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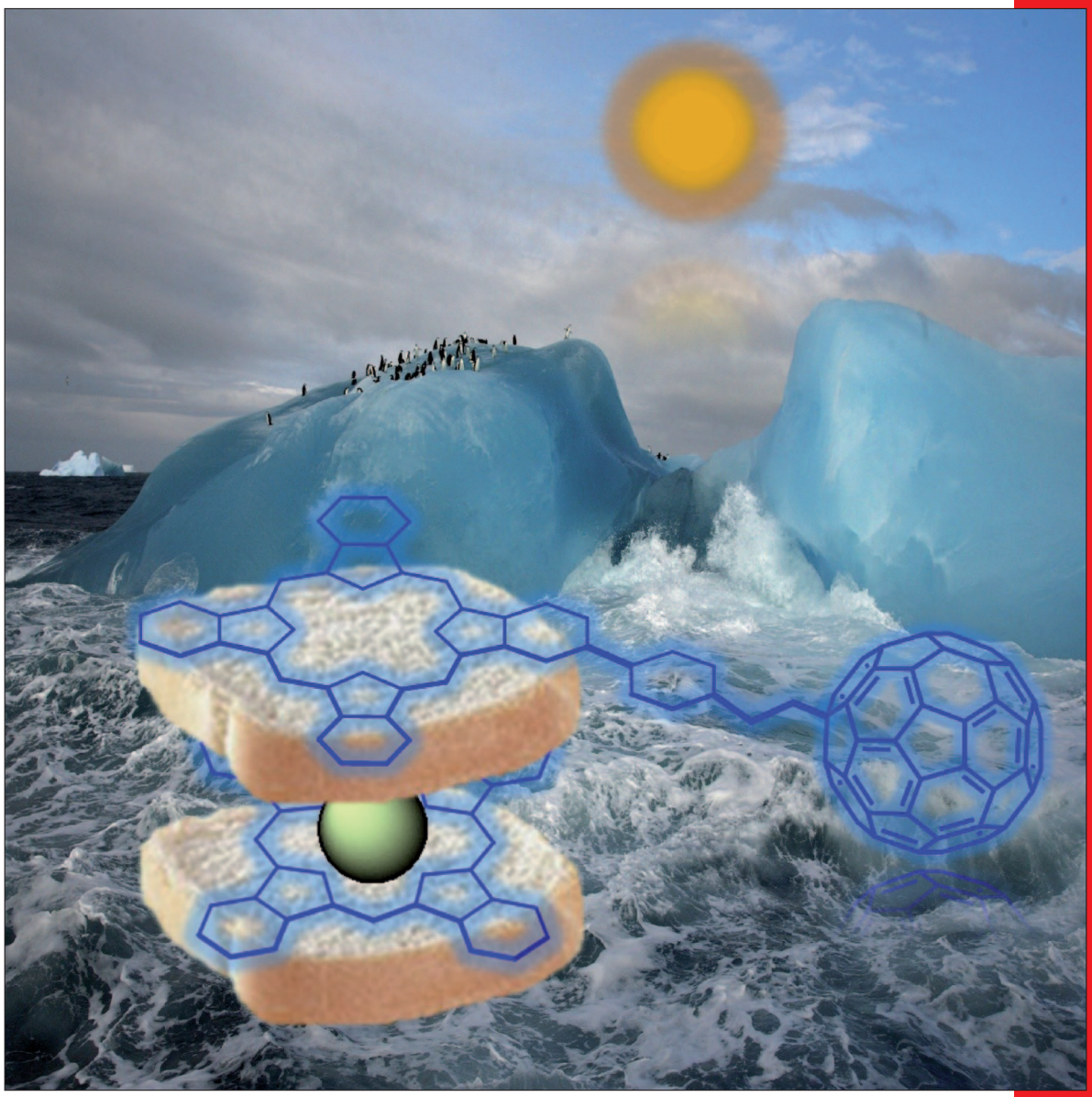

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Review

Organocatalytic Asymmetric Synthesis of Organophosphorus Compounds

K. A. Jørgensen et al.

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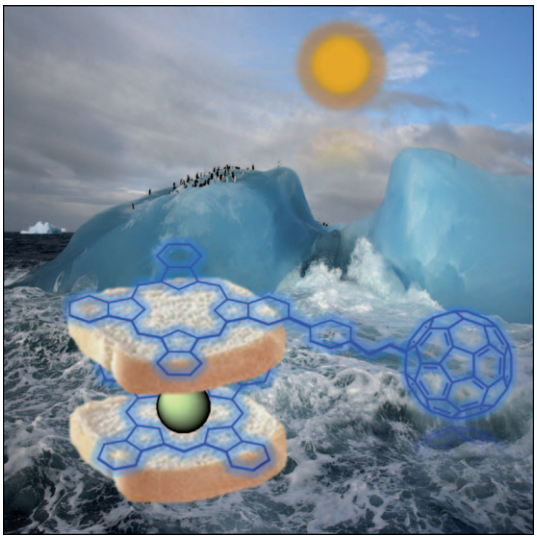
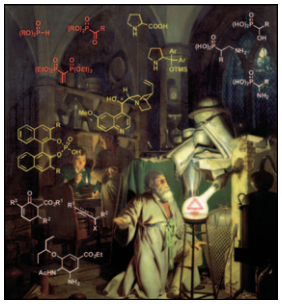
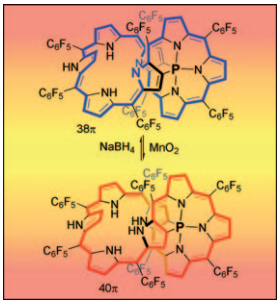
… bis(phthalocyaninato) complex covalently linked to a C_{60} fullerene unit is floating in the Antartic Ocean in front of the South Sandwich Islands (picture from Maria Stenzel, National Geographic). In their Full Paper on page 114 ff., D. M. Guldi, T. Torres, G. de la Torre et al. demonstrate a photoinduced electron-transfer process from the sandwiched lanthanide complex to the C_{60} fullerene acceptor.

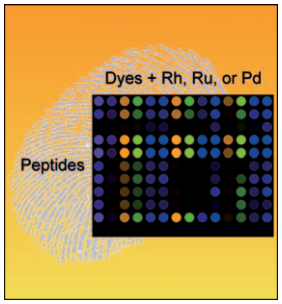




Organophosporus Compounds
In their Review on page 28 ff., K. A. Jørgensen et al. discuss recent advances in the synthesis of optically active organophosphorus compounds by using chiral organic molecules as the catalysts. The elaborated organocatalytic strategies offer straightforward and easy access to phosphorus-containing molecules of biological and synthetic importance. The origins of asymmetric invitation and the scope and advantages of these methods are also outlined.

Phosphorus Complexes of Octaphyrin
In their Communication on page 55 ff., A. Osuka et al. describe the preparation of the mono- and bisphosphorus complexes of octaphyrin upon treatment of an octaphyrin with PCl_3 in the presence of amine and a small amount of water. In both cases, the reversible redox interconversion between the 38π- and 40π-electron states were demonstrated





Sensor Arrays
In their Full Paper on page 104 ff., K. Severin et al. discuss how cross-reactive sensor arrays can be constructed from fluorescent dyes and simple 4d transition-metal complexes. Sensor arrays comprising only six metal–dye combinations displayed remarkable analytical power: samples containing low-micromolar concentrations of dipeptides were identified with high accuracy, and mixtures of the nonapeptide bradykinin and the decapeptide kallidin could be distinguished.