Synlett

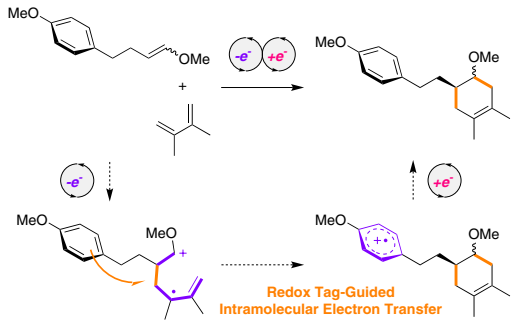
Accounts and Rapid Communications in Chemical Synthesis

February 14, 2024 • Vol. 35, 245–366

Cluster

Organic Chemistry Under Visible Light: Photolytic and Photocatalytic Organic Transformations

Guest Editors: Prof. S. Sen and Prof. L. Gremaud



Redox-Tag-Guided Radical Cation Diels–Alder Reactions: Use of Enol Ethers as Dienophiles

H. Morizumi, K. Nakayama, Y. Kitano, Y. Okada

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Synlett

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DOI: 10.1055/a-2122-8508

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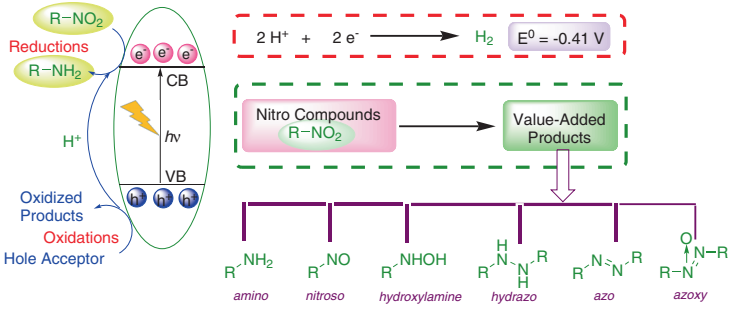
Recent Developments in Photocatalytic Reduction of Nitro Compounds to Valuable Scaffolds

Cluster Account

245



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Synlett **2024**, *35*, 268–278
DOI: 10.1055/a-2131-4126

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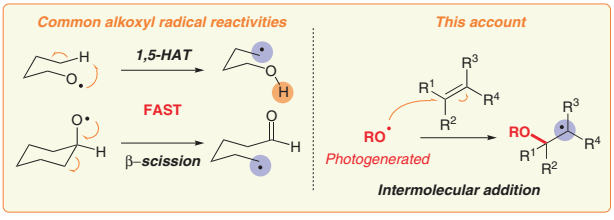
Recent Uses of Photogenerated Oxygen-Centered Radicals in Intermolecular C–O Bond Formation

Cluster Account

268



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Synlett **2024**, *35*, 279–284
DOI: 10.1055/a-2107-5396

Sulfoximines as *S*-Aryl Surrogates: A Photocatalytic Rapid, Metal-Free, Mild Protocol to Access 3-Arylsulfenyl Indoles

Cluster

279

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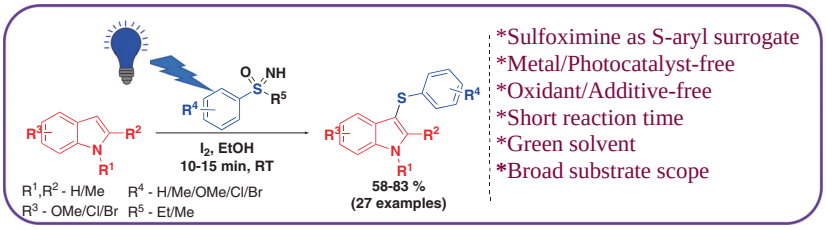

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Synlett **2024**, *35*, 285–290
DOI: 10.1055/a-2086-0630

Continuous-Flow Synthesis of Cyclobutenes Using LED Technology

Cluster

285

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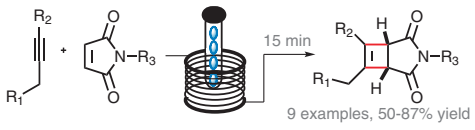

