**Transition-Metal-Catalyzed Alkyl Heck-Type Reactions**

D. Kurandina  
P. Chuentragool  
V. Gevorgyan*  
University of Illinois at Chicago, USA

**Alkyl Heck-Type Reactions**

1. **oxidative addition**

2. **migratory insertion**

3. **β-H elimination**

**Sulfur Betaines from S-Propargyl Xanthates. Unusual Chemistry from a Simple Functional Group**

S. Z. Zard*  
Laboratoire de Synthèse Organique associé au CNRS, Ecole Polytechnique, France
Conformational Dynamics in Asymmetric Catalysis: Is Catalyst Flexibility a Design Element?

J. M. Crawford
M. S. Sigman*
University of Utah, USA

Rigidity is not a required design element for highly selective asymmetric catalysts.

Synthesis of Bullvalenes: Classical Approaches and Recent Developments

S. Ferrer
A. M. Echavarren*
Institute of Chemical Research of Catalonia (ICIQ), Spain
Universitat Rovira i Virgili, Spain

UV light

Cu(II) catalysis

Bullvalene

Co(II) catalysis

Au(I) catalysis

Transition-Metal-Catalyzed Alkenyl sp2 C–H Activation: A Short Account

M. Maraswami
T.-P. Loh*
Nanyang Technological University, Singapore
Nanjing Tech University, P. R. of China
University of Science and Technology of China, P. R. of China

Stereoactive alkene synthesis
Atom economical
Versatile products
Synthesis of cyclic alkenes
Including macrocycles
Advancements in Visible-Light-Enabled Radical C(sp)²–H Alkylation of (Hetero)arenes

A. C. Sun
R. C. McAtee
E. J. McClain
C. R. J. Stephenson
University of Michigan, USA

Pyroles as Dienes in (4+3) Cycloadditions

F. Hu
J. P. L. Ng
P. Chiu
The University of Hong Kong, P. R. of China

Gold Vinylidenes as Useful Intermediates in Synthetic Organic Chemistry

F. Gagosz
University of Ottawa, Canada
Recent Advances in the Application of Ring-Closing Metathesis for the Synthesis of Unsaturated Nitrogen Heterocycles

E. J. Groso
C. S. Schindler*
University of Michigan, USA

Straightforward One-Pot Syntheses of Silylamides of Magnesium and Calcium via an In Situ Grignard Metalation Method

S. Krieck
P. Schüler
J. M. Peschel
M. Westerhausen*
Friedrich Schiller University Jena, Germany

Asymmetric Organocatalysis Revisited: Taming Hydrindanes with Jørgensen–Hayashi Catalyst

Y. Stöckl
W. Frey
J. Lang
B. Claasen
A. Baro
S. Laschat*
Universität Stuttgart, Germany
**A Scalable, One-Pot Synthesis of 1,2,3,4,5-Pentacarbomethoxycyclopentadiene**

M. A. Radtke  
C. C. Dudley  
J. M. O’Leary  
T. H. Lambert*  
Columbia University, USA  
Cornell University, USA

- new one-pot procedure
- major improvement in ease of reaction and purification

**General Synthetic Approach to Rotenoids via Stereospecific, Group-Selective 1,2-Rearrangement and Dual S_N2Ar Cyclizations of Aryl Fluorides**

S. Matsuoka  
K. Nakamura  
K. Ohmori*  
K. Suzuki*  
Tokyo Institute of Technology, Japan

**Metal Enolates – Enamines – Enol Ethers: How Do Enolate Equivalents Differ in Nucleophilic Reactivity?**

A. I. Leonov  
D. S. Timofeeva  
A. R. Ofial*  
H. Mayr*  
Ludwig-Maximilians-Universität München, Germany
Bromine-Radical-Mediated Site-Selective Allylation of C(sp³)–H Bonds

M. Ueda
A. Maeda
K. Hamaoka
M. Sasano
T. Fukuyama
L. Ryu*
Osaka Prefecture University,
Japan
National Chiao Tung University,
Taiwan

M. Ueda
A. Maeda
K. Hamaoka
M. Sasano
T. Fukuyama
L. Ryu*
Osaka Prefecture University,
Japan
National Chiao Tung University,
Taiwan

