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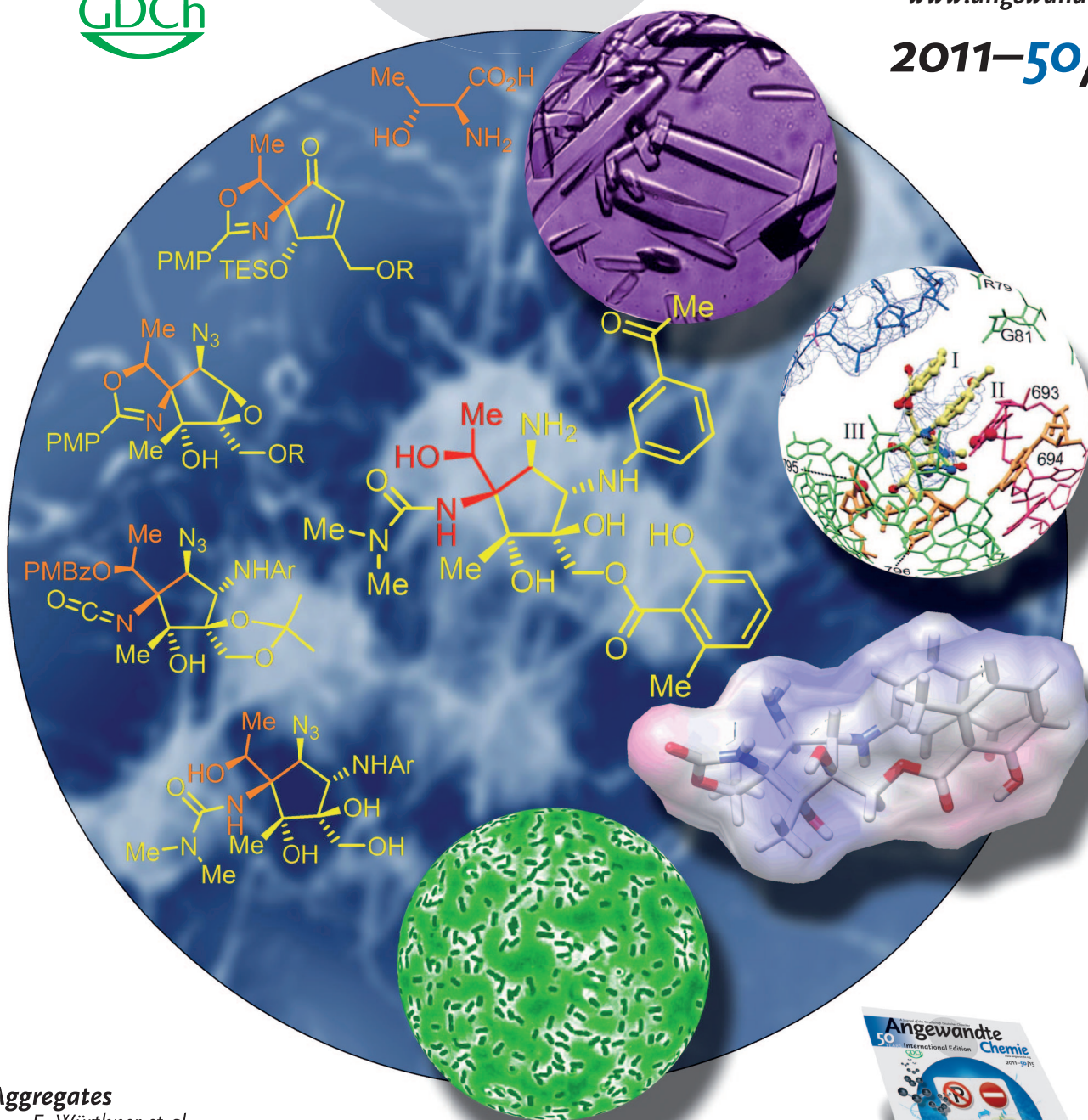
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J-Aggregates

F. Würthner et al.

C–H Activation

P. S. Baran and T. Newhouse

Redox-Active Ligands

B. de Bruin et al.

Molecular Motors

E. M. Pérez



Cover Picture

Stephen Hanessian,* Ramkrishna Reddy Vakiti, Stéphane Dorich, Shyamapada Banerjee, Fabien Lecomte, Juan R. DelValle, Jianbin Zhang, and Benoît Deschênes-Simard

Packing dense functionality in a cyclopentane framework is how the soil microorganism *Streptomyces pactum* produces pactamycin, a cytotoxic and antibacterial aminocyclopentitol. S. Hanessian and co-workers describe the first total synthesis of pactamycin in their Communication on page 3497 ff. The image shows intermediates that eventually culminate in pactamycin. The inserts show *B. subtilis* (green), crystals of *Thermus thermophilus* (magenta), and the binding of pactamycin in the 30S rRNA subunit (according to Ramakrishnan et al.) against a background of *S. pactum*.

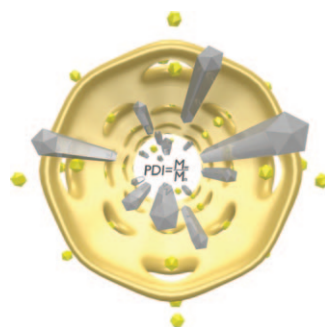


J-Aggregates

Supramolecular construction principles are used by F. Würthner et al. in their Review on page 3376 ff. to describe J-aggregates of various classes of dyes. A main focus is on the optical and photophysical properties as well as the applications of these aggregates.

Nanomaterial Purification

In their Communication on page 3412 ff., J. Huang and co-workers show that cross-flow filtration can remove nanoparticle impurities from a silver nanowire solution. They also introduce the use of the polydispersity index to determine solution purity.



Polymerization Catalysts

M. Kol et al. describe in their Communication on page 3529 ff. titanium complexes, whose labile positions lie in different electronic environments, that are highly active catalysts for the synthesis of high-molecular-weight polypropylene with ultrahigh isotacticity.