

Synthesis

Reviews and Full Papers in Chemical Synthesis

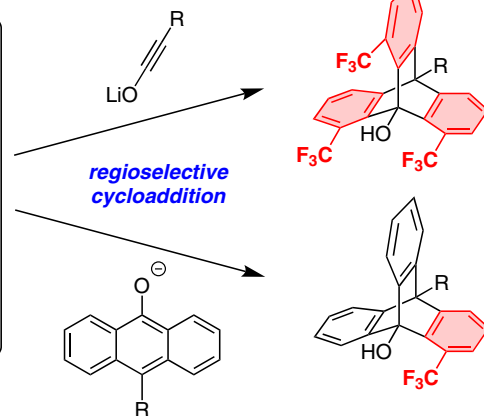
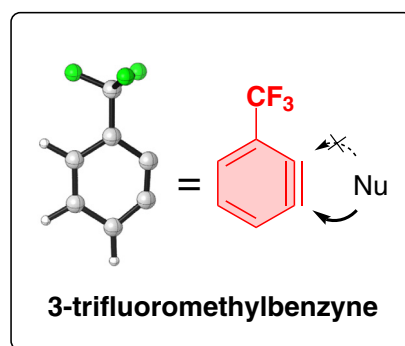
November 17, 2022 • Vol. 54, 4843–5138

Special Topic

Aryne Chemistry in Synthesis

Editor: Hideki Yorimitsu

Guest Editor: Suguru Yoshida



3-Trifluoromethylbenzyne: Precise Orientation in Cycloaddition Reaction Enabled Regioselective Synthesis of Trifluoromethylated Triptycenes

T. Iwata, M. Hyodo, T. Fujiwara, R. Kawano, L. Kuhn, I. V. Alabugin, M. Shindo

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Synthesis

Synthesis 2022, 54, 4843–4863
DOI: 10.1055/s-0042-1751368

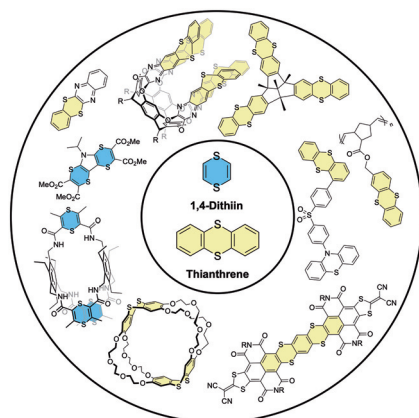
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The Properties, Synthesis, and Materials Applications of 1,4-Dithiins and Thianthrenes

Review

4843



Synthesis

Synthesis 2022, 54, 4864–4882
DOI: 10.1055/a-1921-0698

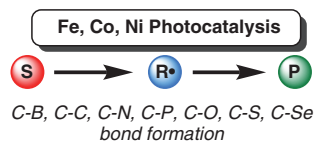
C. Yin
M. Wang
Z. Cai
B. Yuan
P. Hu

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P. R. of China

Visible-Light-Induced Iron Group Metal Catalysis: Recent Developments in Organic Synthesis

Short Review

4864



Synthesis

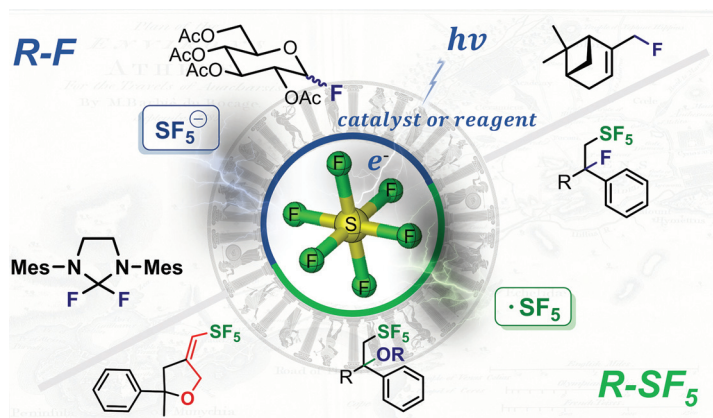
Synthesis 2022, 54, 4883–4894
DOI: 10.1055/a-1877-5231

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Photochemical Activation of Sulfur Hexafluoride: A Tool for Fluorination and Pentafluorosulfanylation Reactions

