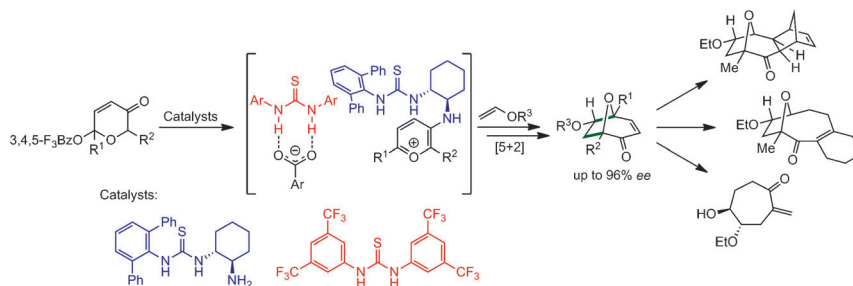


Synthetic Methods

M. R. Witten,
E. N. Jacobsen* _____ 5912–5916



Catalytic Asymmetric Synthesis of 8-Oxabicyclooctanes by Intermolecular [5+2] Pirylium Cycloadditions



A dual thiourea catalyst system enables the title reaction to be carried out to form useful chiral building blocks that can

participate in a series of complexity-generating transformations to achieve varied molecular architectures.



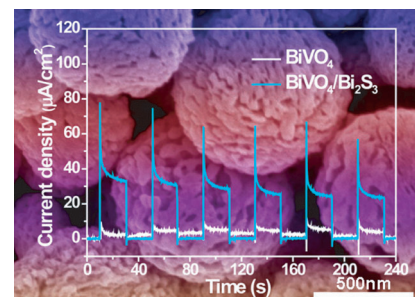
Photoelectrochemistry

X. Gao, H. B. Wu, L. Zheng, Y. Zhong,
Y. Hu,* X. W. Lou* _____ 5917–5921



Formation of Mesoporous Heterostructured BiVO₄/Bi₂S₃ Hollow Discoids with Enhanced Photoactivity

Unique features: Uniform heterostructured BiVO₄/Bi₂S₃ hollow discoids with mesoporous shell are synthesized by a facile anion exchange reaction of BiVO₄ discoids in aqueous Na₂S solution. Because of their heterostructured nature they exhibit significantly enhanced photocurrent response and photocatalytic activity for reduction of Cr^{VI} under visible-light illumination.



DOI: 10.1002/anie.201404978

Flashback: 50 Years Ago ...

Weight loss and hemorrhage, or even immunization against tuberculosis are just some of the biological actions of lipids produced by the tubercle bacillus, as discussed in a Review by E. Lederer. The biosynthesis and structure of these compounds were also outlined.

Burchard Franck published two Communications on secalonic acids, which are the pale yellow main pigment of ergot (*Calviceps purpurea*). In the first Communication, the chromatographic

separation and physical properties of secalonic acids A and B were discussed, and in the second Communication, the authors outlined how mass spectrometry and NMR spectroscopy were used to confirm the structures of the acids.

Emanuel Vogel also contributed two “classics” on triene systems. His first Communication dealt with the synthesis of bicyclo[4,2,0]octa-2,4,7-triene by the dehalogenation of 7,8-dibromobicyclo[4,2,0]octa-2,4-diene. The target prod-

uct can isomerize to form cyclooctatetraene. In his second Communication, Vogel reported the use of NMR spectroscopy to derive the energy barrier for the norcaradiene–cycloheptatriene equilibrium.

The use of anion-exchange thin-layer chromatography plates for the analysis of enzymatic reactions was reported by K. and E. Randerath.

[Read more in Issue 6/1964.](#)