Synlett

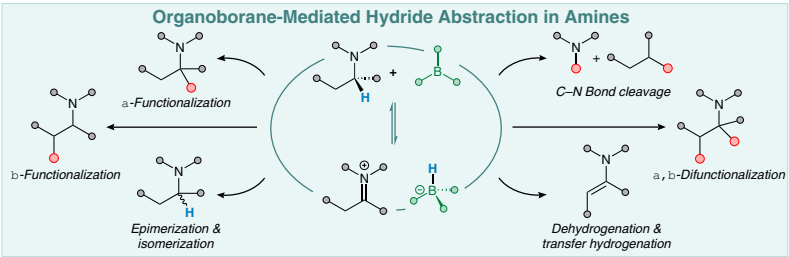
Accounts and Rapid Communications in Chemical Synthesis

November 14, 2023 • Vol. 34, 2059–2248

Cluster

Modern Boron Chemistry: 60 Years of the Matteson Reaction

Editor: Tomislav Rovis
Guest Editors: James P. Morken, Varinder K. Aggarwal



Recent Advances in Catalysis Using Organoborane-Mediated Hydride Abstraction

J. P. Gillions, S. A. Elsherbeni, L. Winfrey, L. Yun, R. L. Melen, L. C. Morrill, A. P. Pulis

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Cluster Preface: Modern Boron Chemistry: 60 Years of the Matteson Reaction

Cluster

2059

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Synlett **2023**, *34*, 2061–2070
DOI: 10.1055/a-2099-6557

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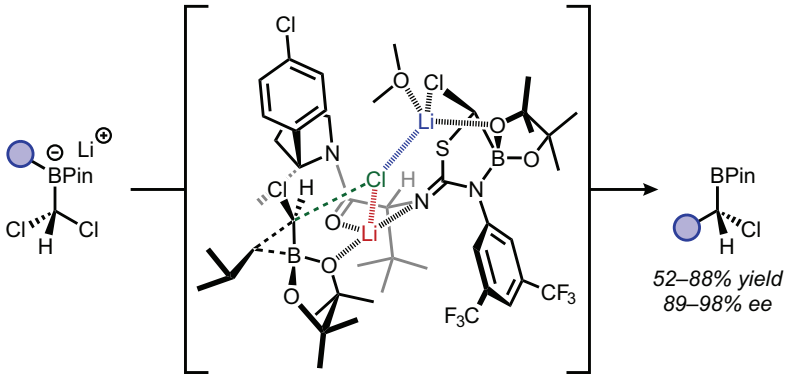
Development of Enantioselective Lithium-Isothiourea-Boronate–Catalyzed Matteson Homologations

Cluster Account

2061



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Synlett **2023**, *34*, 2071–2084
DOI: 10.1055/a-2106-1799

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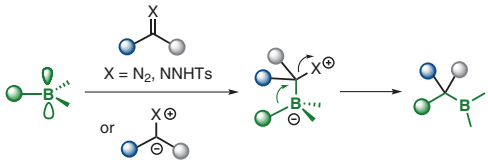
Transition-Metal-Free Insertion of Diazo Compounds, *N*-Arylsulfonylhydrazones or Ylides into Organoboronic Acids or Their Derivatives

Cluster Account

2071



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DOI: 10.1055/a-2036-1151

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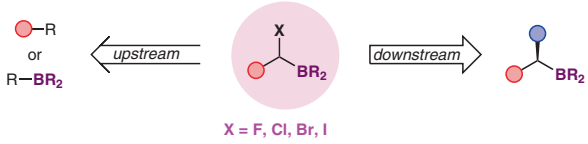
Recent Advances in the Preparation and Asymmetric Transformation of α-Haloboron Compounds

Cluster Account

2085



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Synlett **2023**, *34*, 2097–2102
DOI: 10.1055/a-2117-9878

