Photodriven Dehydrogenative Homocoupling of Benzylic C–H Bonds Forming Strained C–C Bonds

N. Ishida, M. Son, T. Kawasaki, M. Ito, M. Murakami
Enantioselective Palladium-Catalyzed Decarboxylative Dearomative Asymmetric Allylic Alkylation of Benzofurans: Diversity-Oriented Synthesis of Flavaglines

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Westlake Institute for Advanced Study, P. R. of China
Zhejiang University, P. R. of China
Nanjing Tech University, P. R. of China

R1 = alkyl or aryl
THF, temp.
82–99% yield
90–96% ee

Tsuji–Trost–Stoltz AAA

Wacker–Grubbs–Stoltz oxidation

intra-benzoin condensation

conjugate addition

Five-Membered-Ring-Fused Tacrines as Anti-Alzheimer’s Disease Agents

M. do Carmos Carreiras*
J. Marco-Contelles
Universidade de Lisboa, Portugal

is less hepatotoxic than tacrine
is a potent noncompetitive ACHE inhibitor
completely inhibits EsAChE-induced Aβ1–40 aggregation
does not affect Aβ1–40 self-aggregation
shows strong neuroprotective effects
Absolute Asymmetric Catalysis, from Concept to Experiment: A Narrative

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DOI: 10.1055/a-1536-4673

Synthesis and Reactions of 1,3,5-Tri- and 1,3,5,7-Tetracarbonyl Compounds

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DOI: 10.1055/s-0037-1610780

Synthetic Study on Carthamin, Part 4. Improved Synthesis of a C-Glycosyl Quinochalcone by Installation of a Side Chain through Regioselective De-O-methylation and Acyl Rearrangement

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Tokyo Institute of Technology, Japan

DOI: 10.1055/s-0040-1719836
Synthesis of a Glycosylphosphatidylinositol (GPI) Fragment as a Potential Substrate for Mannoprotein Transglycosidases

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The Scripps Research Institute, USA
The University of Melbourne, Australia

![Chemical structure of Disaccharide and Tetrasaccharide](image)

[Glycosylation + Deprotection](image)

Novel Benzothiophene-Based Fluorescent Dye Exhibiting a Large Stokes Shift

Y. V. Bolt
N. S. Baleeva
Y. V. Nelyubina
A. A. Andrianova
Z. M. Kaskova*
A. S. Tsarkova
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Pirogov Russian National Research Medical University, Russian Federation

![Chemical structure of Benzothiophene-Based Fluorescent Dye](image)

- novel class of fluorescent dyes
- two-step synthesis from benzenethiols
- opportunities for further functionalization

Diastereoselective Pd-Catalyzed Decarboxylative Allylation To Construct Quaternary Stereocenters Using Sulfinimine as the Directing Group

S. Cao
C. Li
X. Wang
Y. Huang
G. Yang*
Y. Luo*
S. Qin*
Nankai University, P. R. of China
Hubei University of Science and Technology, P. R. of China

![Chemical structure of Allylation](image)

Pd cat. (0.05 equiv) ligand base-free
THF, rt

18 examples up to 97% yield
Photodriven Dehydrogenative Homocoupling of Benzylic C–H Bonds Forming Strained C–C Bonds

N. Ishida*
M. Son
T. Kawasaki
M. Ito
M. Murakami*
Kyoto University, Japan

Visible light catalyst

\[ \Delta G > 0 \]

Stereoselective Synthesis of (−)-Heliannuol E by α-Selective Propargyl Substitution

N. Ogawa*
C. Uematsu
Y. Kobayashi
Meiji University, Japan

α-selective propargyl substitution

>99% r.s

A Metal-Free β-Stereoselective Synthesis of 2-Deoxy-C-arylglycosides: Synthesis of 5-Aza Analogues of Aquayamycin

Y. Mei
N. Jiang
Y. Yang
W. Zhang
S. Qiu
H. Guo
J. Zhang*
East China Normal University, P. R. of China

Metal-free catalysis
Easily accessible donor
Via glycosyl iodide intermediate
Mild reaction conditions
Rapid reaction process
Applications to aza-aquayamycin synthesis
1,4,2-Dioxazol-5-ones as Isocyanate Equivalents: An Efficient Synthesis of 2-Quinolinones via $\beta$-Keto Amides

A. Vala
N. Parmar
J. Y. Soni
S. Kotturi
R. Guduru
Piramal Discovery Solutions, India

Asymmetric Aldol Reaction of Alkenyl Esters with $\alpha$-Keto Esters Catalyzed by Chiral Tin Alkoxides

A. Yanagisawa
C. Uchiyama
K. Takagi
Chiba University, Japan

A [4+3] Cycloaddition Reaction of Aza-ortho-quinone Methides with C,N-Cyclic Azomethine Imines for Synthesis of 1,2,4-Triazepines

X. Wang
Z. Li
C. Feng
Q. Zhen
M. Guo
Y. Yao
X. Zou
P. Wang
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