

Synthesis

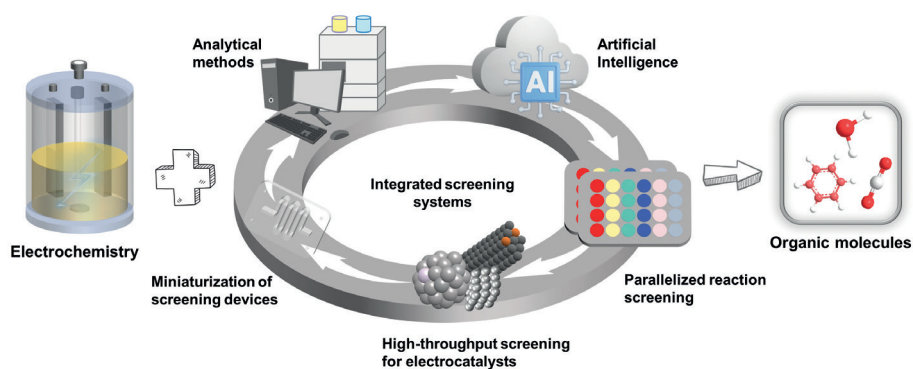
Reviews and Full Papers in Chemical Synthesis

September 15, 2023 • Vol. 55, 2797–3056

Special Topic

Electrochemical Organic Synthesis

Editor: Liu-Zhu Gong, Guest Editor: Hai-Chao Xu



Accelerated Electrosynthesis Development Enabled by High-Throughput Experimentation

H. Chen, Y. Mo

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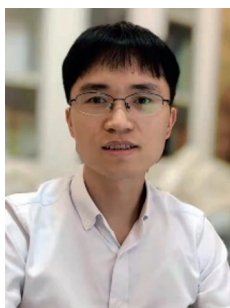
Synthesis

Electrochemical Organic Synthesis

Editorial

Synthesis **2023**, 55, 2797–2798
DOI: 10.1055/a-2096-4349

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2797

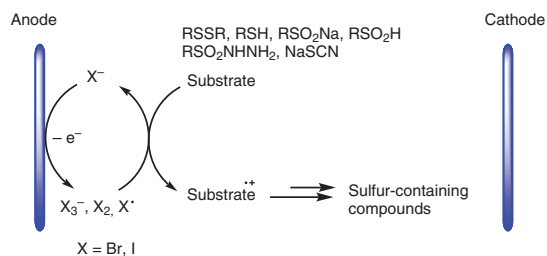
Synthesis

Progress in S–X Bond Formation by Halogen-Mediated Electrochemical Reactions

Review

Synthesis **2023**, 55, 2799–2816
DOI: 10.1055/a-2096-4349

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Synthesis

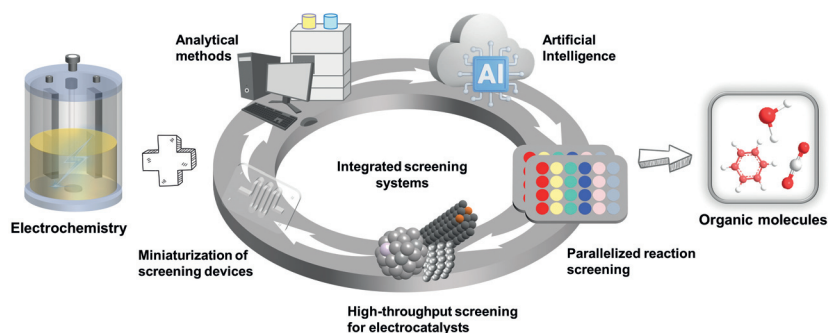
Synthesis 2023, 55, 2817–2832
DOI: 10.1055/a-2072-2617

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Accelerated Electrosynthesis Development Enabled by High-Throughput Experimentation