- 365 nm LED instead of Hg-vapor lamp
- MeCN instead of halogenated solvents
- high yield and good productivity

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Synlett **2024**, *35*, 291–296
DOI: 10.1055/a-2131-3208

Visible-Light-Driven Denitrogenative C–C Bond Formation and Oxidative Difunctionalization of Vinyl Azides

Cluster

291

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A. Majee*
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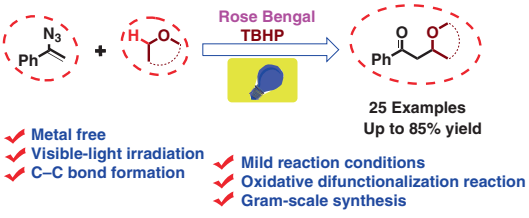

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Synlett **2024**, *35*, 297–302
DOI: 10.1055/a-2131-4033

A Computational and Experimental Analysis of Aldehyde Photo-oxidation Driven by Visible Light in a Homemade Reactor

Cluster

297

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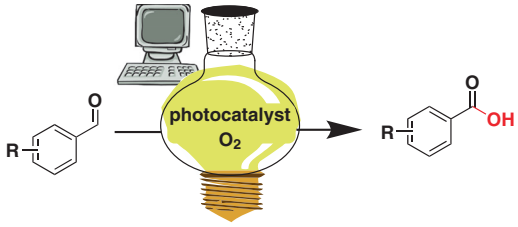

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Synlett **2024**, *35*, 303–306
DOI: 10.1055/a-2122-8631

Photocatalytic 1,4-Addition of Aromatic Aldehydes or Ketones via Umpoled Carbinol Anions

Cluster

303

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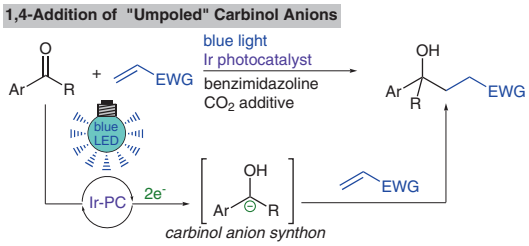

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Synlett **2024**, *35*, 307–312
DOI: 10.1055/a-2117-8928

Triangulenium Ions: Versatile Organic Photoredox Catalysts for Green-Light-Mediated Reactions

Cluster

307

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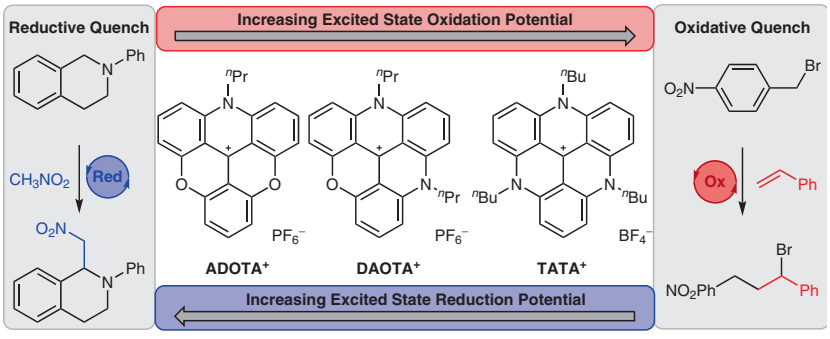

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Synlett
Synlett **2024**, *35*, 313–318
DOI: 10.1055/a-2136-3700

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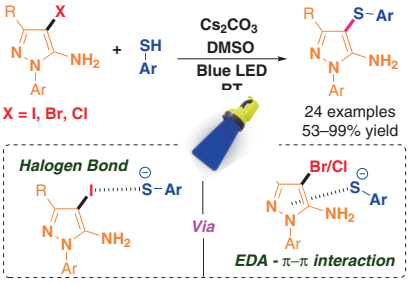
Transition-Metal-Free and Photocatalyst-Free Sulfenylation of Halopyrazolamines under Visible-Light Irradiation via Electron Donor–Acceptor Complexes

