A High-Throughput Approach to Discovery: Heck-Type Reactivity with Aldehydes

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Palladium-Catalyzed Annulation via Acyl C–H Bond Activation

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Development of Novel C–H Bond Transformations and Their Application to the Synthesis of Organic Functional Molecules

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The Invention of New Methodologies: An Opportunity for Dating Natural Products

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Cover Page: Atropisomerism – In Memoriam Kurt Mislow

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Prologue: Atropisomerism

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α-Alkylation of N–C Axially Chiral Quinazolinone Derivatives Bearing Various ortho-Substituted Phenyl Groups: Relation between Diastereoselectivity and the ortho-Substituent

1. LiHMDS
2. R-Y
THF, –20 °C
12 examples (85–98%)

X = F, Cl, Me, Br, Et, i-Pr, CF₃
Dynamic Covalent Chemistry within Biphenyl Scaffolds: Effects from Endocyclic to Exocyclic Sulfonamides

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Synthesis and Conformational Analysis of 10-Mesitylanthracene-1,8-diyol Oligomers

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Atropisomerism in the 2,3,4,5-Tetrahydro-1H-1,5-benzodiazepine Nucleus: Effects of Central Chirality at C3 on the N-Mesylation Reaction

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Transmission of Point Chirality to Axial Chirality for Strong Circular Dichroism in Triarylmethylium-\(\text{o,o}\)-dimers

Y. Ishigaki
T. Iwai
Y. Hayashi
A. Nagaki
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Toward a Catalytic Atroposelective Synthesis of Diaryl Ethers Through \(\text{C(}\text{sp}^2\text{)}–\text{H}\) Alkylation with Nitroalkanes

A. N. Dinh
R. R. Noorbehesht
S. T. Toenjes
A. C. Jackson
M. A. Saputra
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Stereodynamic Analysis of New Atropisomeric 4,7-Di(naphthalen-1-yl)-5,6-dinitro-1H-indoles

A. Pagano
E. Marotta
A. Mazzanti
G. Petrillo*
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University of Genova, Italy
A Planar-Chiral Pillar[5]arene-Based Monophosphine Ligand with Induced Chirality at the Biaryl Axis

Y. Nagata*
Y. Shimada
T. Nishikawa
R. Takeda
M. Uno
T. Ogoshi*
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Kyoto University, Japan
Kanazawa University, Japan

Effect of Regioisomerism on the Efficiency of 1-Phenylpyrrole-Type Atropisomeric Amino Alcohol Ligands in Enantioselective Organometallic Reactions

B. Mátravölgyi
S. Deák
Z. Erdélyi
T. Hergert
P. Ábrányi-Balogh
F. Faigl*
Budapest University of Technology and Economics, Hungary

Configurationally Stable Atropisomeric Acridinium Fluorophores

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C. Sparr*
University of Basel, Switzerland
Cobalt Vanadium Oxide Supported on Reduced Graphene Oxide for the Oxidation of Styrene Derivatives to Aldehydes with Hydrogen Peroxide as Oxidant

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C. Hu
K. Chen
G. Xiao
X. Peng*
Nanjing University of Science and Technology, P. R. of China

Catalyst (0.02 g), 65 °C, MeCN (5 mL)
H₂O₂ (30 wt%, 3 equiv), 6 h

R¹ = aryl
R² = H, NO₂, Ph

up to 96% yield
16 examples

Combining Oxoammonium Cation Mediated Oxidation and Photo-redox Catalysis for the Conversion of Aldehydes into Nitriles

J. Nandi
M. L. Witko
N. E. Leadbeater*
University of Connecticut, USA

R = aryl, heteroaryl

ammonium persulfate as oxidant and nitrogen source
dual catalytic system of photocatalyst and ACT
12 examples
13–74% yield

Pd-Catalyzed Oxidation of Aldimines to Amides

S. Gao
Y. Ma
W. Chen
J. Luo*
Ningbo University, P. R. of China

Pd(OAc)₂, TBHP

R¹ = Br, Cl, F, Me, NO₂
R² = CF₃, NO₂, COMe, Br, Cl, F, Me, t-Bu, OCF₃, OMe

21 examples
up to 85% yield
Synthesis of 1,4-Diketones via Titanium-Mediated Reductive Homocoupling of $\alpha$-Haloketones

N. N. Le
A. M. Rodriguez
J. R. Alleyn
M. R. Gesinski*
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Facile Construction of Hydantoin Scaffolds via a Post-Ugi Cascade Reaction

Z.-G. Xu
Y. Ding
J.-P. Meng
D.-Y. Tang
Y. Li
J. Lei
C. Xu*
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Iridium/f-Amphox-Catalyzed Asymmetric Hydrogenation of Styrylglyoxylamides

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Chemoselective and Metal-Free Synthesis of Aryl Esters from the Corresponding Benzylic Alcohols in Aqueous Medium Using TBHP/TBAI as an Efficient Catalytic System

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A. Ghatak
A. K. Das
S. Bhar*
Jadavpur University, India

\[ \text{H}_2\text{O, 8 h, 80 °C} \]

\[ \text{MeOH, 8 h, 80 °C} \]