Short Review

2817



Synthesis

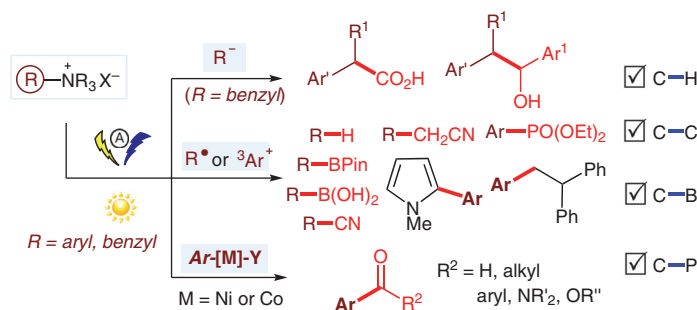
Synthesis 2023, 55, 2833–2842
DOI: 10.1055/a-2020-8923

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Recent Advances in Electro- or Photochemical Driven Transformations via Cleavage of the C–N Bond of Quaternary Ammonium Salts

Short Review

2833



Synthesis

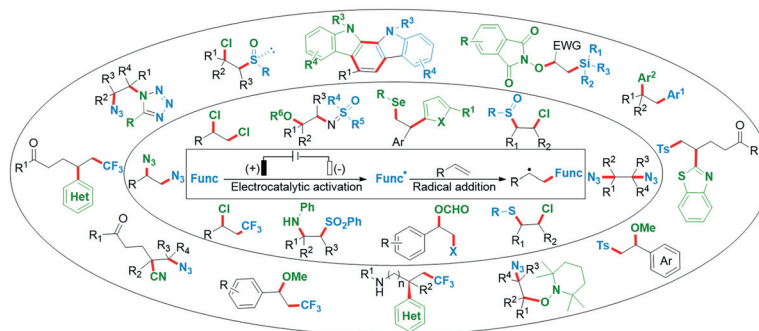
Synthesis 2023, 55, 2843–2859
DOI: 10.1055/a-2036-2074

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Electrochemical Difunctionalization of Alkenes

Short Review

2843



Synthesis

Synthesis 2023, 55, 2860–2872
DOI: 10.1055/a-2044-2140

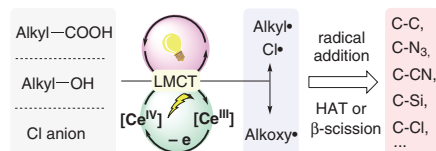
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Photoelectrochemical Cerium Catalysis via Ligand-to-Metal Charge Transfer: A Rising Frontier in Sustainable Organic Synthesis

Short Review

2860



Synthesis

Synthesis 2023, 55, 2873–2895
DOI: 10.1055/a-2019-0399

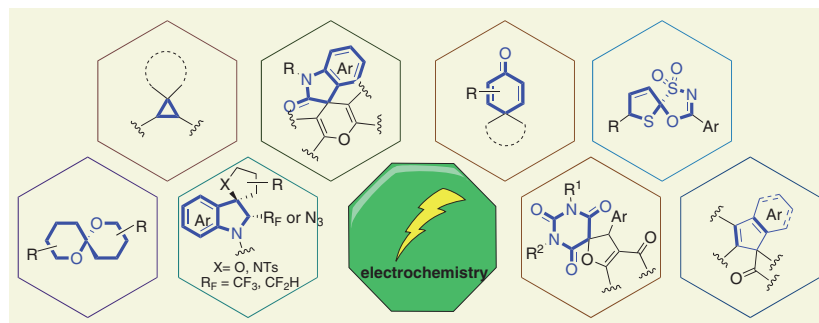
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Research Advances in Electrochemical Synthesis of Spirocyclic Skeleton Compounds