Cluster
313



Synlett
Synlett **2024**, *35*, 319–324
DOI: 10.1055/a-2153-6819

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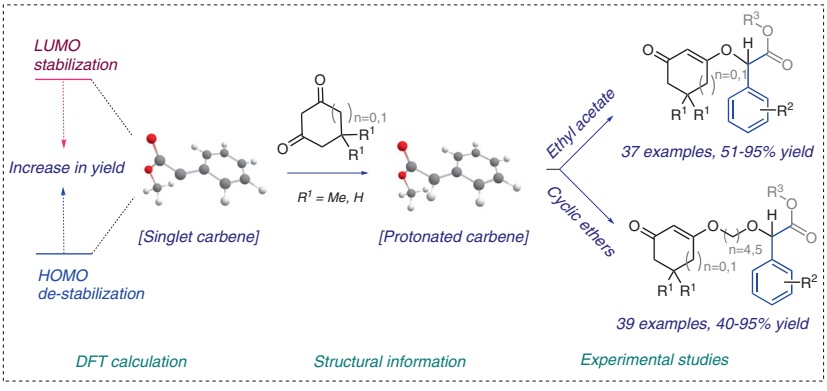
A Combination of Computational and Experimental Studies to Correlate Electronic Structure and Reactivity of Donor–Acceptor Singlet Carbenes

Cluster
319



Synlett
Synlett **2024**, *35*, 325–329
DOI: 10.1055/a-2153-6687

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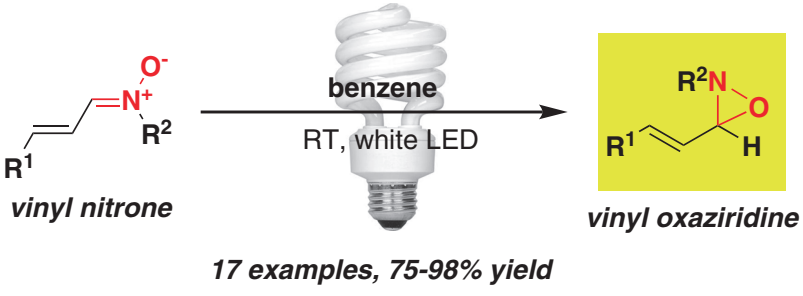
Visible-Light-Promoted Synthesis of Vinyloxaziridines from Conjugated Carbonyls

Cluster
325



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Synlett **2024**, *35*, 330–336
DOI: 10.1055/a-2071-7077

Anthraquinone-Catalyzed Photooxidation of Boronic Acids in a Bio-Based Solvent (2-Me-THF)

Cluster **330**

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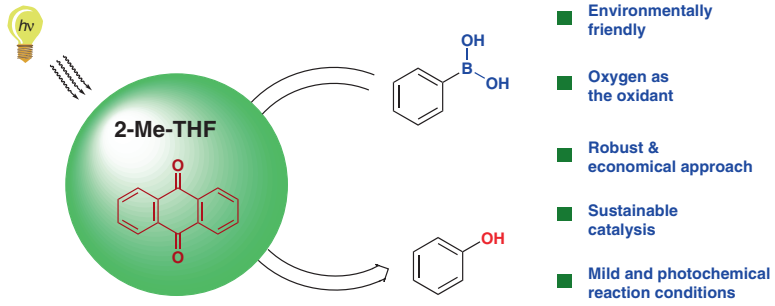

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Synlett **2024**, *35*, 337–341
DOI: 10.1055/s-0041-1738444

Nickel/Photoredox-Catalyzed Decarboxylative Coupling of Aryl Bromides with *N*-Protected Glycine as an Aminomethyl Source

Cluster **337**

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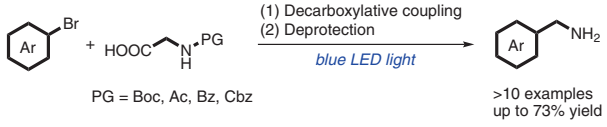

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Synlett **2024**, *35*, 342–346
DOI: 10.1055/a-2131-3368

Iron-Catalyzed Oxidative Decarboxylation of Oxamic Acids: A Safe and Efficient Photochemical Route to Urethanes

