Isothiazoles in the Design and Synthesis of Biologically Active Substances and Ligands for Metal Complexes

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Stereoselective Preparation and Reactions of Chiral Secondary Alkylithiums

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Recent Advances in Difluoromethylthiolation

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Direct Transformation of Propargylic Alcohols and O,O-Diethyl Phosphorothioic Acid into S-(2H-Chromen-4-yl) Phosphorothioates

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Visible-Light-Promoted C2 Trifluoromethylation of Quinoline N-Oxides

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Synthesis and Photophysical Properties of 3-Amino-4-arylpyridin-2(1H)-ones

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Silver-Promoted Regioselective Oxidative Decarboxylative C–H Alkylation of Phenanthridines with Carboxylic Acids

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A Photoredox Catalysis Approach for the Synthesis of Both the ABDE and the ABCD Cores of Tronocarpine

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An Alternative Metal-Free Aerobic Oxidative Cross-Dehydrogenative Coupling of Sulfonyl Hydrazides with Secondary Phosphine Oxides

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J. Liu  
F. Cheng*  
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- Metal-free process
- Broad substrate scope
- Air as safe and green oxidant
- Efficient and practical to prepare bioactive molecules

Pictet–Spengler Synthesis of Perfluoroalkylated Tetrahydro-γ-carbolines and Tetrahydropyrrolopyrazines

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- iso-Pictet–Spengler
- 5 examples 24–88% yield
- 3 examples 40–50% yield
- 4 examples 33–76% yield

A Concise and Efficient Approach to 2,6-Disubstituted 4-Fluoropyrimidines from α-CF₃ Aryl Ketones

F. Liu  
X. Zhang  
Q. Qian*  
C. Yang*  
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- Simple starting materials
- Metal-free, mild conditions
- 28 examples, yields up to 98%
Efficient Synthesis of Diarylmethylamines via Lewis Acid Catalyzed Friedel–Crafts Reactions of Donor–Acceptor Aziridines with N,N-Dialkylanilines

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Y. I. Kwon
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Metal-Free Synthesis 6-Benzylphenanthridines via Radical Addition/Cyclization of 2-Isocyanobiphenyls

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DMSO-Mediated Synthesis of Methylene-Bridged Unsymmetrical Bisamides in the Presence of AcOH

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Efficient Synthesis of 5-Trifluoromethylthio-1,2,3-Triazoles: One-Pot Multicomponent Reaction from Elemental Sulfur and TMSCF₃

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L.-L. Shen
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1) CuI, KF, DMF, 0 °C
2) Ag₂CO₃, 1,10-phen

20 examples, up to 81% yield

A Simplified Protocol for the Stereospecific Nickel-Catalyzed C–S Vinylation Using NiX₂ Salts and Alkyl Phosphites

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B. Mirabi
E. M. Larin
M. Lautens*

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Ni₂ (0.5–2.5 mol%) P(O₃Pr)₃ (2–10 mol%)
DIPEA (2.5 equiv), DMF (0.4 M)
120 °C, 18 h

21 examples low catalyst load
22–92% yield

Nucleophilic Addition of 1,1'-Bis(hydroxymethyl)ferrocene to Alkynes: Synthesis of Ferrocene Diethenyl Ethers

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N. A. Kolyvanov
O. A. Tarasova
A. I. Albanov
A. P. Tantsyrev
B. A. Trofimov*

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KOH/DMSO
DABCO/CH₂Cl₂

3 examples 68–80% yield
R¹ = R² = H; R¹ = Me, R² = H;
R¹ = H, R² = Ph

4 examples 91–98% yield
EWG = CO₂Me, CO₂Et,
2-Furoyl, C(O)Ph