Short Review

2873



Synthesis

Synthesis 2023, 55, 2896–2910
DOI: 10.1055/a-2004-6485

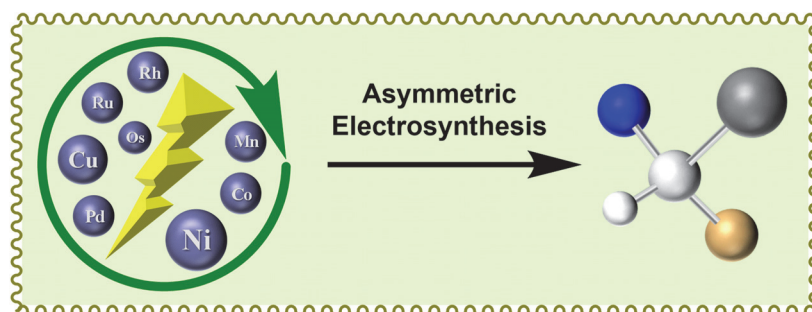
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Asymmetric Organic Electrochemistry Catalyzed by Transition Metals

Short Review

2896

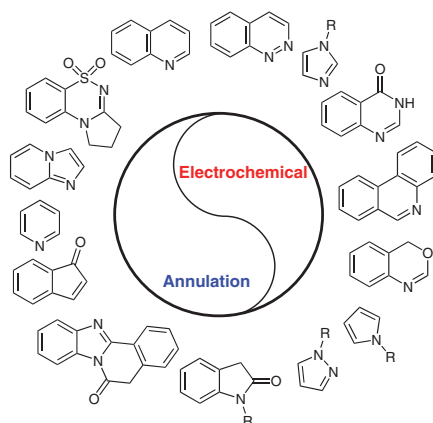


Synthesis 2023, 55, 2911–2925
DOI: 10.1055/a-2039-1728

2911

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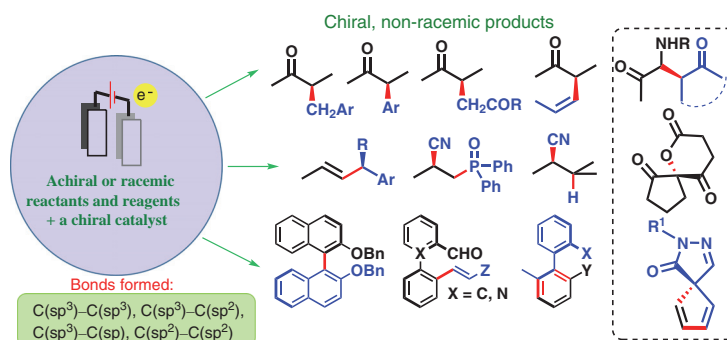


Synthesis 2023, 55, 2926–2942
DOI: 10.1055/a-2011-7073

2926

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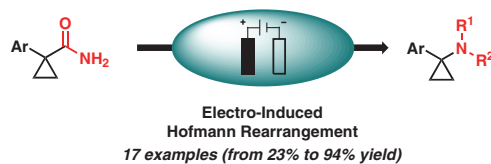


Synthesis 2023, 55, 2943–2950
DOI: 10.1055/a-2050-9368

2943

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Synthesis

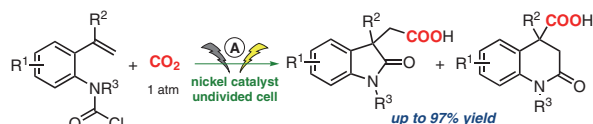
Synthesis 2023, 55, 2951–2958
DOI: 10.1055/s-0041-1738439

L.-L. Wang
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H. Wang
L. Tao
J. Huang
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Nickel-Catalyzed Electrochemical Cyclizative Carboxylation of Alkene-Tethered Carbamoyl Chlorides with Carbon Dioxide

Paper
2951



Synthesis

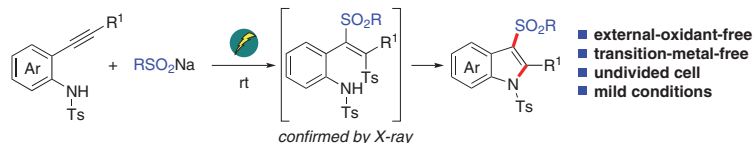
Synthesis 2023, 55, 2959–2968
DOI: 10.1055/a-1996-8054

P. Jiang
R. Liu
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B. Zheng
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Electrochemical Synthesis of 3-Sulfonylindoles via Annulation of *o*-Alkynylanilines with Sodium Sulfinates