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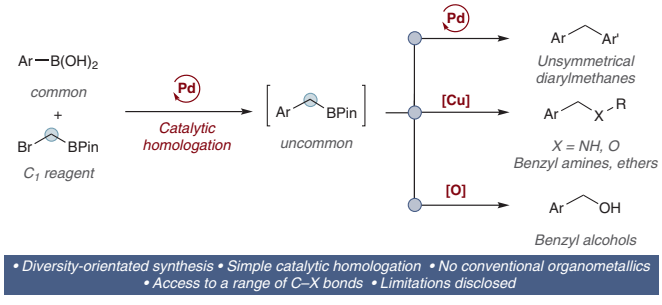
Pd-Catalyzed Homologation of Arylboronic Acids as a Platform for the Diversity-Oriented Synthesis of Benzylic C–X Bonds

Cluster

2097



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Synlett **2023**, *34*, 2103–2109
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Ligand-Enabled Regio- and/or Stereoselective Hydroboration of Alkenes

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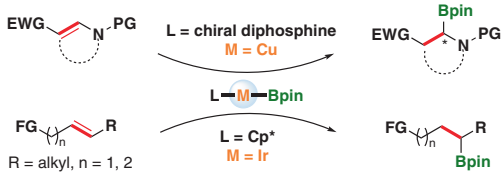
2103



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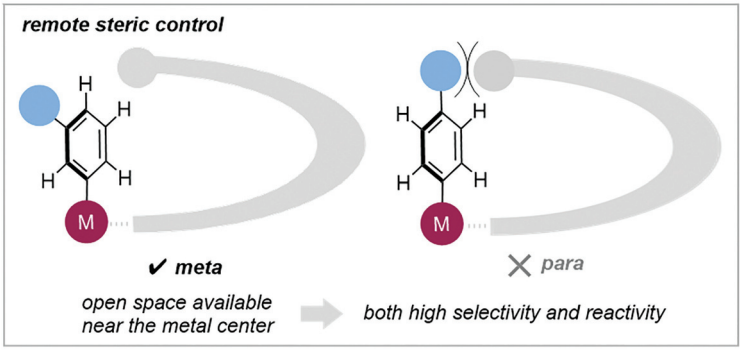
Remote Steric Control for Site-Selective Synthesis

New Tools

2110



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Synlett **2023**, *34*, 2117–2128
DOI: 10.1055/a-2111-9629

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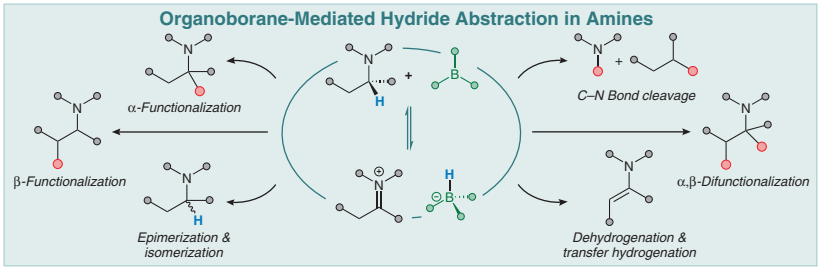
Recent Advances in Catalysis Using Organoborane-Mediated Hydride Abstraction

Account

2117



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Synlett **2023**, *34*, 2129–2158
DOI: 10.1055/a-2132-1356

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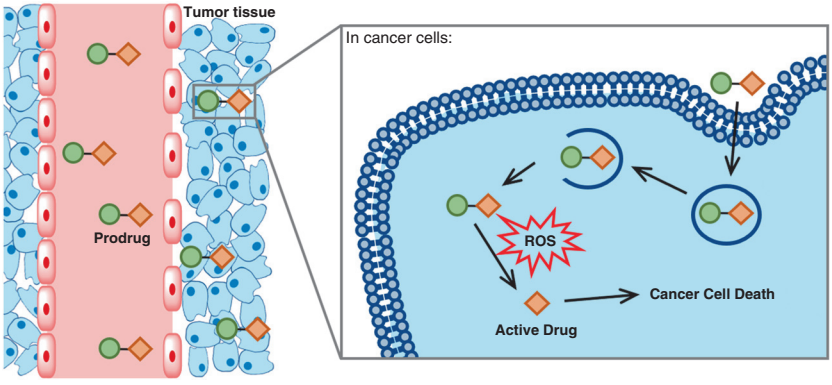
Boronic Acids and Beyond: ROS-Responsive Prodrugs as Tools for a Safer and More Effective Cancer Chemotherapy

