Palladium-Catalyzed Asymmetric Allylic Alkylation Strategies for the Synthesis of Acyclic Tetrasubstituted Stereocenters

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Syntheses of Cyanophycin Segments for Investigations of Cell-Penetration

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Unsymmetrical Difunctionalization of Two Different C–H Bonds in One Pot Under Transition-Metal Catalysis

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Guided by Evolution: Biology-Oriented Synthesis of Bioactive Compound Classes

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Recent Developments in Polyene Cyclizations and Their Applications in Natural Product Synthesis

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Electrochemical/Photochemical Aminations Based on Oxidative Cross-Coupling between C–H and N–H

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Synthesis and Reactivity of Mixed Dimethylalkynylaluminum Reagents

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Syntheses of Cyclomarins – Interesting Marine Natural Products with Distinct Mode of Action towards Malaria and Tuberculosis

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**Palladium(0)-Catalyzed Difunctionalization of 1,3-Dienes: From Racemic to Enantioselective**

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\[
\begin{align*}
\text{1,2-product} \quad & \quad \text{1,4-product} \\
R \quad & \quad R' \quad \text{Pd(0)} \quad \text{R'-X} \quad \text{Nu} \quad & \quad \text{R} \quad & \quad \text{Nu} \quad \text{or} \quad \\
X = \text{Br, I, OTf, ONF, N, N}_2^+ \quad & \quad R' = \text{H, N, C} \quad & \quad \text{Nu} = \text{N, B, C, H, O, Si} \\
\end{align*}
\]

**Recent Advances in Enantioselective C–C Bond Formation via Organocobalt Species**

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**Twofold Ferrocene C–H Lithiations For One-Step Difunctionalizations**

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Tris(acetylacetonato) Iron(III): Recent Developments and Synthetic Applications

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Hydrogen Atom Transfer

Oxidations

Cross-Couplings

Reactions with Alkenes/Alkynes

Borylations

Radical Reactions

α-Arylation of Amides from α-Halo Amides Using Metal-Catalyzed Cross-Coupling Reactions

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7-Azaindoline Auxiliary: A Versatile Attachment Facilitating Enantioselective C–C Bond-Forming Catalysis

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Electrophilic Activation of Amides for the Preparation of Poly-substituted Pyrimidines

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Formation of Complex α-Imino Esters via Multihetero-Cope Rearrangement of α-Keto Ester Derived Nitrones

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Asymmetric Total Synthesis and Biological Evaluation of (+)-Cycloclavine

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Chemoenzymatic Total Synthesis of (+)-Oxycodone from Phenethyl Acetate

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Silicon Grignard Reagents as Nucleophiles in Transition-Metal-Catalyzed Allylic Substitution

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Alkylpotassium-Catalyzed Benzylic C–H Alkylation of Alkylarenes with Alkenes

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Continuous Flow Chlorination of Alkenyl Iodides Promoted by Copper Tubing

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Rhodium-Catalyzed Cascade Annulative Coupling of 3,5-Diaryl-isoxazoles with Alkynes

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Electrophilic Sulfoximidations of Thiols by Hypervalent Iodine Reagents

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**Synthesis**

Enantioselective Electrochemical Lactonization Using Chiral Iodoarenes as Mediators

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Electrolysis in Batch

Electrolysis in Flow

up to 87% yield
up to 79% ee

**Synthesis**

Synthesis of the C1–C12 Fragment of Calyculin C

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**Synthesis**

Diastereoselectivities in Reductions of α-Alkoxy Ketones Are Not Always Correlated to Chelation-Induced Rate Acceleration

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