

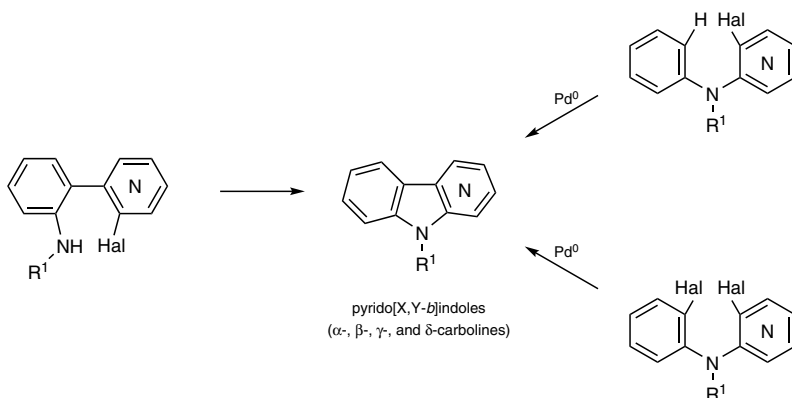
Abstracts

New

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10.23 **Product Class 23: Pyrido[X,Y-b]indoles (Carbolines)***J. A. Joule*

Methods for the synthesis of the four isomeric carboline (pyrido[X,Y-b]indole) ring systems are discussed. Reports from 1919, when the word “carboline” was first coined, up to 2015 are covered, with some references from early 2016 also included.



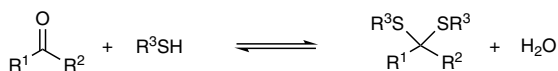
Keywords: carbolines · 9*H*-pyrido[2,3-*b*]indoles · 9*H*-pyrido[3,4-*b*]indoles · 5*H*-pyrido[4,3-*b*]indoles · 5*H*-pyrido[3,2-*b*]indoles · indoles · pyridines · carbon–carbon bond formation · carbon–nitrogen bond formation · palladium catalysis · aromatization · dehydrogenation · tryptamines

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30.3 **Product Class 3: S,S-Acetals***T.-Y. Luh and M.-k. Leung*

This section introduces acyclic and cyclic dithioacetals (*S,S*-acetals) and describes their use as protective groups or alternative functional groups for further transformations.



Keywords: dithioacetals · *S,S*-acetals · thiols · carbonyl compounds · sulfides · protecting groups

2018

Updated Section ·

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Completely Revised Contributions ·

New

New Contributions

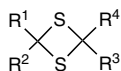
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30.3.2.2 **1,3-Dithietanes**

T.-Y. Luh, M.-k. Leung, and C.-M. Chou

This section is an update to the earlier *Science of Synthesis* contribution (30.3.2) describing the synthesis of 1,3-dithietanes. The preparation of symmetrical dithietanes by dimerization of various thiocarbonyl compounds and of unsymmetrical dithietanes from thioketones and imines, or from aldehydes and carbon disulfide is discussed.



Keywords: 1,3-dithietanes · Bunte salts · thioketones · thiophosgene · thiocarbonates · thioacetamides · carbon disulfide

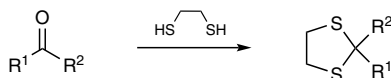
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30.3.3.2 **1,3-Dithiolanes**

M.-k. Leung, C.-M. Chou, and T.-Y. Luh

This section is an update to the earlier *Science of Synthesis* contribution (30.3.3) describing the synthesis of 1,3-dithiolanes. As 1,3-dithiolanes are stable under various conditions and are easily converted back into carbonyl groups under mild conditions, they have been widely explored as protecting groups. This section explores newer catalysts as well as solid-supported catalysts for the conversion of carbonyl groups into 1,3-dithiolanes.



Keywords: 1,3-dithiolanes · aldehydes · ketones · carbonyl compounds · ethane-1,2-dithiol · protic acid catalysis · Lewis acid catalysis · heterogeneous catalysis · solid supports · ionic liquids · acetals

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