Professor Stefan Matile

Curriculum Vitae

2003 – present	Full Professor, Department of Organic Chemistry, University of Geneva, Geneva, Switzerland
2010 – present	National Centre of Competence in Research (NCCR) Chemical Biology, Founding Member, WP Leader, Steering Committee
2014 – present	National Centre of Competence in Research (NCCR) Molecular Systems Engineering, Founding Member, WP co-Leader, Steering Committee
2021 – present	Director, Department of Organic Chemistry, U Geneva (same 2004-05, 08-09, 11-14)
1989	Diploma under the Supervision of Professor W.-D. Woggon, Department of Chemistry, University of Zurich, Zurich, Switzerland
1994	Ph.D. under the Supervision of Professor W.-D. Woggon, University of Zurich
1994 – 1996	Swiss NSF Postdoctoral Research Fellow, Department of Chemistry, Columbia University, New York, NY, USA, with Professor K. Nakanishi
1996 – 1999	Assistant Professor of Chemistry, Department of Chemistry, Georgetown University, Washington, DC, USA
1999 – 2003	Associate Professor of Organic Chemistry, University of Geneva
2000 – 2005	National Research Program (NRP) Functional Supramolecular Materials, Project Leader
2013 – 2016	Vice-President, School of Chemistry and Biochemistry, University of Geneva
2016 – 2019	President, School of Chemistry and Biochemistry, University of Geneva

Research Interests

Translational supramolecular chemistry, at the interface of synthetic organic, biological and materials chemistry, with a passion for unorthodox interactions, expecting that the integration of new ways to get into contact on the molecular level will ultimately solve otherwise intractable challenges in science and society. Recent highlights are the discovery of fluorescent probes to image physical forces in biology (flippers, commercialized), catalysis with anion-π interactions, chalcogen and pnictogen bonds, and dynamic covalent exchange cascades to enter into cells and hinder viruses to do the same (thiol-mediated uptake, antivirals). Topics of longstanding interest are multistep organic synthesis, multicomponent surface architectures, ion transport, and molecular tongues and leaves (sensors, photosystems).

Recent Key Publications (total 344, 61 *JACS*, etc)

- Laurent, Q.; Martinent, R.; Lim, B.; Pham, A.-T.; Kato, T.; López-Andarias, J.; Sakai, N.; Matile, S. "Thiol-Mediated Uptake," *JACS Au* **2021**, *1*, 710–728.
- Zhao, Y.; Cotelle, Y.; Liu, L.; Lopez-Andarias, J.; Bornhof, A.-B.; Akamatsu, M.; Sakai, N.; Matile, S. "The Emergence of Anion-π Catalysis," *Acc. Chem. Res.* **2018**, *51*, 2255–2263.
- Gini, A.; Paraja, M.; Galmés, B.; Besnard, C.; Poblador-Bahamonde, A. I.; Frontera, A.; Sakai, N.; Matile, S. "Pnictogen-Bonding Catalysis: Brevetoxin-Type Polyether Cyclizations," *Chem. Sci.* **2020**, *11*, 7086–7091.
- Laurent, Q.; Martinent, R.; Moreau, D.; Winssinger, N.; Sakai, N.; Matile, S. "Phosphorothioate Oligonucleotides Enter Cells by Thiol-Mediated Uptake," *Angew. Chem. Int. Ed.* **2021**, *60*, 19102–19106.
- Piazzolla, F.; Mercier, V.; Assies, L.; López-Andarias, J.; Sakai, N.; Roux, A.; Matile, S. "Fluorescent Membrane Tension Probes for Early Endosomes," *Angew. Chem. Int. Ed.* **2021**, *60*, 12258–12263.
- Strakova, K.; López-Andarias, J.; Jiménez-Rojo, N.; Chambers, J. E.; Marciniak, S. J.; Riezman, H.; Sakai, N.; Matile, S. "HaloFlippers: A General Tool for the Fluorescence Imaging of Precisely Localized Membrane Tension in Living Cells," *ACS Cent. Sci.* **2020**, *6*, 1376–1385.

Selected Honors

- ERC Advanced Investigator (2010)
- SNSF Level-1 Investigator (2017)
- ERC Advanced Investigator Panel (2019), Swiss ERC Panel (2014)
- Some Lectures (total 292): Heilbronner-Hückel, Molecular Science Frontier (Chinese Academy of Sciences), Krishnan Memorial, W. S. Johnson (Stanford), Torkil Holm, Tateshina, Bürgenstock, Asan; Visiting Professor: U Florida (Tarrant), Angers, Warwick, Santiago de Compostela, JSPS (2x)

More: www.unige.ch/sciences/chiorg/matile/ *August 2021*