Direct Methenylation of 4-Alkylpyridines Using Eschenmoser’s Salt

G. N. Shivers, S. L. Tun, S. L. McLean, F. C. Pigge
Catalytic Asymmetric [3+3] Cycloaddition of Activated Isocyanides with Azomethine Imines

- High yields
- Good to excellent stereoselectivities
- Wide substrate scope
- Simple procedure
- Late-stage functionalization of complex bioactive molecules

5 mol% Ag₂CO₃
10 mol% L* 
THF, 25 °C, 48 h 

[3+3] cycloaddition up to >20:1 dr 
99% yield, 99% ee

R₁ = aryl, heteroaryl, alkyl
R₂ = H, aryl, heteroaryl, alkyl
R³ = H, Me
EWG = phosphine oxide, phosphonate, ester, amide

Translation of a Phosphine- and Azide-Based Reaction to Chemical Modification of Biomolecules in Ionic Liquid

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R = biomolecule
peptide/protein DNA saccharide

ionic liquid
**Synthetic Tools that Enable Synthesis and Understanding of Bioactive Macrocycles**

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The University of Toronto, Canada

**Unlocking Electrophilic N-Aryl Intermediates from Aryl Azides, Nitroarenes, and Aryl Amines in Cyclization–Migration Reactions**

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**Direct Methenylation of 4-Alkylpyridines Using Eschenmoser’s Salt**

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Synlett 2022, 33, 1907–1912
DOI: 10.1055/a-1893-7550

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Synthetic and Mechanistic Investigation of an Unexpected Intramolecular 1-5 Nitrogen to Carbon Tosyl Migration

Migrating Group
NaOH, THF
r.t., 16 h

1,5-Nitrogen to Carbon Tosyl Migration

Synlett 2022, 33, 1913–1916
DOI: 10.1055/a-1921-0928

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α-Metalated Isocyanides Toward a Tangible Reagent Space

One-pot > tangible > bifunctionality

Synlett 2022, 33, 1917–1924
DOI: 10.1055/a-1930-7294

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Oxone-Promoted Cyclization/Hydrolysis of 1,5-Enenitriles Initiated via Direct C(sp³)–H Oxidative Functionalization: Access to Pyrrolidine-2,4-diones

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Stereoselective Synthesis of (Z)-1,2-Bis(arylsulfanyl)ethenes with Calcium Carbide as a Solid Alkyne Source

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Z. Wang
Z. Li*
Northwest Normal University, P. R. of China

Inexpensive and easy-to-handle alkyne source
High stereoselectivity
Wide functional-group tolerance
Eighteen examples
Extension to gram scale

Heterogeneous Photocatalytic Radical Synthesis of Aryl Allyl Sulfones

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L.-f. Zhang
Changzhou Vocational Institute of Engineering, P. R. of China

PANI–g-C3N4–TiO2
visible light, rt
15 examples, 57–81%

Synthesis of Dehydromuscone by an Alkene Metathesis Macrocyclization Reaction at 0.2 M Concentration

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J. Sánchez-Quesada
E. Espinós-Ferri
A. Leyva-Pérez*
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Dehydromuscone
0.1 mol% catalyst
0.2 M concentration

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Free-Radical-Involved Trifluoromethylthiolation Cyclization of Alkenes To Access SCF$_3$-Substituted Indolo[2,1-$\alpha$]isoquinolines

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Stereoselective Synthesis of Acyclic Skeleton of Boscartin A

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Rhodium(I)-Catalyzed [2+2+1]-Carbonylative Cycloaddition of Diynes with Anthracene $\alpha$-Diketone as the Source of CO

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