Short Review

4883



Synthesis

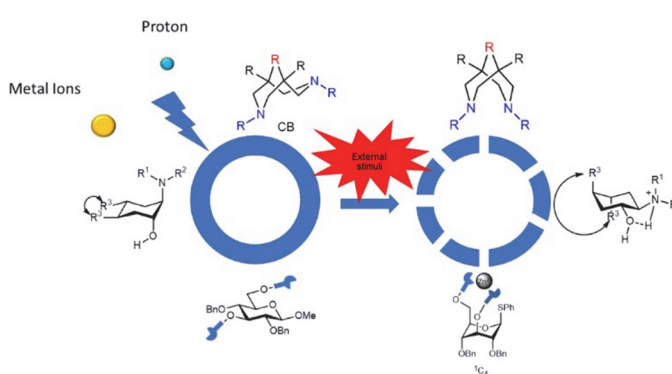
Synthesis 2022, 54, 4895–4906
DOI: 10.1055/s-0040-1720045

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Ring-System-Based Conformational Switches and their Applications in Sensing and Liposomal Drug Delivery

Short Review

4895



Synthesis

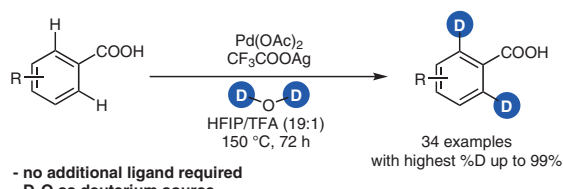
Synthesis 2022, 54, 4907–4916
DOI: 10.1055/a-1859-8012

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Palladium-Catalyzed Ligand-Free *ortho*-Deuteration of Aromatic Carboxylic Acids with D₂O

Feature

4907



Synthesis

Use of Vinyl Sulfides in Fischer Indole Reactions

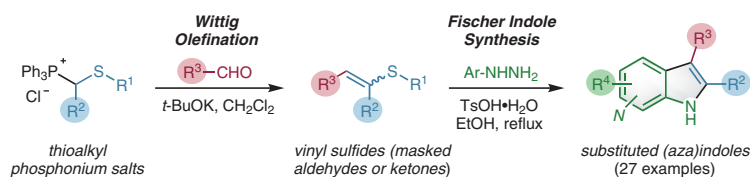
Feature

4917

Synthesis 2022, 54, 4917–4931
DOI: 10.1055/a-1868-4148

P. Pal
M. Fragis
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Synthesis

Aryne Annulations for the Synthesis of Carbocycles and Heterocycles: An Updated Review

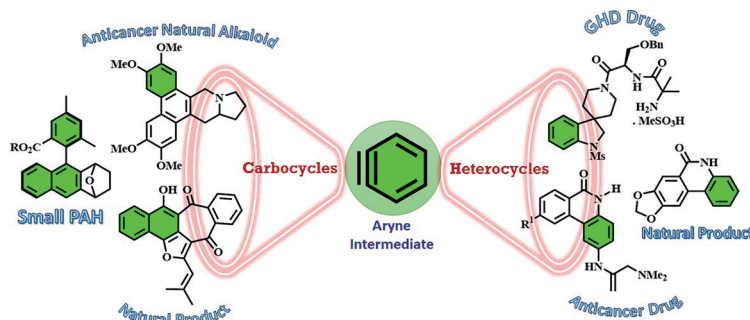
Special Topic

4932

Synthesis 2022, 54, 4932–4962
DOI: 10.1055/a-1863-8622

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Synthesis

Formal Syntheses of Dictyodendrins B, C, and E by a Multi-Substituted Indole Synthesis

