Concept

New Templating Strategies with Salen Scaffolds
(Salen=N,N’-Bis(salicylidene)ethylenediamine Dianion)
A. W. Kleij
An exceptionally challenging synthesis target...

... has finally met its match. An avenue of neem trees flanks an outline of the Ley azadirachtin synthesis road map. The neem tree is the natural source of azadirachtin—a potent insect-feeding suppressant that is widely used in pest control. The highly complex natural product contains sixteen contiguous stereogenic centres, seven of which are tetrasubstituted carbon atoms. Full details of the chemistry used to shape a route to this fascinating target are discussed by S. V. Ley et al. on page 10683 ff. Photographs: William M. Ciesla, www.forestryimages.com; design: Alistair Boyer.

Salen-Templated Synthesis
On page 10520 ff., in his Concept article A. W. Kleij describes how metallosalen scaffolds have become increasingly important in templated synthetic events (salen = N,N'-bis(salicylidene)ethylenediamine dianion). Interesting developments may be expected in various applications that focus on structural and catalytic complexity.

Helicates
In their Communication on page 10535 ff., L. F. Lindoy et al. describe the microwave synthesis of a rare example of a dinuclear helicate, [Ru₂L₃]⁺⁺ (L = 5,5″-dimethyl-2,2‴;5,5‴;2,2‴-quaterpyridine). They showed that it can be separated efficiently into its P and M enantiomers by DNA-based affinity chromatography.

Solid-State Reactions
In their Full Paper on page 10570 ff., S. Nishikiori et al. discuss the self-assembly of simple building units in the solid state. Grinding of metal acetates with bis(3-cyanopentane-2,4-dionato) afforded a range of mononuclear and polymeric complexes.