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**Biomimetic Materials**

Review by Z. Guan and A. M. Kushner

**Low-Valent Silicon**

Highlight by P. Jutzi

**Colloidal Spheres**

Highlight by A.-H. Lu et al.

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## Cover Picture

Yuichi Kitagawa, Hiroshi Segawa, and Kazuyuki Ishii\*

*The homochirality of life* is still an unsolved mystery. Magneto-chiral dichroism (MChD, the dependence of the absorbance of a chiral molecule on the direction of a magnetic field) has attracted attention as a plausible way to explain this puzzle. Several examples of MChD of metal compounds are known, but MChD of biological organic compounds has not been reported. In their Communication on page 9133 ff., K. Ishii et al. describe the first observation of MChD in organic compounds by using porphyrin J-aggregates.

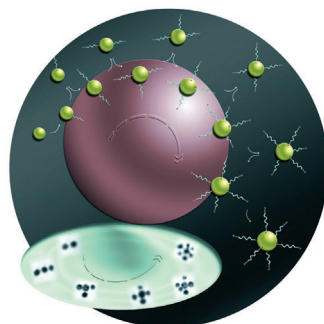
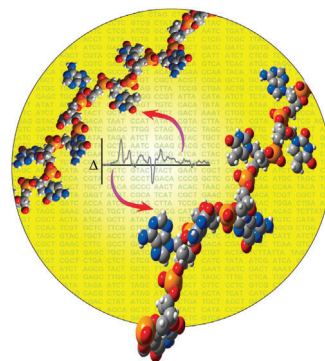


### ***Biomimetic Materials***

Z. Guan and A. M. Kushner show in their Review on page 9026 ff. how advanced materials can be developed following nature's inspiration. The focus is on secondary and tertiary structures of protein domains as well as the modular building principle.

### ***DNA Analysis***

In their Communication on page 9058 ff., E. Papadopoulou and S. E. J. Bell report how differences in the SERS spectra of unthiolated DNA sequences, which are adsorbed onto the surfaces of Ag colloids, can be used to detect single-nucleotide mismatches.



### ***DNA Self-Assembly***

A simple strategy to place DNA linkers at 90° or 180° angles on nanoparticles is introduced by J.-W. Kim et al. in their Communication on page 9185 ff. The method produces a nanoscale building block that allows control of nanoassembly geometry.