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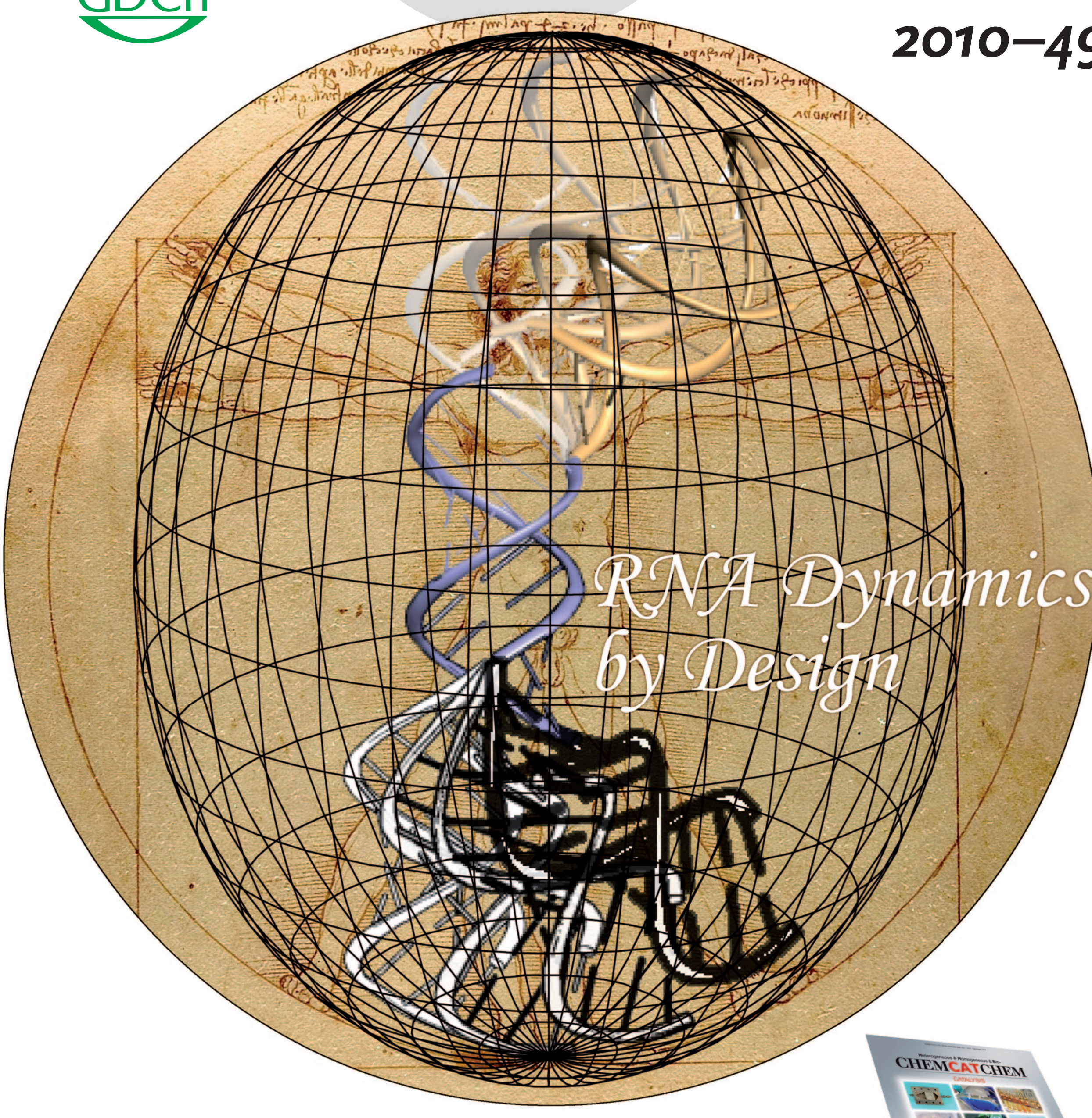

Amyloid Protein–Membrane Interactions
H. A. Lashuel and S. M. Butterfield

Natural Product Synthesis
J. Mulzer, H. J. Martin, and T. Magauer

Highlights: High-Pressure Polymorphs in In_2O_3 Nanocrystals · Development of Ionic Liquid Salts

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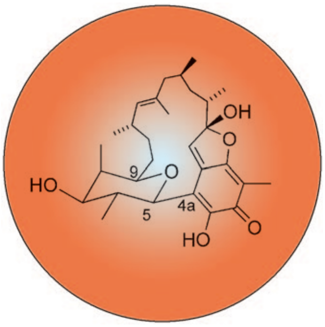
Cover Picture

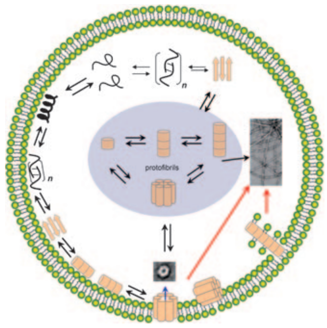
Andrew C. Stelzer, Jeremy D. Kratz, Qi Zhang, and Hashim M. Al-Hashimi*

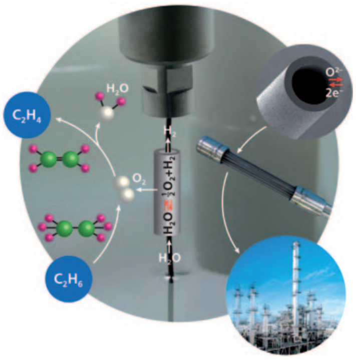
The rational design of biomolecular structures with prescribed dynamic properties is an outstanding challenge in structural biology. In their Communication on page 5731 ff., H. M. Al-Hashimi and co-workers use a single A-U to G-C mutation to rationally alter the dynamic characteristics of the transactivation response element (TAR) RNA so that it mimics its bound state with the ligand argininamide. A thermodynamic topological framework emerges for designing local and global aspects of RNA dynamics at atomic resolution.



Natural Product Synthesis
In their Minireview on page 5614 ff., H. J. Martin, J. Mulzer, and T. Magauer describe different strategies developed in the last few years for the synthesis of the polyketide Kendomycin, which has unusual structural features and biological activities.

Amyloid Toxicity
In their Review on page 5628 ff., S. M. Butterfield and H. A. Lashuel show how studies with artificial membrane model systems have provided valuable insight into the mechanisms by which amyloidogenic proteins interact with membranes.





Water Splitting
In their Communication on p. 5656 ff., H. Jiang, J. Caro et al. couple water splitting and ethane dehydrogenation in a perovskite oxygen-permeable membrane reactor. Hydrogen from water splitting was obtained on one side of the membrane, and ethylene was produced simultaneously on the other.