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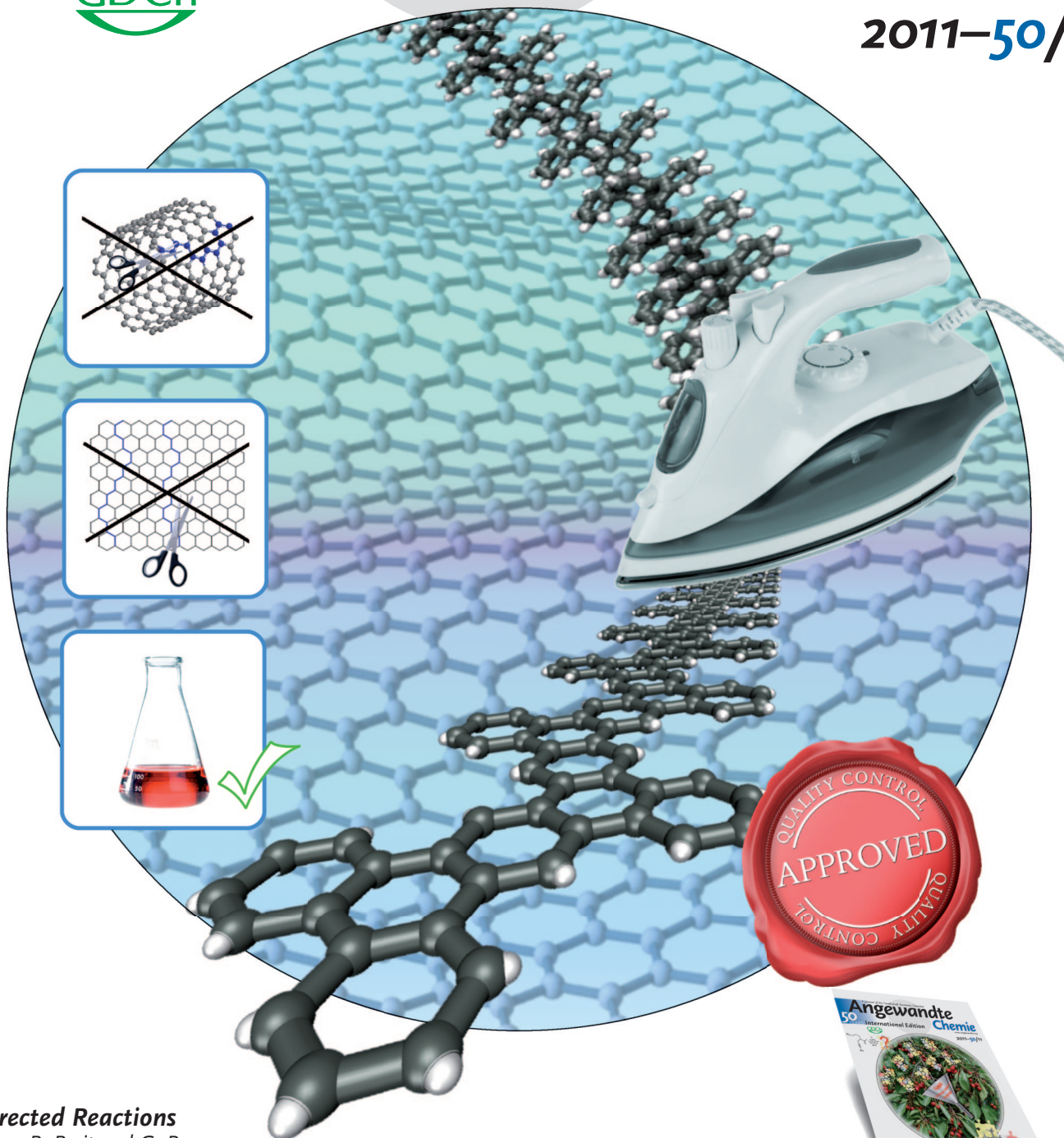
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Directed Reactions

B. Breit and G. Rousseau

Enzyme Inhibitors

E. Meggers

Highlights: Chlorophyll • Porphyrinoids • Synthesis of Pyridines

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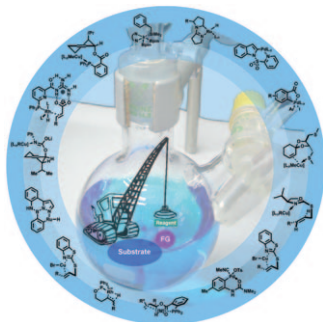
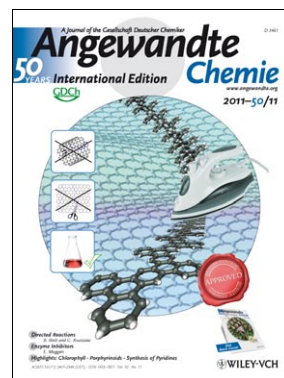
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Cover Picture

Lukas Dössel, Lileta Gherghel, Xinliang Feng, and Klaus Müllen*

Ironing with iron(III) chloride: A bottom-up organic synthesis in solution to synthesize defect-free graphene ribbons that cannot be obtained by top-down methods such as lithography or unzipping of carbon nanotubes is described by K. Müllen and co-workers in their Communication on page 2540 ff. Three-dimensional polyphenylene precursors with a unique kinked backbone enable full planarization into a rigid ribbon in a single reaction step. This cyclodehydrogenation is achieved by an intramolecular Scholl reaction with FeCl_3 .

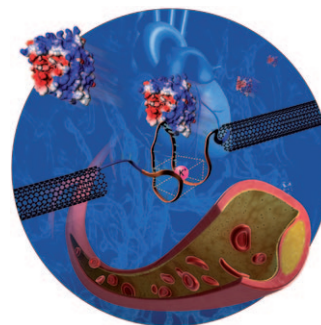


Chemoselectivity

An appropriately designed removable reagent-directing group can be used when the existing functional group within a substrate cannot achieve the required chemoselectivity. An overview of the current methods is given in the Review by B. Breit and G. Rousseau on page 2450 ff.

Molecular Electronic Devices

In their Communication on page 2496 ff. X. Guo, X. Fang, and co-workers describe aptamer-functionalized single-walled carbon nanotubes for the real-time, label-free detection of DNA and proteins.



NMR Spectroscopy

Residual dipolar couplings (RDCs) can be used to determine the constitution of a small molecule when traditional methods for structure elucidation fail. In their Communication on page 2643 ff., B. Luy, S. Kirsch, and co-workers apply this method to a highly congested tricyclic compound that results from the electrophilic cyclization of an azide-containing 1,5-enyne.