Account

2129



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Synlett **2023**, *34*, 2159–2164
DOI: 10.1055/a-2077-2113

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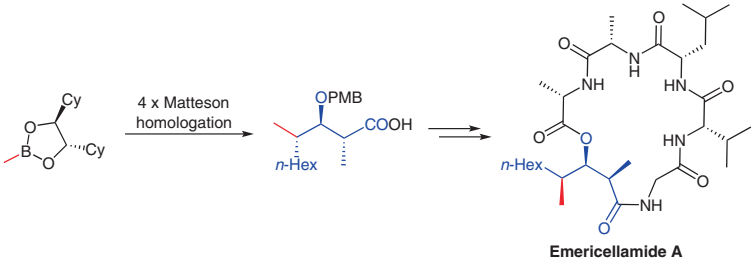
A Straightforward Synthesis of Emericellamide A Using Matteson's Homologation Approach

Cluster

2159



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DOI: 10.1055/a-2089-4260

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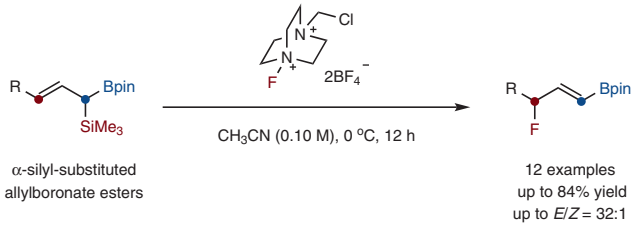
Chemo-, Regio-, and Stereoselective Access to (*E*)-Boryl-Substituted Allyl Fluorides via Electrophilic Fluorodesilylation

Cluster

2165



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N-Functionalization of 1,2-Azaborines

Cluster

2169

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DOI: 10.1055/a-2108-9895

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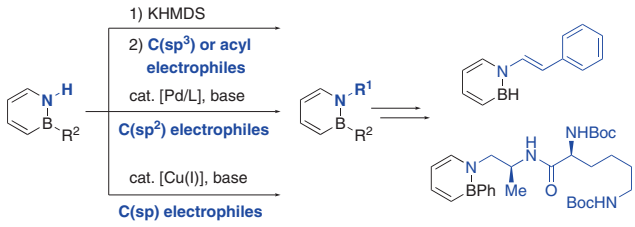

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Photoredox-Catalyzed Radical–Radical Coupling of Potassium Trifluoroborates with Acyl Azoliums

Cluster

2175

Synlett **2023**, *34*, 2175–2180
DOI: 10.1055/s-0041-1738448

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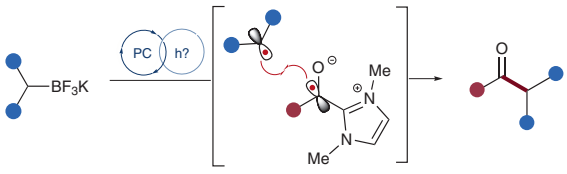

• intermolecular radical-radical coupling •

• alkyl azolium coupling partners •

• bench stable reagents •

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Asymmetric Catalytic Hydroboration of Enol Carbamates Enables an Enantioselective Matteson Homologation

Cluster

2181

Synlett **2023**, *34*, 2181–2186
DOI: 10.1055/a-2106-1461

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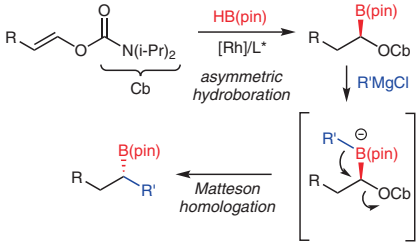

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Remote Back Strain: A Strategy for Modulating the Reactivity of Triarylboranes

