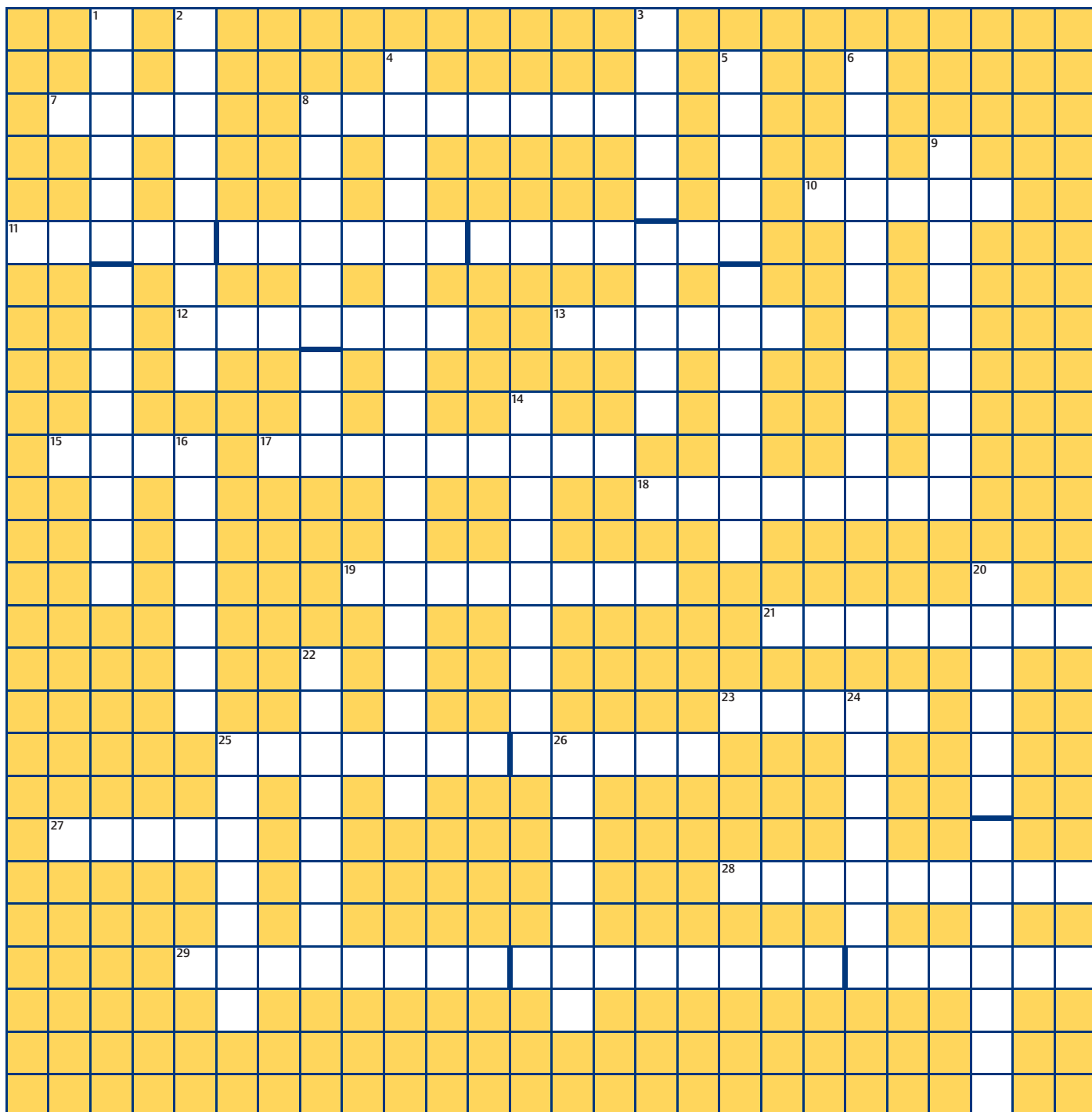


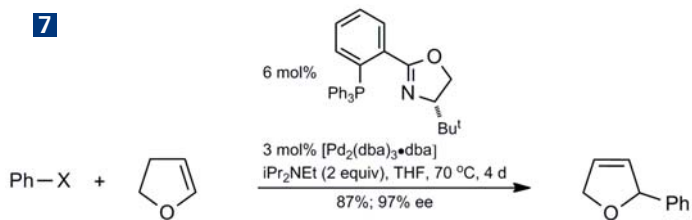
Science of Synthesis Crossword



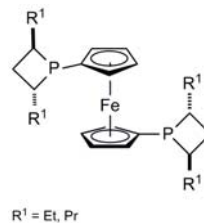
Do you need help?
Look up name reactions
in the electronic version of Science of Synthesis!

