5:\eta^5\text{-Fulvalene})\text{Ir}_2(\text{ortho-\mu-C}_6\text{H}_4)\text{CO}_2 \text{(Ir-Ir)}\) and Related Complexes}

J. Baumgartner
R. G. Bergman*
B. Kayser
T. P. Klupinski
Y. K. Park
K. P. C. Vollhardt*
M. J. West
B. Zhu
University of California at Berkeley, USA
Green Access to $\alpha$-Haloalkyl and $\alpha$-Halobenzyl Esters, Versatile Intermediates for the One-Pot Two-Step Synthesis of $O, O'$-Diacyl Acetals Using Zinc-Based Ionic Liquid Catalyst

$\text{R, R'} = \text{alkyl, aryl}$

14 examples up to 92% yield