Cluster

2187

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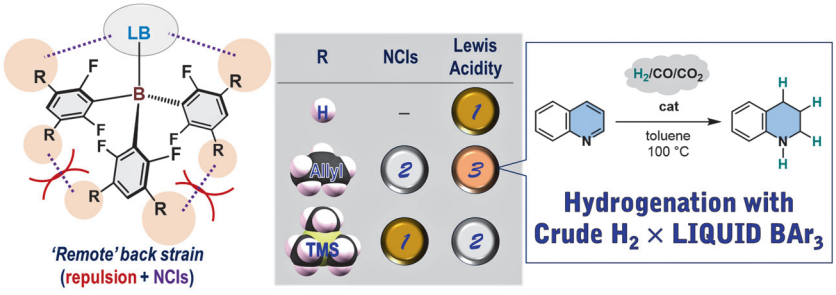

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Addition of a Phosphinoboronate Ester to Borole and Borafluorene

Cluster

2193

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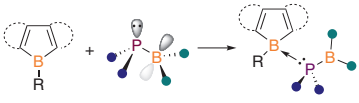

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Synlett **2023**, *34*, 2197–2199
DOI: 10.1055/s-0041-1738434

Synthesis of (±)-Phyltetralin by Cu/Pd-Catalyzed Arylboration

Cluster

2197

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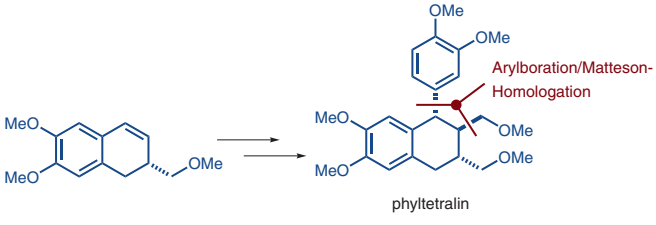

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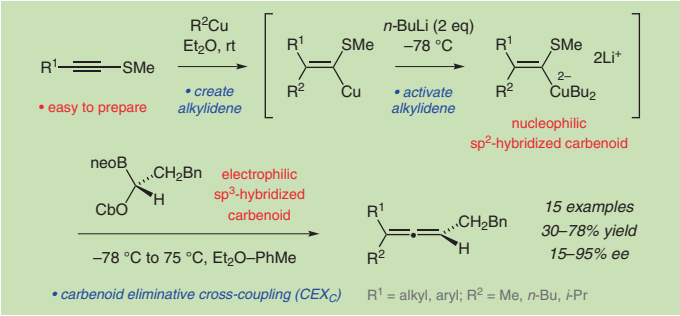
Enantiocontrolled Connective Synthesis of Allenes by Carbenoid Eliminative Cross-Coupling between α-(Methylthio)vinylcuprate Species and α-(Carbamoyloxy)alkylboronates

Cluster

2200



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Synlett **2023**, *34*, 2205–2209
DOI: 10.1055/a-2051-1054

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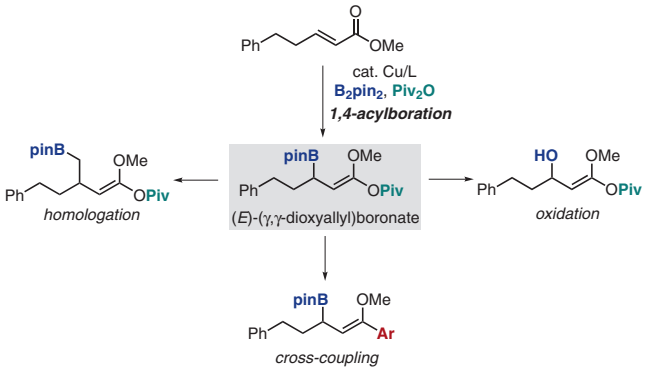
Preparation and Use of (γ,γ-Dioxyallyl)boronates

Cluster

2205



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Synlett **2023**, *34*, 2210–2214
DOI: 10.1055/a-2071-4465