Across

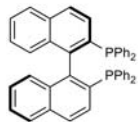
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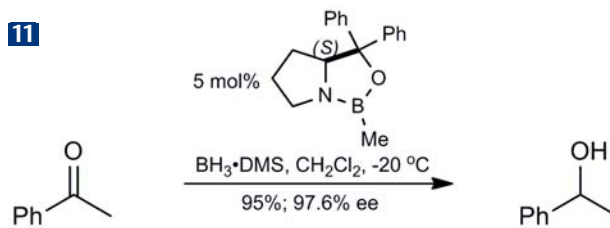
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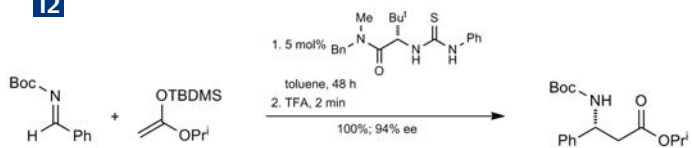
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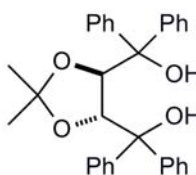
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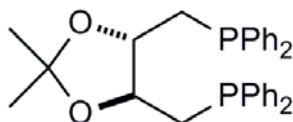
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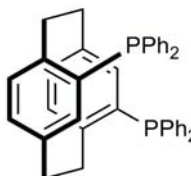
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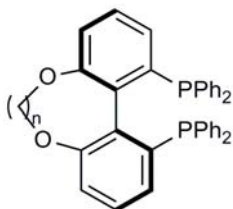
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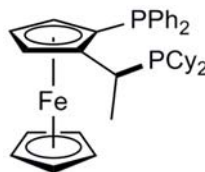
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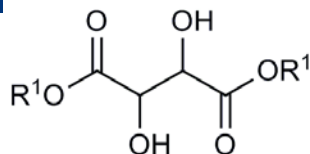
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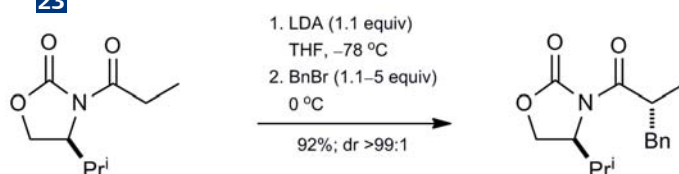
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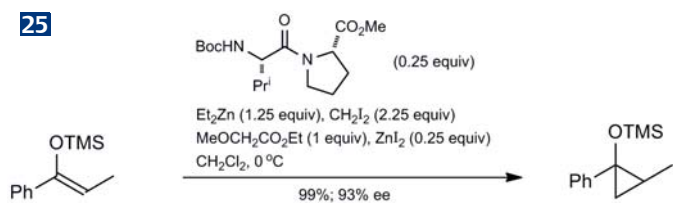
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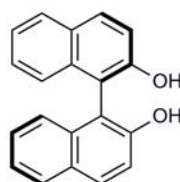
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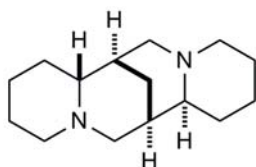
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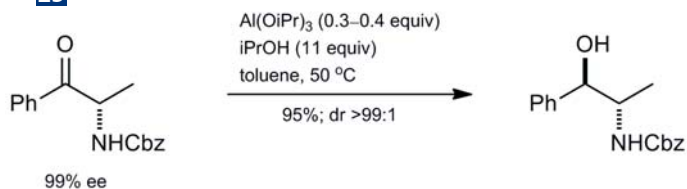
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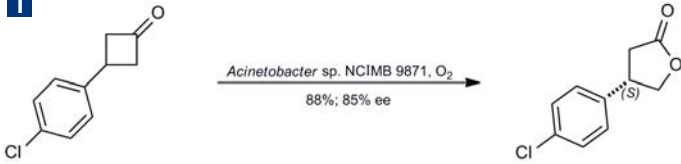


