Purely inorganic...

... open-framework compounds $(NH_4)_4In_{12}Se_{20}$ (1) and $(NH_4)_2In_{12}Se_{19}$ (2) have been synthesized and their ion-exchange properties are reported by M. Kanatzidis et al. in their Full Paper on page 51 ff. The chalcogenide framework has innate reactivity towards soft heavy-metal ions (Hg^{2+}, Pb^{2+}, Ag^+) and its pores are well suited for their capture. The authors show that 1 can effectively and selectively remove such metal ions from water.



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Metal Nanoparticles in Ionic Liquids

In their Concept article on page 32 ff., J. Dupont and P. Migowski describe the use of transition-metal nanoparticles dispersed in these fluids as stable and active catalysts for reactions in multiphase conditions. The catalytic properties (activity and selectivity) of these soluble metal nanoparticles indicate that they possess a pronounced surfacelike (multisite) rather than single-site-like catalytic properties.

Antiviral Complexes

In their Full Paper on page 40 ff., P. J. Sadler et al. describe their investigations on the configurations of nickel–cyclam, nickel–benzylcyclam, and nickel–xylylbicyclam, complexes, both in the solid state and in solution. The interactions of these complexes as adducts with lysozyme both in solution and in crystals were also studied.





Cross-Coupling Reactions

In their Full Paper on page 150 ff., M. G. Organ et al. describe how they were able to significantly improve the yields in the Kumada–Tamao–Corriu reaction. In order to achieve this they employed PEPPSI precatalysts (see figure). The reaction was applied in the synthesis of a wide range of biaryls.

Chem. Eur. J. 2007, 13, 3

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