AIMS AND SCOPE

Although total synthesis reached extraordinary levels of sophistication in the last century, the development of practical and efficient synthetic methodologies is still in its infancy. The goal of achieving chemical reactions that are economical, safe, environmentally benign, resource- and energy-saving will demand the highest level of scientific creativity, insight and understanding in a combined effort by academic and industrial chemists.

Advanced Synthesis & Catalysis is designed to stimulate and advance that process by focusing on the development and application of efficient synthetic methodologies and strategies in organic, bioorganic, pharmaceutical, natural product, macromolecular and materials chemistry. The targets of synthetic studies can range from natural products and pharmaceuticals to macromolecules and organic materials. While metal catalysis, biocatalysis and organocatalysis play an ever increasing role in achieving synthetic efficiency, all areas of interest to the practical synthetic chemist fall within the purview of *Advanced Synthesis & Catalysis*, including synthesis design, reaction techniques, separation science and process development.

Contributions from industrial and governmental laboratories are highly encouraged. It is the goal of the journal to help initiate a new era of chemical science, based on the efforts of synthetic chemists and on interdisciplinary collaboration, so that chemistry will make an even greater contribution to the quality of life than it does now.

Advanced Synthesis & Catalysis

succeeding Journal für praktische Chemie
(founded in 1828)

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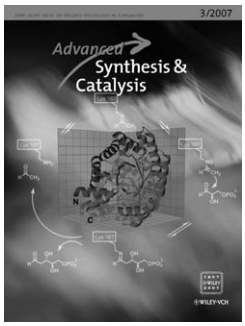
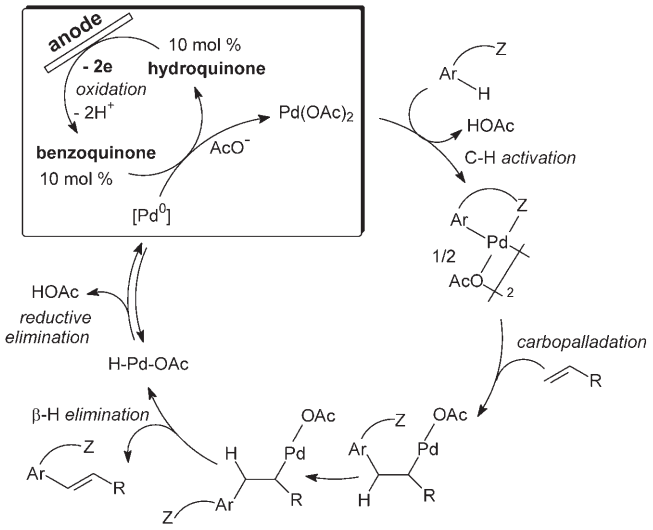
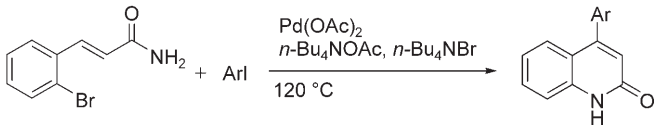


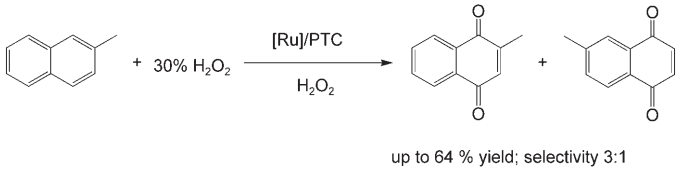
Cover Picture

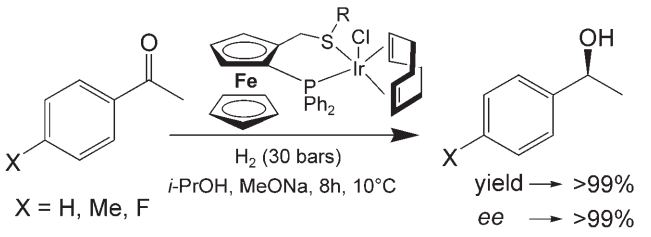
The cover picture results from the seminal mechanistic work on DERA, deoxyribose-5-phosphate aldolase, a widely distributed catabolic enzyme, by Chi-Huey Wong and co-workers.

