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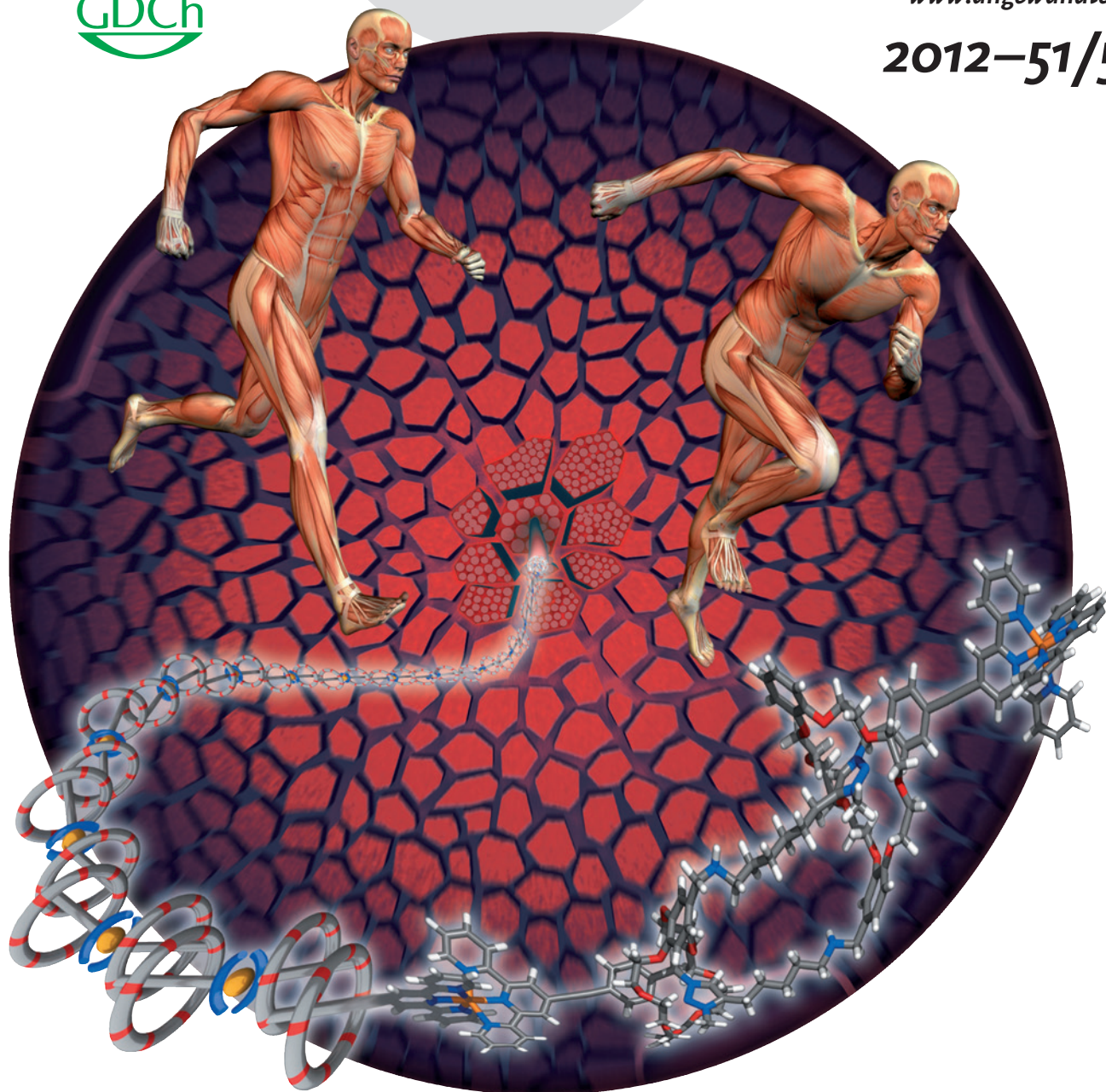
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Total Synthesis of Thiostrepton

Review by K. C. Nicolaou

Photocatalysis

Highlight by Y. H. Hu

Nanoparticle Chains

Highlight by J. Pyun

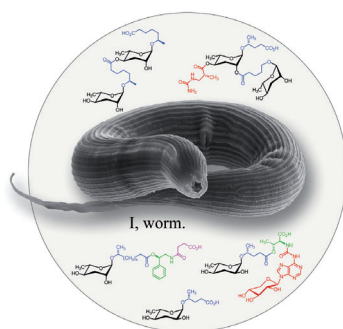
ACIEFS 51 (50) 12377–12628 (2012) · ISSN 1433–7851 · Vol. 51 · No. 50

 **WILEY-VCH**

Cover Picture

Guangyan Du, Emilie Moulin, Nicolas Jouault, Eric Buhler,* and Nicolas Giuseppone*

Artificial muscles can be created by using a bottom-up approach that involves coupling the controlled motions of a very high number of molecular machines. The cover picture shows a muscular fiber from which a single-chain supramolecular polymer made of thousands of telescopic rotaxanes emerges. In their Communication on page 12504 ff., N. Giuseppone and co-workers show how the integrated functioning of these rotaxanes results in amplified motion. (Graphics by Mathieu Lejeune.)

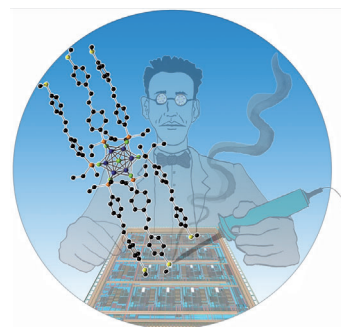


Nematode Metabolism

By analyzing the *P. pacificus* metabolome, R. J. Sommer, F. C. Schroeder et al. have identified complex small molecules built from primary metabolites that can also affect the development of the worms, as reported in their Communication on page 12438 ff.

Quantum Dots

In their Communication on page 12473 ff., L. Venkataraman, C. Nuckolls, M. L. Steigerwald et al. report a method for the preparation of discrete quantum dots on the molecular scale that connect to nanoscale electrodes.



Molecular Sensors

In their Communication on page 12477 ff., D. Margulies et al. describe how a series of nonspecific, fluorescent receptors on a single molecule mimics the function of optical cross-reactive sensor arrays.