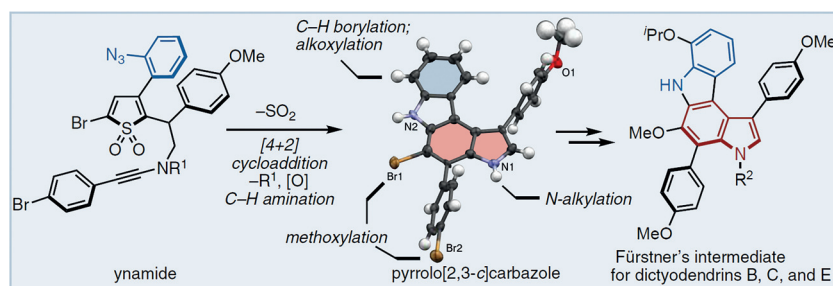
Special Topic

4963

Synthesis 2022, 54, 4963–4970
DOI: 10.1055/a-1786-9881

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Synthesis

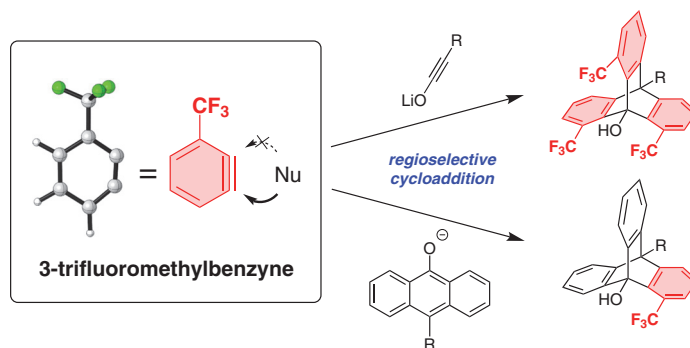
Synthesis 2022, 54, 4971–4978
DOI: 10.1055/a-1818-0576

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3-Trifluoromethylbenzyne: Precise Orientation in Cycloaddition Reaction Enabled Regioselective Synthesis of Trifluoromethylated Triptycenes

Special Topic

4971



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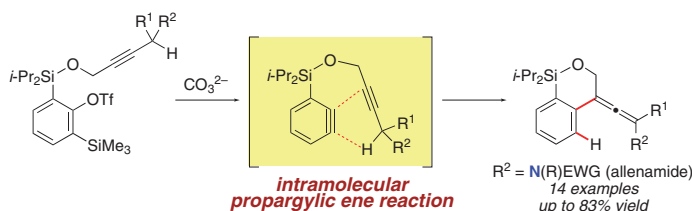
Synthesis 2022, 54, 4979–4988
DOI: 10.1055/a-1826-2545

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Intramolecular Propargylic Ene Reaction of Benzyne En Route to Highly Functionalized Allenes and Allenamides

Special Topic

4979



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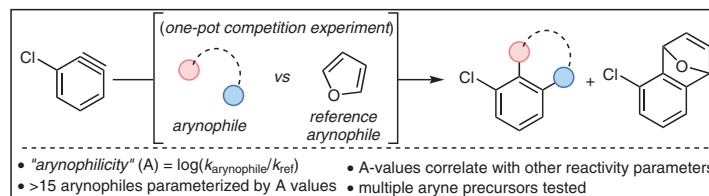
Synthesis 2022, 54, 4989–4996
DOI: 10.1055/a-1845-3066

B. E. Metzger
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Parameterization of Arynophiles: Experimental Investigations towards a Quantitative Understanding of Aryne Trapping Reactions

Special Topic

4989



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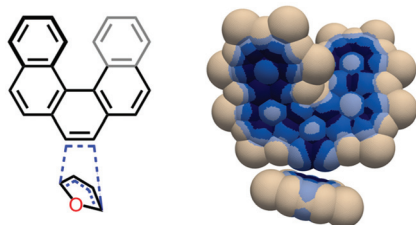
Synthesis 2022, 54, 4997–5002
DOI: 10.1055/a-1867-0674

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Multidimensional Isotropic Magnetic Shielding Contour Maps for the Visualization of Aromaticity in *ortho*-Arynes and Their Reactions

Special Topic

4997



Synthesis

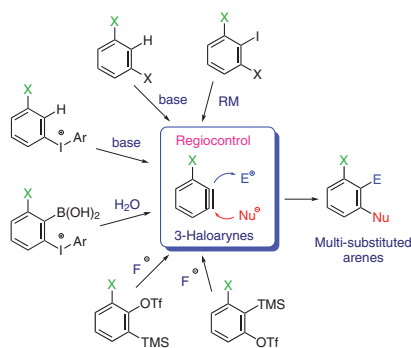
Synthesis 2022, 54, 5003–5016
DOI: 10.1055/a-1814-9853

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Regiocontrol by Halogen Substituent on Arynes: Generation of 3-Haloarynes and Their Synthetic Reactions

Special Topic

5003



Synthesis

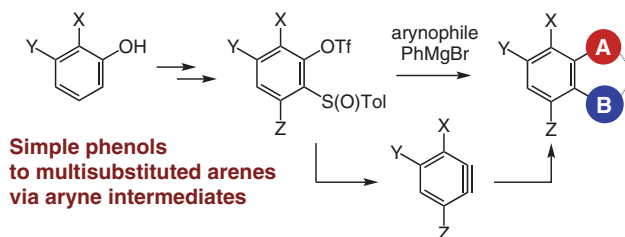
Synthesis 2022, 54, 5017–5025
DOI: 10.1055/a-1834-2927