Paper
2959



Synthesis

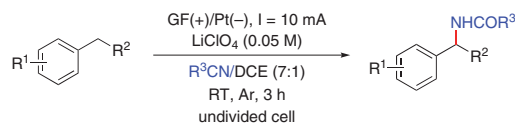
Synthesis 2023, 55, 2969–2978
DOI: 10.1055/a-1992-7066

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Electrochemical Benzylic C(sp³)-H Amidation via Ritter-Type Reaction in the Absence of External Mediator and Oxidant

Paper
2969



- ▲ Transition-metal-free
- ▲ External-oxidant-free
- ▲ Mediator-free
- ▲ Broad substrate scope

Synthesis

Synthesis 2023, 55, 2979–2984
DOI: 10.1055/a-2000-8231

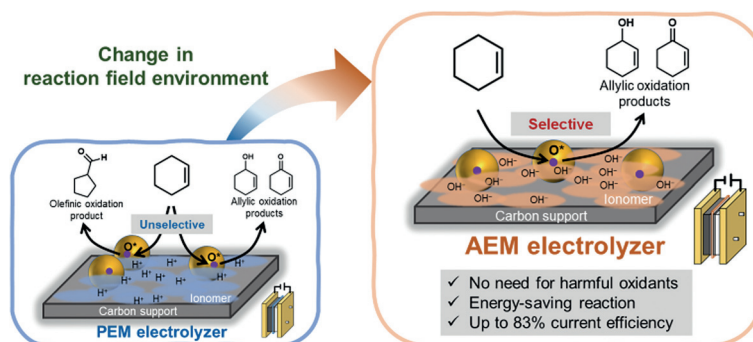
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Comparative Investigation of Electrocatalytic Oxidation of Cyclohexene by Proton-Exchange Membrane and Anion-Exchange Membrane Electrolyzers

Paper

2979



Synthesis

Synthesis 2023, 55, 2985–2992
DOI: 10.1055/a-2038-9146

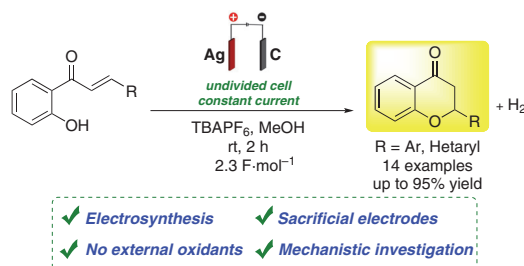
W. A. B. Santos
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Electrosynthesis of Flavanones via oxa-Michael Addition Using Sacrificial Electrodes

Paper

2985



Synthesis

Synthesis 2023, 55, 2993–2998
DOI: 10.1055/a-2013-5865

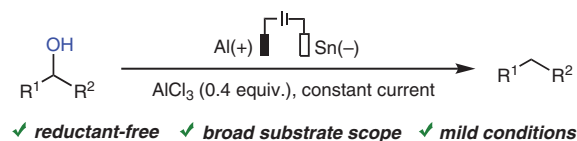
J. Liu
X. Li
X. Chen
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Electrochemical Deoxygenation of Alcohols into Alkanes

Paper

2993



Synthesis

Synthesis 2023, 55, 2999–3004
DOI: 10.1055/a-2034-9821

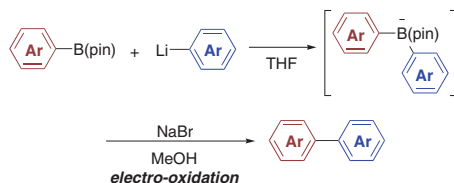
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Electrochemical Cross-Coupling Reactions between Arylboronic Esters and Aryllithiums Using NaBr as a Halogen Mediator

Paper

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Synthesis

Synthesis 2023, 55, 3005–3012
DOI: 10.1055/a-2044-1995

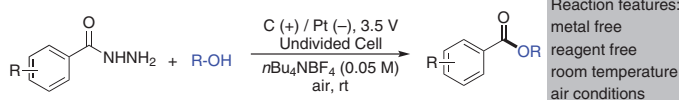
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Reagent-Free Esterification from Benzoyl Hydrazines and Alcohols under Electrochemical Conditions

