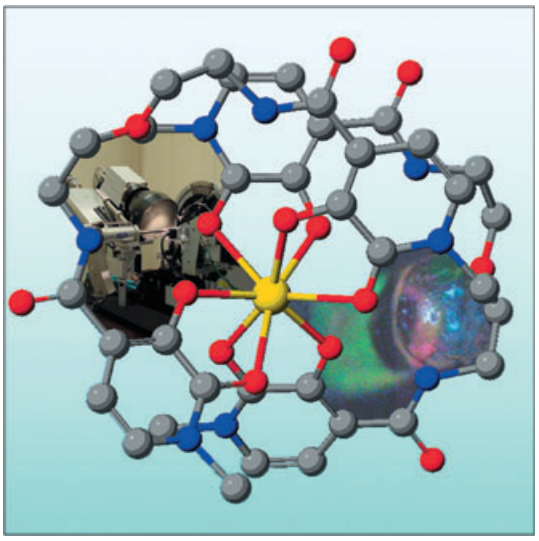
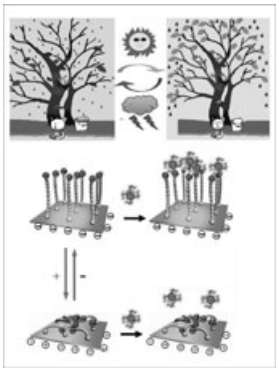
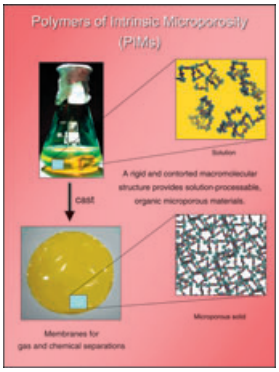
In pursuit of selective sequestration of plutonium…

… the synthesis and structural analysis of [Pu^{IV}{5LIO(Me-3,2-HOPO)}$_2$], the first Pu^{IV} hydroxypyridonate complex (see center: Pu: yellow, N: blue, O: red, C: gray) has been reported. The structure of the deep purple crystals (inset right) was determined by using a small-molecule diffractometer at the Advanced Light Source (inset left). More details of this fascinating chemistry are described in the Full Paper by K. N. Raymond, D. K. Shuh et al. on p. 2842.

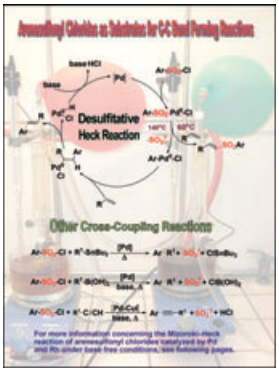




Switchable Surfaces
Increasing attention has been placed on the development of controlled switchable surfaces, also known as "smart surfaces", that can respond to environmental stimuli. Reversible control of the surface properties has been achieved with various methods. The Concept article by J. Kong et al. on page 2622 ff. describes advances in this field of surface chemistry.



Polymers of Intrinsic Microporosity
Novel types of microporous material are required for chemoselective adsorptions, separations, and heterogeneous catalysis. In the Concept article by N. B. McKeown et al. on page 2610 ff., the synthesis and application of polymeric materials that possess microporosity is discussed.



Desulfitative Mizoroki–Heck Coupling
S. R. Dubbaka and P. Vogel describe on pages 2633 ff. the Pd-catalyzed desulfitative Mizoroki–Heck couplings of sulfonyl chlorides with mono- and disubstituted olefins.