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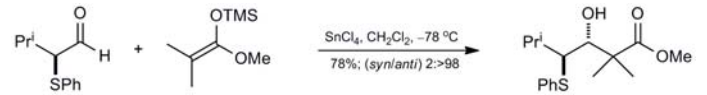


Down

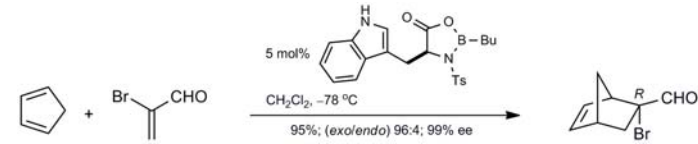
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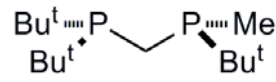
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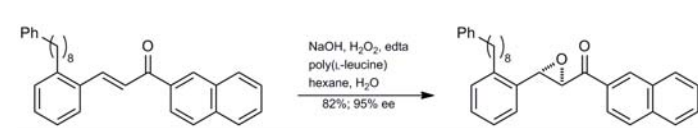
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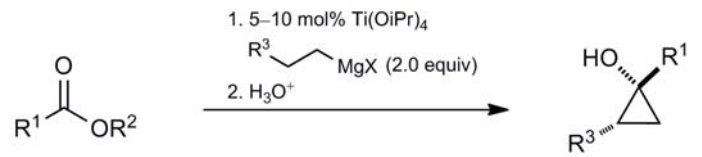
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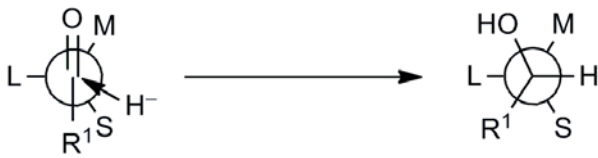
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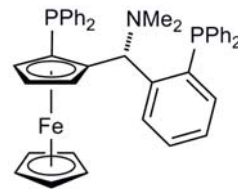
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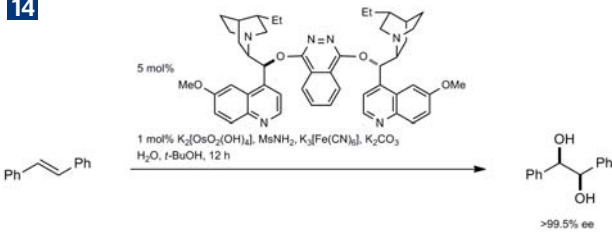
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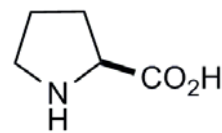
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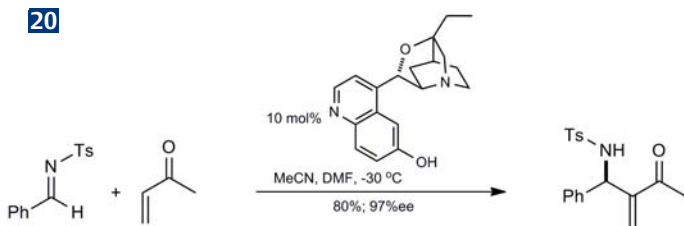
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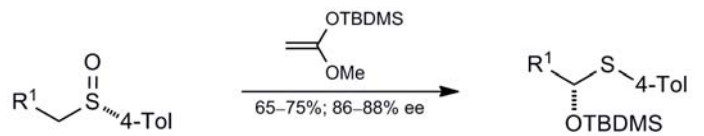
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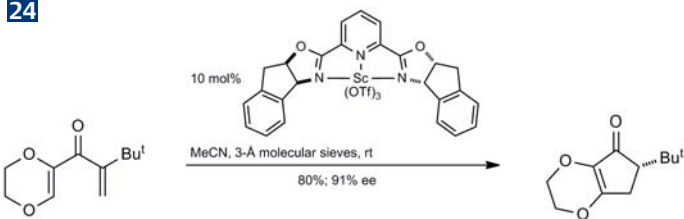
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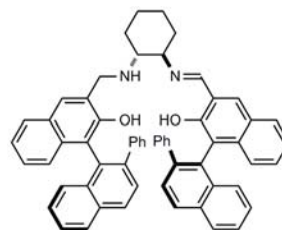
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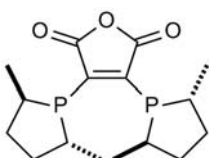
24