Paper

3005



Synthesis

Synthesis 2023, 55, 3013–3018
DOI: 10.1055/a-2039-4825

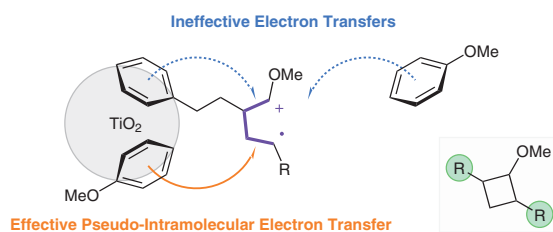
S. Adachi
N. Maeta
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Z. Wang
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Radical Cation [2+2] Cycloadditions Enabled by Surface-Assisted Pseudo-Intramolecular Electron Transfers

Paper

3013



Synthesis

Synthesis 2023, 55, 3019–3025
DOI: 10.1055/a-2029-0617

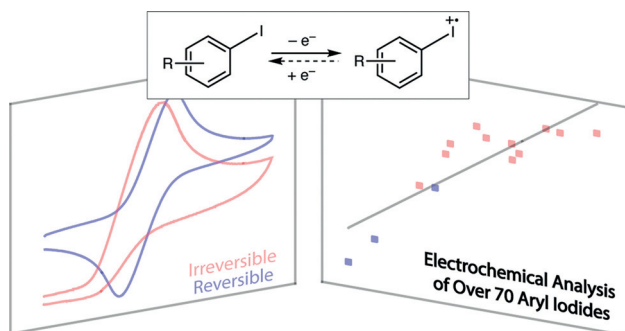
B. L. Frey
P. Thai
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Structure–Activity Relationships for Hypervalent Iodine Electro-catalysis

Paper

3019



Synthesis

Synthesis 2023, 55, 3026–3032
DOI: 10.1055/a-2147-2863

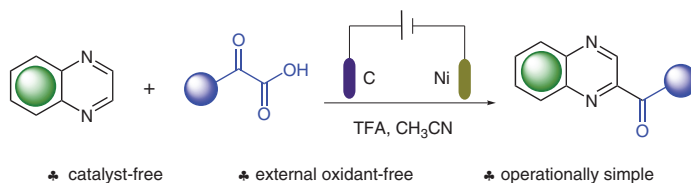
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Electrochemical Decarboxylative Minisci-Type Acylation of Quinoxalines under Catalyst- and External-Oxidant-Free Conditions

Paper

3026



Synthesis

Synthesis 2023, 55, 3033–3039
DOI: 10.1055/a-2006-1285

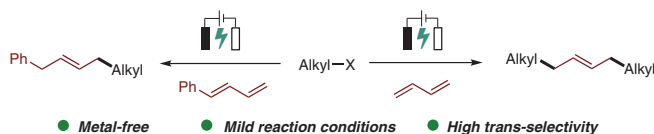
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Electrochemical Synthesis of *trans*-Olefins from Buta-1,3-dienes and Alkyl Halides

Paper

3033



Synthesis

Electrochemical Difunctionalization of Alkenes towards the Synthesis of β -Bromoethers under Metal-Free Conditions

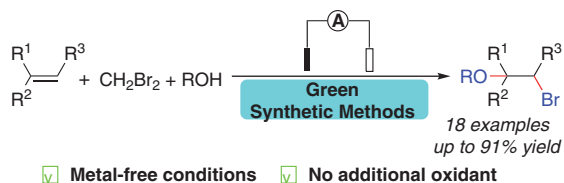
Paper

3040

Synthesis 2023, 55, 3040–3046
DOI: 10.1055/a-2025-1822

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Synthesis

Catalyst- and Additive-Free Electrochemical CO₂ Fixation into Morita–Baylis–Hillman Acetates

Paper

3047

Synthesis 2023, 55, 3047–3055
DOI: 10.1055/a-2029-0488

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