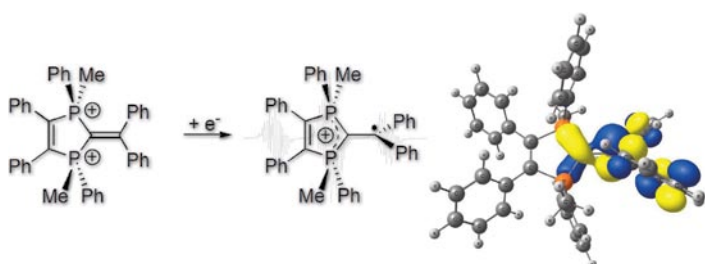


Science Concentrates

Formation and Structure of a Stable Monoradical Cation by Reduction of a Diphospho-fulvenium Salt

F. Biaso, T. Cantat, N. Mézailles, L. Ricard, P. Le Floch*, and M. Geoffroy*, *Angew. Chem. Int. Ed.* **2006**, 45, 7036
 Université de Genève; Ecole Polytechnique, Palaiseau

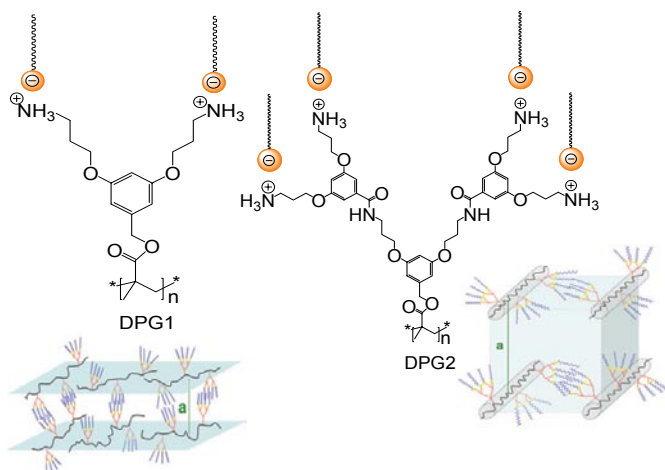
A stable diphospho-fulvenium radical cation has been isolated for the first time. X-ray crystal structure, EPR measurements and DFT calculations prove that, in this new fulvene system, the reduction of the diphospho-fulvenium dication leads to a monoradical which is stabilized by the two electron-withdrawing phosphonium groups.



Liquid-Crystalline Polymers from Cationic Dendronized Polymer-Anionic Lipid Complexes

N. Canilho, E. Kasëmi, R. Mezzenga*, and A.D. Schlüter, *J. Am. Chem. Soc.* **2006**, 128, 13998
 Université de Fribourg; ETH Zürich; Nestlé Research Center, Lausanne

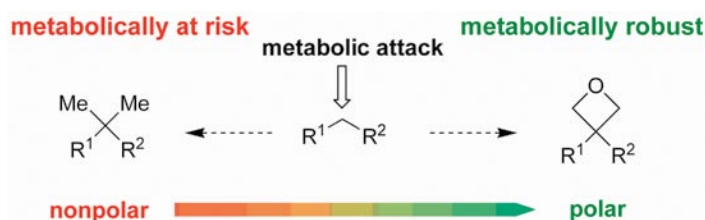
In this communication, authors report for the first time the use of cationic dendronized polymers as a model system for templating thermotropic liquid-crystalline phases (LC) via complexation and self-assembly with counter-charged ionic lipids. A rationale of the structure and periodicity of the molecular architecture is proposed as being a consequence of two factors: (a) dendron generation and (b) length of the lipid tail. Due to the reversible nature of the ionic complexation, this process is highly relevant for nanoporous channels, biomimetic, transport, and nanotemplating applications.



Oxetanes as Promising Modules in Drug Discovery

G. Wuitschik, M. Rogers-Evans*, K. Müller, H. Fischer, B. Wagner, F. Schuler, L. Polonchuk, and E.M. Carreira*, *Angew. Chem. Int. Ed.* **2006**, in press, DOI: 10.1002/anie.200602343
 F. Hoffmann-La Roche AG, Basel; ETH Zürich

Many molecules that exhibit *in vitro* activity also share features such as low solubility, metabolic liability and amphiphilicity that rule out their further development. This paper demonstrates that by the introduction of an oxetane moiety, these properties – amongst others – can be dramatically altered. It furthermore reveals flexible and easy access routes to a variety of oxetane-containing compounds starting from oxetan-3-one as a central building block.



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Surface Chirality of CuO Thin Films

R. Widmer*, F.-G. Haug, P. Ruffieux, O. Gröning, M. Biemann, P. Gröning, and R. Fasel, *J. Am. Chem. Soc.* **2006**, 128, 14103
 Empa, Thun

CuO thin films were electrochemically deposited on a Au(001) surface from a solution containing chiral tartaric acid (TA) and investigated by X-ray photoelectron spectroscopy and diffraction. The presence of enantiopure TA in the deposition process results in homochiral CuO surfaces: Films grown with L(+) or D(-)-TA exhibit a CuO(111) or CuO($\bar{1}\bar{1}\bar{1}$) surface orientation, respectively. Enantiospecificity of the chiral CuO surfaces is demonstrated by homochiral growth continuation in presence of racemic TA. On the other hand, deposition in presence of only racemic or meso TA yields heterochiral films with no enantiospecificity. CuO films of alternating chirality can be grown by alternating the TA enantiomers during deposition.