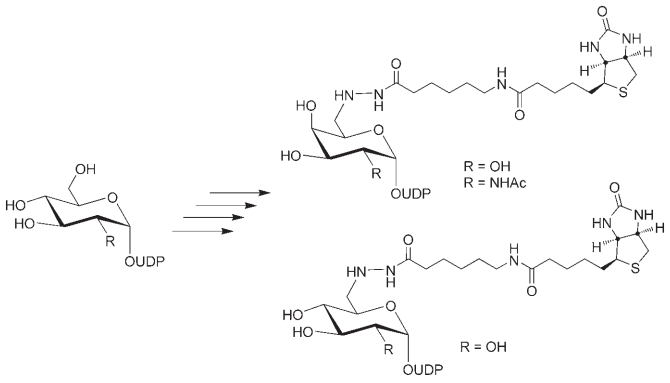
COMMUNICATIONS



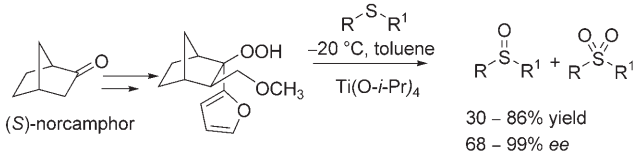


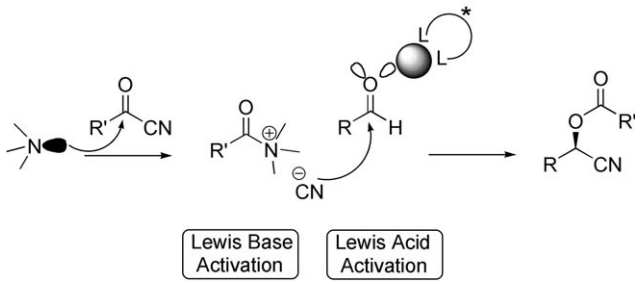


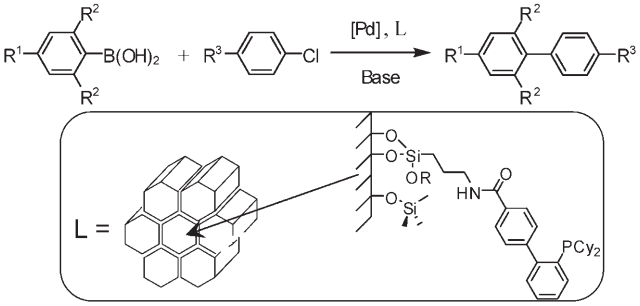


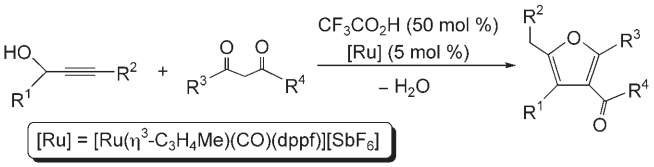


FULL PAPERS

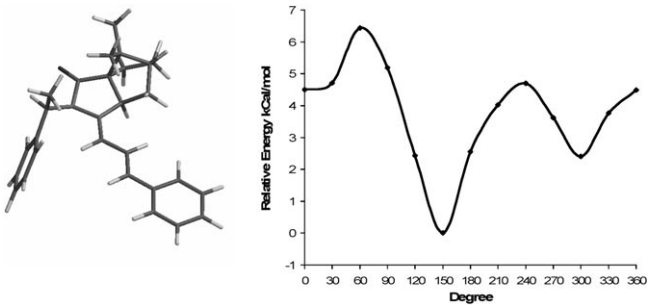


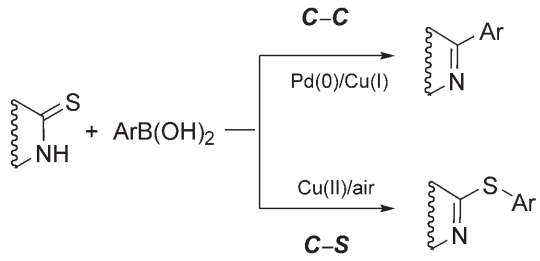


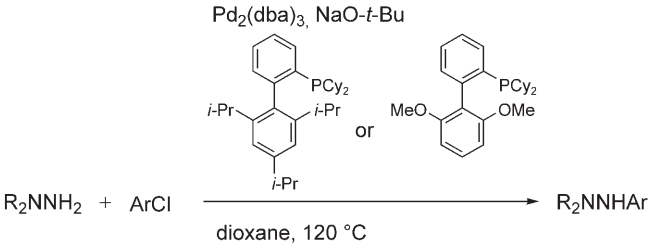


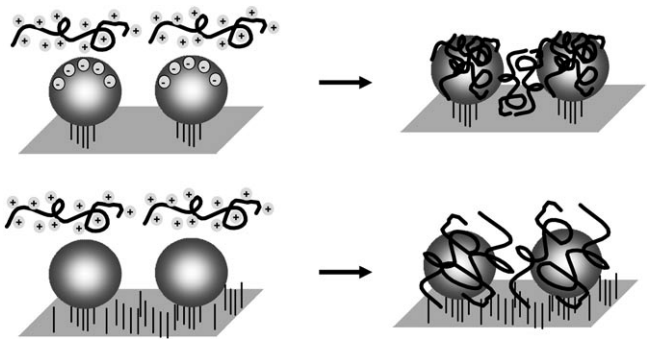


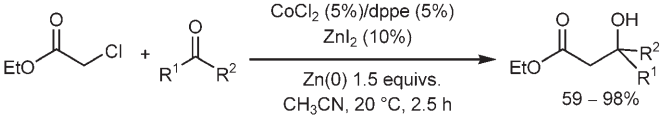
UPDATES







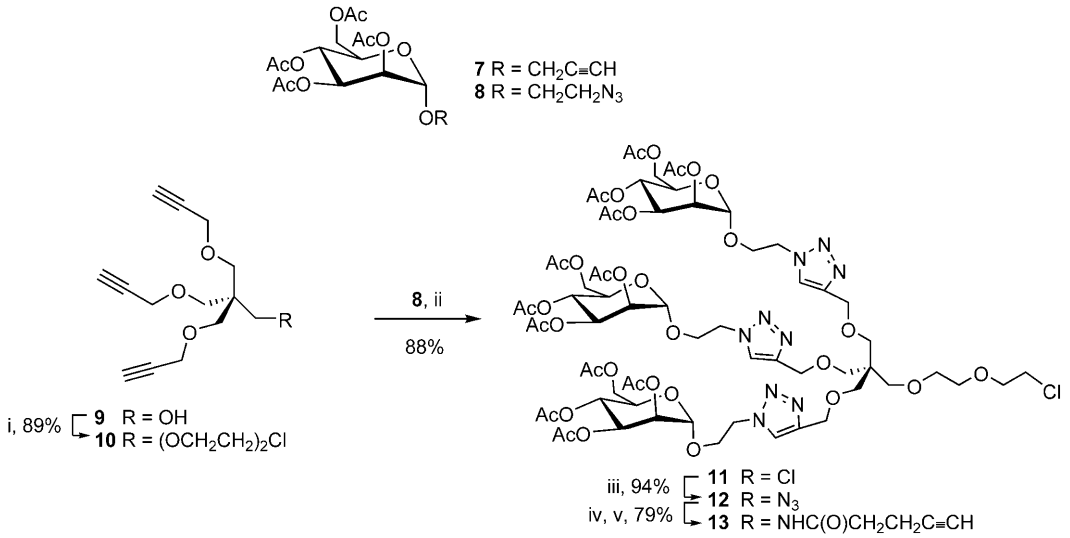




BOOK REVIEWS

CORRIGENDUM

In the paper by Mariano Ortega-Muñoz, Javier Lopez-Jaramillo, Fernando Hernandez-Mateo, and Francisco Santoyo-Gonzalez in Issue 16 + 17, 2006, pp. 2410-2420, the structural formulae of compounds **7**, **8**, and **11** – **13** in Scheme 2 on page 2412 are incorrect: all of the sugar hydroxy groups should be acetylated. Also, the deacetylation step in the general procedure for the preparation of glyco-silicas **14** – **17** on page 2418 was missing. The correct scheme and procedure are as follows.



Scheme 2. Alkyne and azide carbohydrate derivatives for click-chemistry immobilization on functionalized silica. Reaction conditions: (i) $(ClCH_2CH_2)_2O$, NaOH; (ii) $CuI(C_2H_5)_3P$, DIPEA, toluene, MW; (iii) NaN_3/DMF/80 °C; (iv) H_2, Pd/C. MeOH; (v) $HC{\equiv}CCH_2CH_2COOH$, DCC, CH_2Cl_2.

General Procedure for the Preparation of Glyco-Silicas 14-17

The alkyne or azide sugar derivative **7**, **8**, **12** and **13** (0.3 mmol) were deprotected by standard Zemplen de-*O*-acetylation in NaOMe/MeOH (20 mL). The mixture was neutralized with Amberlite IR-120 (H) resin and filtered. After evaporation of the solvent, the crude residue was dissolved in dry DMF (5 mL). The complementary azide or alkyne functionalized silica **4** or **6** (1 g) was then suspended and the copper catalyst $(EtO)_3P \cdot CuI$[16c] (10 mmol %, 10 mgr) was subsequently added. The reaction mixture was irradiated at 800 W and 90 °C for 1 h in a Milestone Star Microwave Labstation until the IR spectra of the reaction mixture showed complete disappearance of the starting material. The reaction mixture was filtered and the resulting glyco-silica was successively washed with MeOH (2 × 30 mL), EDTA disodium salt solution (50 mM, 2 × 30 mL), water (2 × 30 mL), acetone (2 × 30 mL) and CH_2Cl_2 (2 × 30 mL). The glyco-silicas **14** – **17** were then dried under vacuum (1 mm Hg) at 50 °C for 16 h.

Supporting information on the WWW (see article for access details).

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