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A. Kobayashi
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Synthesis of Multisubstituted Benzenes from Phenols via Multisubstituted Benzenes

Special Topic

5017



Synthesis

Synthesis 2022, 54, 5026–5034
DOI: 10.1055/a-1846-5598

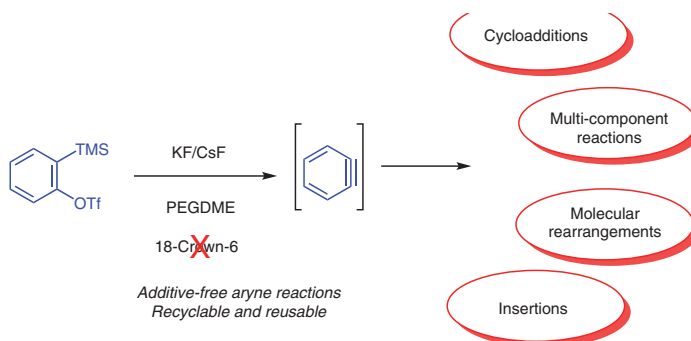
S. Rai
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CSIR-Indian Institute of Chemical
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Poly(ethylene glycol) Dimethyl Ethers (PEGDME): Efficient and Recyclable Solvents for Aryne-Involved Reactions

Special Topic

5026



Synthesis

Synthesis 2022, 54, 5035–5041
DOI: 10.1055/a-1845-3128

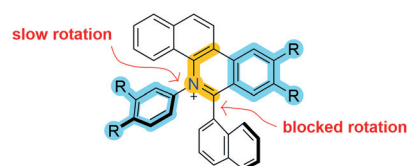
B. C. Agudelo
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Synthesis of Axially Chiral Cationic Benzo[*c*]phenanthridinium Derivatives

Special Topic

5035



Synthesis

Synthesis 2022, 54, 5042–5054
DOI: 10.1055/a-1827-2987

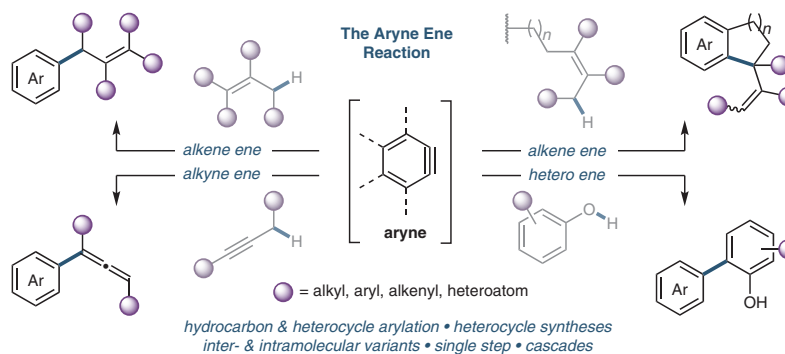
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The Aryne Ene Reaction

Special Topic

5042



Synthesis

Synthesis 2022, 54, 5055–5063
DOI: 10.1055/s-0037-1610786

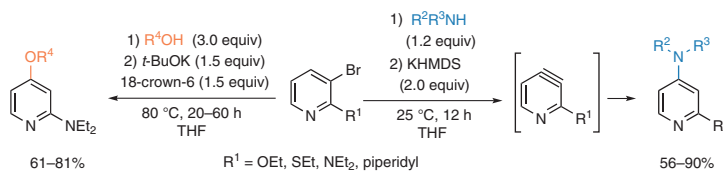
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Regioselective Amination or Alkoxylation of Halogenated Amino-, Thio- or Alkoxy pyridines via Pyridyne Intermediates