25



26



Science of Synthesis – Full-text resource for methods in synthetic organic chemistry

Science of Synthesis provides a critical review of synthetic methodology developed to-date in the fields of organic and organometallic chemistry. Features include:

- Selection of molecular transformations by world-renowned experts with elaboration on scope and limitations
- Full-text descriptions of synthetic methods with practical experimental procedures immediately applicable in the lab
- A community of over 1,750 experts involved in the review and updating of methods
- Logical organization of the synthetic methods for each functional group
- Intuitive search functions to allow rapid lead generation and route optimization
- Integrated special topics:
 - Stereoselective Synthesis (3 volumes)
 - Water in Organic Synthesis (1 volume)
 - Asymmetric Organocatalysis (2 volumes)
 - Cross-Coupling and Heck-Type Reactions (3 volumes)
 - ...

The modern interface

A clear, browserbased interface gives easy access to the methods and experimental procedures in Science of Synthesis. The intuitive search functionality allows you to quickly enter a (sub-)structure or term and provides a comprehensive hitlist including illustrating schemes.

The screenshot shows the Thieme Science of Synthesis website. The page title is '28.7.1.1.2.2.1 Method 1: Fremy's Salt Oxidation'. The DOI is 10.1055/sep-ED-028-00992. The text describes the first chemical preparation of the antineoplastic marine alkaloids of the cystovibin series 132, achieved by modified Knoevenagel-Stable pyridine-ring formation and a photochemical nitrene insertion into a C-H bond as key steps (Scheme 39). A total synthesis has been developed on the basis of retrosynthetic analysis. In the last part of this total synthesis the 4-(2-azidophenyl)quinoline-7,8-dione 134 is formed as a stable intermediate product from quinolin-8-ol 133 by Fremy's salt oxidation (Scheme 39).

Scheme 39 Formation of a 4-(2-Azidophenyl)quinoline-7,8-dione by Oxidation of a Quinolin-8-ol with Fremy's Salt [14]

The scheme shows the conversion of compound 133 to compound 134. Compound 133 is 6-(2-Acetoxyethyl)-4-(2-azidophenyl)quinoline-7,8-dione. The reaction conditions are $(\text{NO}_2)_2\text{NO}$, phosphate buffer, NaOH, yielding 99% of compound 134, which is 6-(2-Acetoxyethyl)-4-(2-azidophenyl)quinoline-7,8-dione.

132 cystovibin A: R¹ = CH₂COMe
cystovibin B: R¹ = COMe
cystovibin C: R¹ = CH₂COMe/OH

133 6-(2-Acetoxyethyl)-4-(2-azidophenyl)quinoline-7,8-dione
134 6-(2-Acetoxyethyl)-4-(2-azidophenyl)quinoline-7,8-dione

Typical Procedure: [14]
A solution of potassium nitrosodisulfonate (5.12 g, 19.1 mmol) in 0.5 M KH₂PO₄ buffer (275 mL) was added to a well-stirred solution of 133 (1.10 g, 2.86 mmol) in MeOH (250 mL) and the resulting mixture was stirred at rt for 3.5 h. The solvents were evaporated, and the residue was diluted with H₂O (150 mL) and extracted with CH₂Cl₂. The combined extracts were dried (Na₂SO₄) and the solvents were evaporated to yield an orange-red solid.

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Retrieve a concise hitlist of reliable organic transformations and applicable methods, hand-selected by experts in the field
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