Cluster **342**

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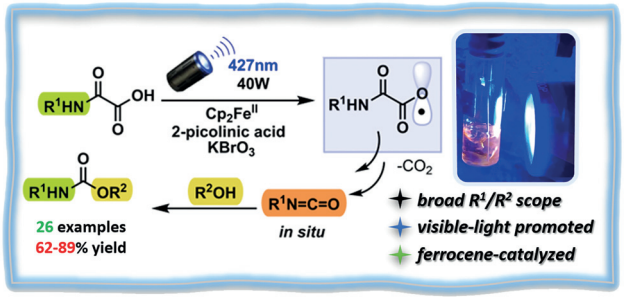

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Synlett
Synlett **2024**, *35*, 347–351
DOI: 10.1055/a-2122-8406

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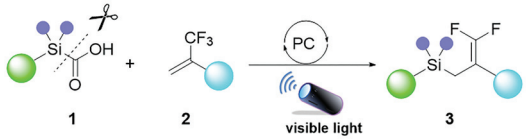
Photoredox Defluorinative Silylation of α-Trifluoromethyl Arylalkenes Using Silacarboxylic Acids as Silyl Radical Precursors

Cluster **347**



26 examples
yield: 35-94%

- readily available and stable silyl radical precursors
- light promoted
- metal free
- mild conditions

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Synlett **2024**, *35*, 352–356
DOI: 10.1055/a-2153-6594

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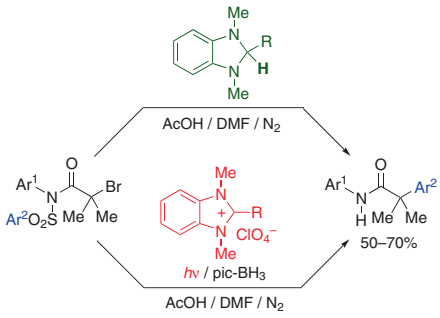
Desulfonylative Radical Truce–Smiles Rearrangement Utilizing the Benzimidazoline and Benzimidazolium Redox Couple

Cluster **352**



Synlett
Synlett **2024**, *35*, 357–361
DOI: 10.1055/a-2117-9803

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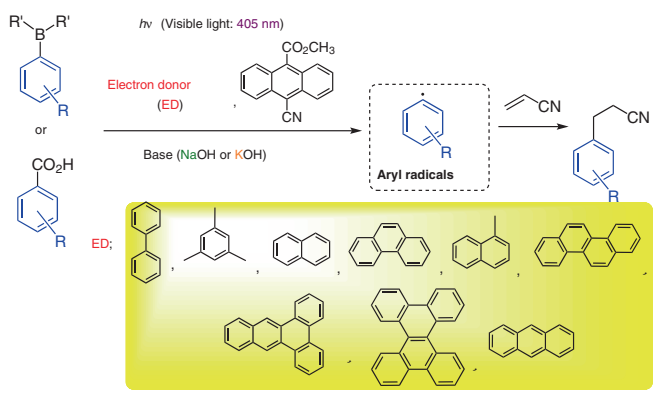
Effects of Electron-Donor and Counter-Cation in Photoinduced Deboronative and Decarboxylative Aryl Radical Generation Using Two-Molecule Photoredox Catalysts

Cluster **357**



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Synlett **2024**, *35*, 362–366
DOI: 10.1055/a-2161-9607

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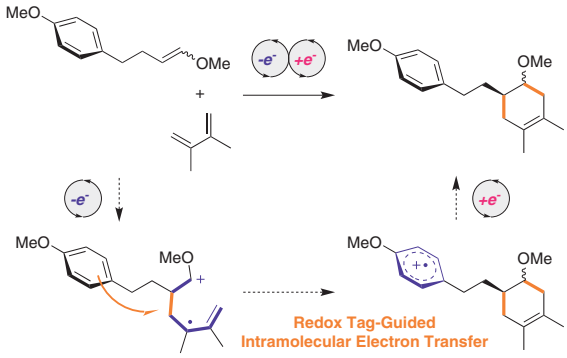
Redox-Tag-Guided Radical Cation Diels–Alder Reactions: Use of Enol Ethers as Dienophiles



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