Special Topic

5055



Synthesis

Synthesis 2022, 54, 5064–5076
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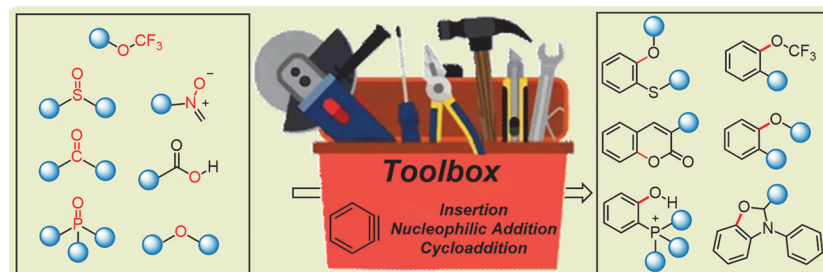
R. Zhang
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Recent Advances in Construction of C(sp²)–O Bonds via Aryne Participated Multicomponent Coupling Reactions

Special Topic

5064



Synthesis

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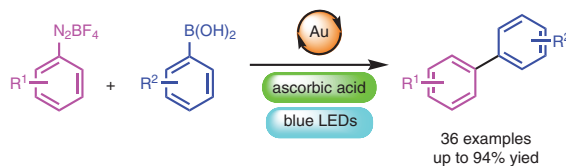
I. Medina-Mercado
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Biaryl Coupling of Aryldiazonium Salts and Arylboronic Acids Catalysed by Gold

Paper

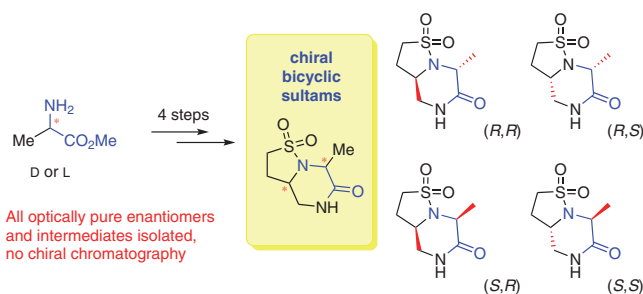
5077



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DOI: 10.1055/s-0040-1719894

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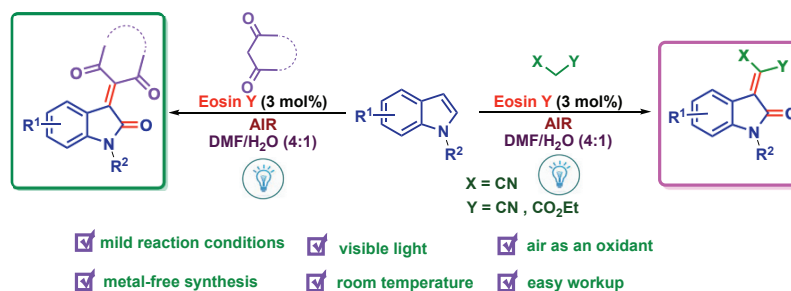
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Synthesis 2022, 54, 5099–5109
DOI: 10.1055/a-1894-8303

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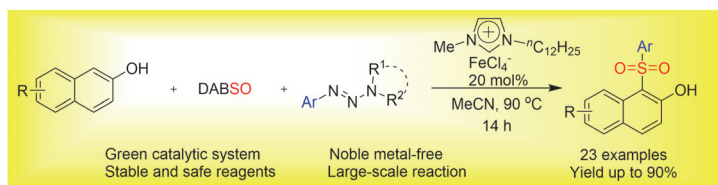
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Synthesis 2022, 54, 5110–5118
DOI: 10.1055/a-1870-9282

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Synthesis

Synthesis 2022, 54, 5119–5127
DOI: 10.1055/s-0041-1737342

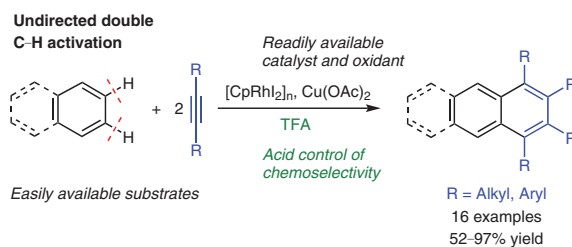
V. B. Kharitonov
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Formation of a Naphthalene Framework by Rhodium(III)-Catalyzed Double C–H Functionalization of Arenes with Alkynes: Impact of a Supporting Ligand and an Acid Additive

Paper

5119



Synthesis

Synthesis 2022, 54, 5128–5138
DOI: 10.1055/s-0037-1610790

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A General Way to Spiro-Annulated 2-Benzoxepines via $\text{Rh}_2(\text{esp})_2$ -Catalyzed [5+2] Cycloaddition of Diazo Arylidene Succinimides to Ketones

Paper

5128