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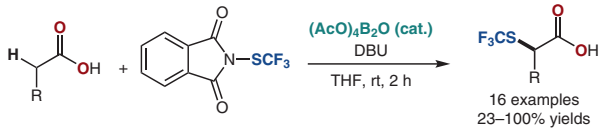
Direct α-Trifluoromethylthiolation of Carboxylic Acids Enabled by Boron Catalysis

Cluster

2210



***Direct installation of* α-SCF$_3$ to bioactive carboxylic acids**

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Hemiboronic Acid-Catalyzed Reduction of α,β-Unsaturated Ketones with Reagent-Controlled Chemoselectivity

Cluster **2215**

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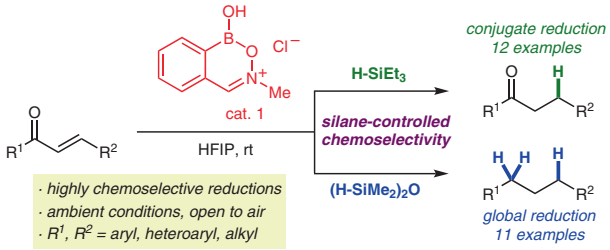

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DOI: 10.1055/a-2126-1750

Metal-Free Directed C–H Borylation of Indoles at the Sterically Congested C2 Position

Cluster **2220**

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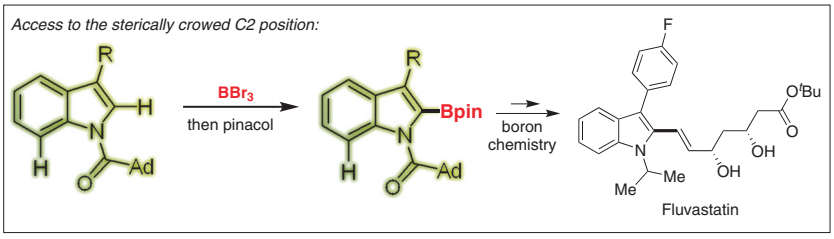

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Synlett **2023**, *34*, 2227–2231
DOI: 10.1055/a-2150-2912

Conjugate Addition of Organoboron Compounds to α,β-Unsaturated Ketones Catalyzed by Nickelacycles

Cluster **2227**

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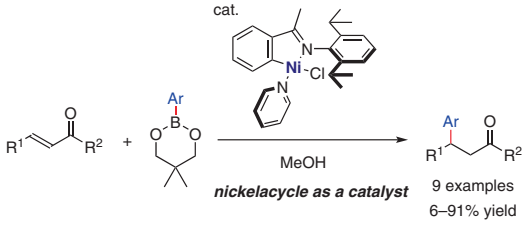

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Intramolecular Asymmetric Cyclopropanation Using Air-Stable Alkylboronic Esters

Cluster **2232**

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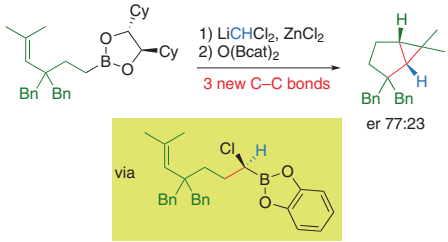

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Boryl Acrylaldehyde: An Elusive Member of the α-Boryl Aldehyde Class of Reagent

Cluster **2239**

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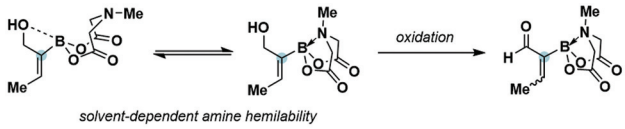

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Synlett **2023**, *34*, 2244–2248
DOI: 10.1055/a-2028-5646

Direct Amination of Benzylic Pinacol Boronates by an Aminoazanium

Cluster **2244**

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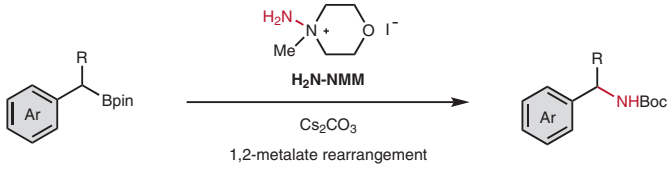

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