

2012-51/35 The Future of Medicinal Chemistry Editorial by R. Metternich and T. Hoffmann

Proteasome Inhibitors

Review by M. Groll and E. M. Huber

Chemistry and Therapeutic Innovation Essay by B. Meunier

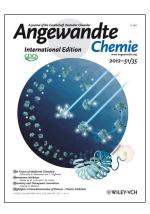
Highlights: Heterodimerization of Ketenes · Protein Inhibition

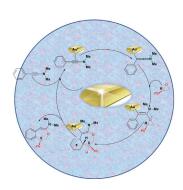


Cover Picture

Niels Zijlstra, Christian Blum, Ine M. J. Segers-Nolten, Mireille M. A. E. Claessens, and Vinod Subramaniam*

In amyloid diseases, monomeric proteins self-assemble into supramolecular aggregates. In their Communication on page 8821 ff. V. Subramaniam et al. describe a new method that combines single-molecule photobleaching approaches with substoichiometric labeling with fluorophores to determine the molecular composition of these large protein aggregates. The cover picture shows the aggregation of combinations of labeled and unlabeled monomers and the subsequent photobleaching analysis of single aggregates.



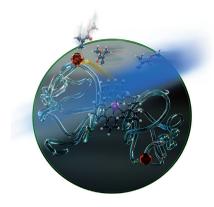


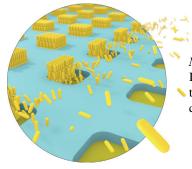
Synthetic Methods

R.-S. Liu and co-workers describe a gold-catalyzed [4+3] cycloaddition of epoxides with arenynamides in their Communication on page 8722 ff. The reaction has a broad substrate scope and the configuration of the epoxide is retained.

Polymerizations

In their Communication on page 8850 ff. B. P. Fors and C. J. Hawker report a living radical polymerization process that can be efficiently activated and deactivated in a dynamic manner with visible light.





Nanofabrication

In their Communication on page 8732 ff., U. Bach et al. describe their strategy for the self-assembly of gold nanorods into standing arrays. This is a key step in the development of functional devices.