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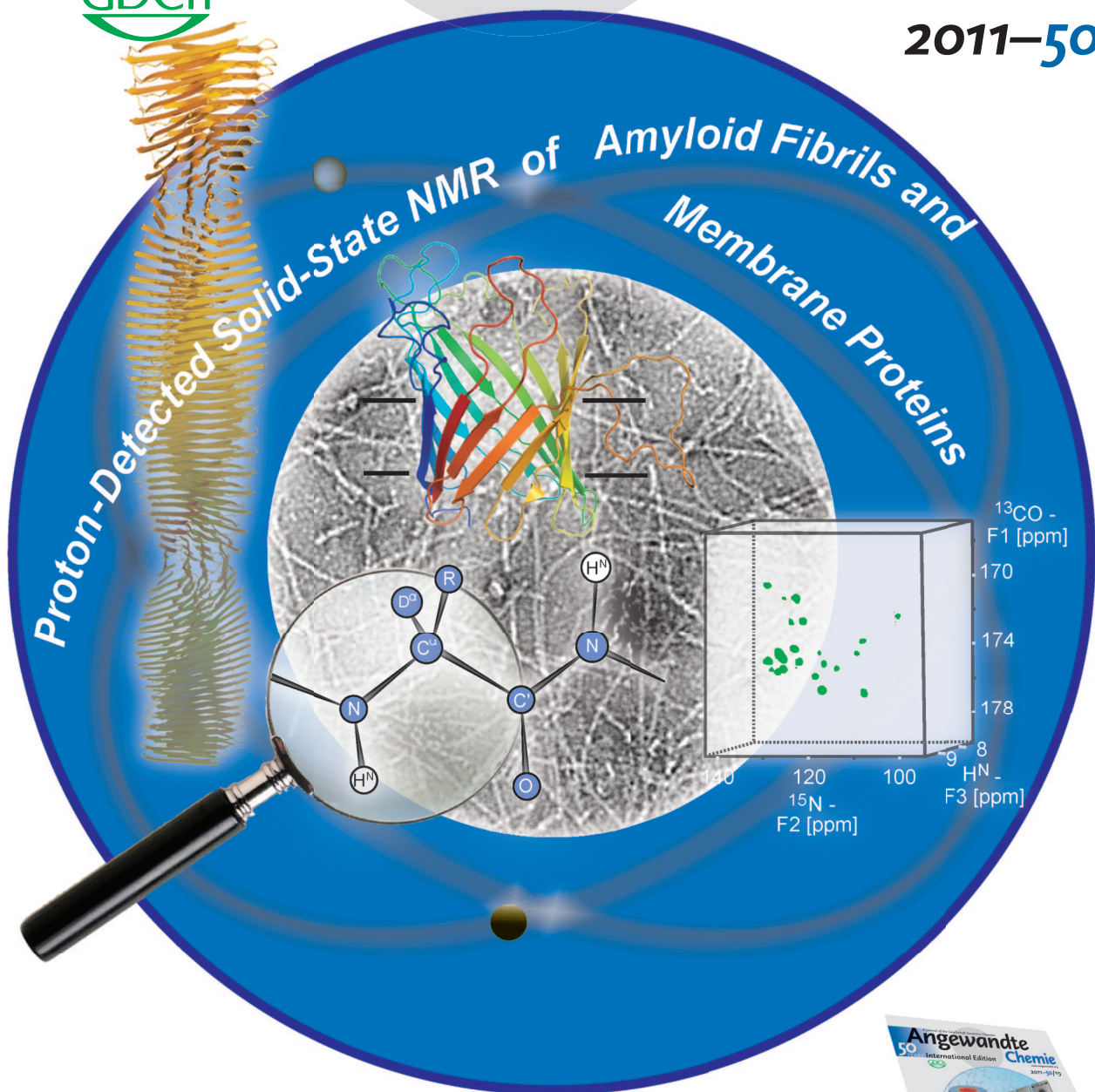
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Focus: Porphyrinoids

With Essays and Reviews by E. Vogel, M. O. Senge, A. Osuka,
L. Latos-Grażyński et al.

**Highlights: DNA Methylation • Single-Chamber Fuel Cell •
CO₂ Activation**

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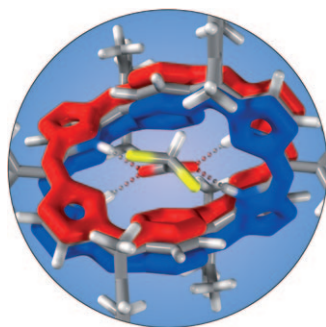
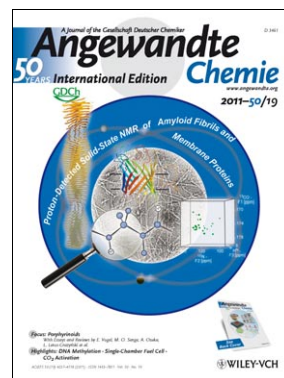


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Cover Picture

Rasmus Linser, Muralidhar Dasari, Matthias Hiller, Victoria Higman, Uwe Fink, Juan-Miguel Lopez del Amo, Stefan Markovic, Liselotte Handel, Brigitte Kessler, Peter Schmieder, Dieter Oesterhelt, Hartmut Oschkinat,* and Bernd Reif*

Solid-state NMR spectroscopy has recently emerged as a tool for structural biology. Sensitivity and resolution, however, still hamper more widespread applications. Protons are ideal as they have the largest gyromagnetic ratio, but they can induce severe line broadening. As described in the Communication by B. Reif and co-workers on page 4508 ff., perdeuteration and partial back-substitution of exchangeable protons can overcome the strong coupling problem. The approach is successfully implemented for fibrils and membrane proteins.

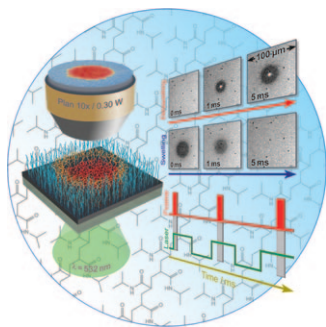
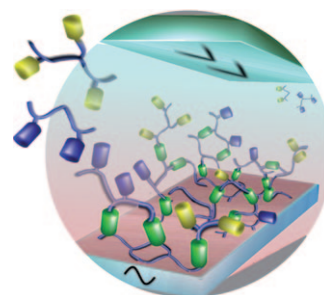


Porphyrinoids

The aromatic character of porphyrins, which has significant chemical and biological consequences, can be substantially altered by modifications of the parent ring system. In their Review on page 4288 ff., L. Latos-Grażyński et al. discuss the structural chemistry of porphyrinoids in the context of their conformational dynamics and π -electron conjugation.

Film Formation by Click Chemistry

In their Communication on page 4374 ff., P. Schaaf and co-workers report the formation of films by the Cu^I-catalyzed Huisgen click reaction of two polyelectrolytes that bear azide and alkyne groups. The morphogen Cu^I is generated electrochemically.



Thermoresponsive Polymers

An all-optical stroboscopic technique that provides unprecedented insight into the temperature-dependent intrinsic switching kinetics of ultrathin polymer coatings is described by N. Hartmann et al. in their Communication on page 4513 ff. In contrast to hitherto reported approaches, response times range from the micro- to the millisecond time scale.