The Chemical Transformations of C1 Compounds

3-Volume Set

Edited by

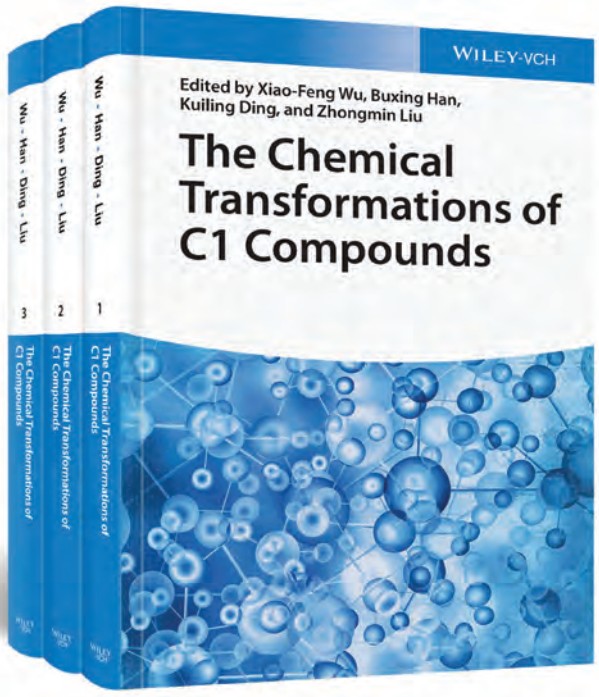
Xiao-Feng Wu, Buxing Han, Kuiling Ding and Zhongmin Liu

Chemistry | Organic Chemistry

A comprehensive exploration of one-carbon molecule transformations

The chemistry of one-carbon molecules has recently gained significant prominence as the world transitions away from a petroleum-based economy to a more sustainable one. In *The Chemical Transformations of C1 Compounds,* an accomplished team of chemists delivers an in-depth overview of recent developments in the field of single-carbon chemistry. The three-volume book covers all major C1 sources, including carbon monoxide, carbon dioxide, methane, methanol, formic acid, formaldehyde, carbenes, C1 halides, and organometallics.

The editors have included resources discussing the main reactions and transformations into feedstock chemicals of each of the major C1 compounds reviewed in dedicated chapters. Readers will discover cutting-edge material on organic transformations with MeNO2, DMF, DCM, methyl organometallic reagents, CC14, CHC13, and CHBr3, as well as recent achievements in cyanation reactions via cross-coupling.



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The book also offers:

- Thorough introductions to chemical transformations of CH4, methods of CH4 activation, chemical transformations of CH3OH and synthesis alkenes from CH3OH
- Comprehensive explorations of the carbonylation of MeOH, CH2O in organic synthesis, organic transformations of HCO2H, and hydrogen generation from HCO2H
- Practical discussions of the carbonylation of unsaturated bonds with heterogeneous and homogeneous catalysts, as well as the carbonylation of C(sp2)-X bonds and C(sp3)-X bonds
- In-depth examinations carbonylative C-H bond activation and radical carbonylation

Perfect for organic and catalytic chemists, *The Chemical Transformations of C1 Compounds* is also an ideal resource for industrial chemists, chemical engineers, and practitioners at energy supply companies.

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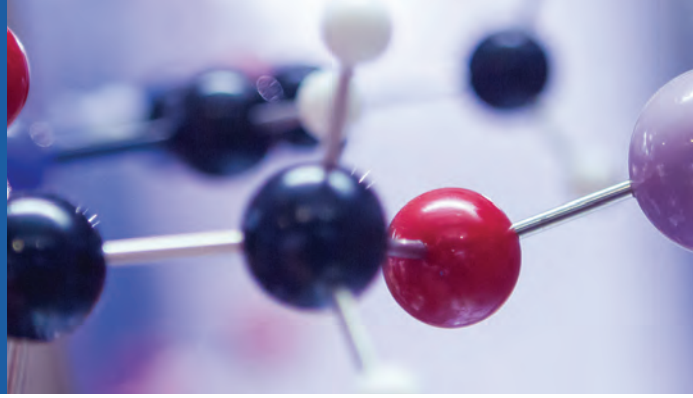

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