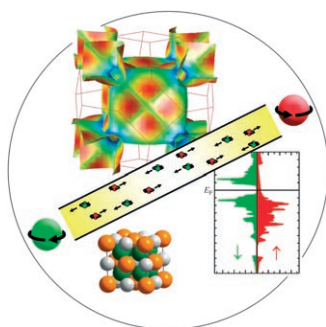
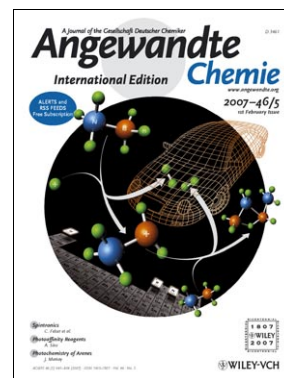


Cover Picture

Frances H. Stephens, R. Tom Baker,* Myrna H. Matus, Daniel J. Grant, and David A. Dixon*

Hydrogen meets the world's need for a carbon-neutral and particulate-free vehicular fuel, but its low density hampers on-board storage capacity. In their Communication on page 746 ff., R. T. Baker, D. A. Dixon, and co-workers present a strategy for hydrogen storage using ammonia–borane (H_3NBH_3), which has a hydrogen capacity of 19.6 wt %—exceeding that of gasoline. They report the mechanism of acid-initiated dehydropolymerization of H_3NBH_3 as elucidated through experimental and computational methods.

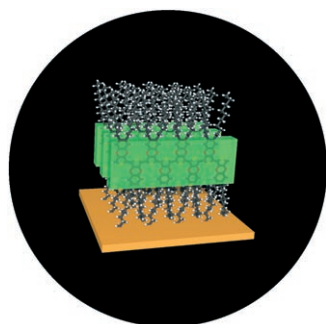
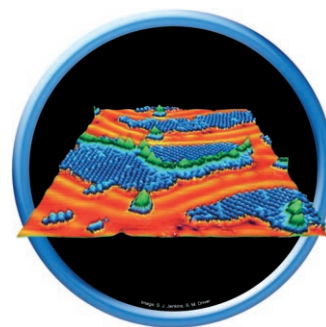


Spintronics

In the Review on page 668 ff., C. Felser et al. discuss materials for spintronics, a research field at the interface of physics, chemistry, and engineering. Stable half-metallic ferromagnets with high Curie temperatures are sought for devices making use of the electron spin.

Surface Chemistry

The adsorbate NO_2 induces a massively cooperative restructuring of an $\text{Au}\{111\}$ surface and nanocluster formation. In their Communication on page 700 ff. D. A. King and co-workers analyze this process.



Conducting Polymers

A soluble, electron-rich polymer with a regiosymmetric structure displays strong thermochromism in solution. The synthesis and properties of this new species are reported by J. R. Reynolds and co-workers in their Communication on page 714 ff.