

Supramolecular Leaves and Noses

Prof. Dr. Stefan Matile

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Professional Career

Stefan Matile received both Diploma (1989) and PhD (1994) from the University of Zurich for research on the bioorganic chemistry of porphyrins under the direction of Wolf Woggon. After a postdoc on the circular dichroism spectroscopy of porphyrins with Koji Nakanishi at Columbia University, New York (1994-1996), he joined the faculty of Georgetown University, Washington DC, as an Assistant Professor. In 1999, he moved to the University of Geneva, where he is currently Full Professor in the Department of Organic Chemistry and the National Centre of Competence in Research (NCCR) in Chemical Biology. He is an ERC Advanced Investigator.

Research

At the interface of synthetic organic, biological and supramolecular materials chemistry. Emphasis is on large molecules and supramolecules that are synthesized from scratch, have interesting functions, and address lessons from nature. Current topics include synthetic photosystems, membrane-based sensing systems, synthetic ion channels, cellular uptake and exotic interactions at work.

Recent Key Publications

"Pattern Generation with Synthetic Sensing Systems in Lipid Bilayer Membranes," *Chem. Sci.* 2011, 2, 303-307.

"Experimental Evidence for the Functional Relevance of Anion- π Interactions," *Nature Chem.* 2010, 2, 533-538.

"Supramolecular n/p-Heterojunction Photosystems with Antiparallel Redox Gradients in Electron- and Hole-Transporting Pathways," *J. Am. Chem. Soc.* 2010, 132, 6923-6925.

"DNA Aptamers as Analyte-Responsive Cation Transporters in Fluorogenic Vesicles: Signal Amplification by Supramolecular Polymerization," *J. Am. Chem. Soc.* 2009, 131, 18048-18049.