An Asymmetric Organocatalytic Aldol Reaction of a Hydrophobic Aldehyde in Aqueous Medium Running in Flow Mode

L. Schober
S. Ratnam
Y. Yamashita
N. Adebar
M. Pieper
A. Berkessel
V. Hess
H. Gröger*
Bielefeld University, Germany

T. Dohi*
H. Sasa
M. Dochi
C. Yasui
Y. Kita*
Ritsumeikan University, Japan

Oxidative Coupling of N-Methoxyamides and Related Compounds toward Aromatic Hydrocarbons by Designer μ-Oxo Hypervalent Iodine Catalyst

T. Dohi*
H. Sasa
M. Dochi
C. Yasui
Y. Kita*
Ritsumeikan University, Japan
GlucoSiFA and LactoSiFA: New Types of Carbohydrate-Tagged Silicon-Based Fluoride Acceptors for ¹⁸F-Positron Emission Tomography (PET)

Alkali Metal Effects in Trans-Metal-Trapping (TMT): Comparing LiTMP with NaTMP in Cooperative MTMP/Ga(CH₂SiMe₃)₃ Metalation Reactions

Complementary Reactivity of 1,6-Enynes with All-Metal Aromatic Tri-nuclear Complexes and Carboxylic Acids
Copper-Catalysed Hydroamination of N-Allenylsulfonamides: The Key Role of Ancillary Coordinating Groups

R. Blieck
L. A. Perego*
I. Ciofini
L. Grimaud*
M. Taillefer*
F. Monnier*

Institut Charles Gerhardt Montpellier UMR 5253 CNRS, AM2N, France
Chimie ParisTech, France
PSL University, Sorbonne Université, France
Institut Universitaire de France, IUF, France

Synthesis of 2-Azidomethyl-5-ethynylfuran: A New Bio-Derived Self-Clickable Building Block

B. Ya. Karlinskii
L. V. Romashov
K. I. Galkin
P. G. Kislitsyn
V. P. Ananikov*

N. D. Zelinsky Institute of Organic Chemistry of the Russian Academy of Sciences, Russian Federation

Visible Light-Promoted Formation of C–B and C–S Bonds under Metal- and Photocatalyst-Free Conditions

L. Blank
M. Fagnoni
S. Protti
M. Rueping*

RWTH Aachen University, Germany
**Lewis Acid Promoted Trapping of Chiral Aza-enolates**

F. Lanza  
J. M. Pérez  
R. P. Jumde  
S. R. Harutyunyan*  
Rijksuniversiteit Groningen, The Netherlands

**Abstract**  
Electrophile: \( \text{a,b}-\text{unsaturated esters, ketones} \)  
3 chiral centers, dr up to 6:1

**Organocatalytic Desymmetrisation of Fittig's Lactones: Deuterium as a Reporter Tag for Hidden Racemisation**

P. Spránitz  
P. Söregi  
B. B. Botlik  
M. Berta  
T. Soós*  
Institute of Organic Chemistry, Research Centre for Natural Sciences, Hungary

**Abstract**  
15 examples  
up to 85% yield  
up to 93% ee

**Synthesis and Evaluation of Cyclic Acetals of Serine Hydroxylamine for Amide-Forming KAHA Ligations**

S. Baldauf  
J. W. Bode*  
ETH Zürich, Switzerland

**Abstract**  
KAHA ligation
Visible-Light-Induced Decarboxylative C–H Adamantylation of Azaoles
at Ambient Temperature

**J. Koeller**
**P. Gandeepan**
**L. Ackermann**
Georg August-Universität, Germany

**[Acr–Mes][ClO4]⁻ (6.0 mol%)**
**Co(dmgH)(dmgH2)Cl2 (8.0 mol%)**

K₂HPO₄
DCE/H₂O, 25–30 °C, 24 h

X = S, O, NR'
R = Me, OMe, CF₃, F, Cl, Br, CO₂Et

19 examples
up to 80% yield

- C–H Adamantylation
- Visible-light-promoted decarboxylation
- No stoichiometric oxidants
- No expensive Ir or Ru photocatalysts
- Ambient reaction temperature