Transition-Metal-Catalyzed Alkyl Heck-Type Reactions

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

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Conformational Dynamics in Asymmetric Catalysis: Is Catalyst Flexibility a Design Element?

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

Synthesis of Bullvalenes: Classical Approaches and Recent Developments

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

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Nanjing Tech University, P. R. of China
University of Science and Technology of China, P. R. of China

= Pd, Pt, Ru, Cu, etc.
Advancements in Visible-Light-Enabled Radical C(sp)^2–H Alkylation of (Hetero)arenes

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R. C. McAtee
E. J. McClain
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Pyroles as迪enes in (4+3) Cycloadditions

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Gold Vinlylenes as Useful Intermediates in Synthetic Organic Chemistry

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Recent Advances in the Application of Ring-Closing Metathesis for the Synthesis of Unsaturated Nitrogen Heterocycles

E. J. Groso
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Short Review

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

S. Krieck
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Feature

Asymmetric Organocatalysis Revisited: Taming Hydrindanes with Jørgensen–Hayashi Catalyst

Y. Stöckl
W. Frey
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B. Claasen
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Feature
A Scalable, One-Pot Synthesis of $1,2,3,4,5$-Pentacarbomethoxycyclopentadiene

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A 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 $S_NAr$ Cyclizations of Aryl Fluorides

S. Matsuoka
K. Nakamura
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Metal Enolates – Enamines – Enol Ethers: How Do Enolate Equivalents Differ in Nucleophilic Reactivity?

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Ludwig-Maximilians-Universität München, Germany

$\frac{1}{2} 1.3 \times 10^7$ $3.5 \times 10^{14}$

Increasing nucleophilicity

$\tau_{1/2}$

$10 \times 10^6$ years, 1 year, 1 s
Bromine-Radical-Mediated Site-Selective Allylation of C(sp³)–H Bonds

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

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S. Ratnam
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N. Adebar
M. Pieper
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V. Hessel
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Oxidative Coupling of N-Methoxyamides and Related Compounds toward Aromatic Hydrocarbons by Designer μ-Oxo Hypervalent Iodine Catalyst

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M. Dochi
C. Yasui
Y. Kita*
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GlucoSiFA and LactoSiFA: New Types of Carbohydrate-Tagged Silicon-Based Fluoride Acceptors for 18F-Positron Emission Tomography (PET)

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V. Wiese
B. Glowacki
L. Iovkova
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Alkali Metal Effects in Trans-Metal-Trapping (TMT): Comparing LiTMP with NaTMP in Cooperative MTMP/Ga(CH2SiMe3)3 Metalation Reactions

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M. Uzelac
L. J. Bole
J. M. Gil-Negrete
D. R. Armstrong
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Complementary Reactivity of 1,6-Enynes with All-Metal Aromatic Tri-nuclear Complexes and Carboxylic Acids

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Copper-Catalysed Hydroamination of N-Allenylsulfonamides: The Key Role of Ancillary Coordinating Groups

Unsaturated moieties enhancing substrate-catalyst binding

- Regio- and stereoselective
- Mild conditions, room temperature
- Up to 90% yield
- Mechanistic studies

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

Self-clickable building block suitable for intermolecular cycloaddition

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

- no photocatalyst
- visible-light-promoted
- metal- and additive-free
Lewis Acid Promoted Trapping of Chiral Aza-enolates

Electrophile: \( \alpha, \beta \)-unsaturated esters, ketones

One-pot reaction
3 chiral centers, dr up to 6:1

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

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

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

KAHA ligation
serine
Visible-Light-Induced Decarboxylative C–H Adamantylation of Azoles
at Ambient Temperature

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

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

19 examples

λₘₚ₅ = 458 nm

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

1284–1292
DOI: 10.1055/s-0037-1611633