



COST ACTION GREENERING – DATA COLLECTION

First name, Family Name: Ludovic Gremaud

Type (Academic or Industrial): Academic

Country: Switzerland

Leadership position in the COST: MC Member CA18224 and Co-leader WG1

Working Group in which you are involved: WG1 and WG3

E-mail: Ludovic.gremaud@hefr.ch

Laboratory/Company:

University of Applied Sciences and Arts Western Switzerland – Fribourg

School of Engineering and Architecture Fribourg (HEIA-FR).

Institute of chemical technologies ChemTech

Laboratory/Company info:

ChemTech Institute is involved in applied and industrial chemistry. Process intensification to provide sustainable, economically and ecologically favorable processes is the main field of activities. ChemTech Institute is a key player in fine chemical and pharmaceutical industries, as well as industries indirectly connected with chemistry (food, packaging, printing, medtech, polymers...).

Link to the home page of the Laboratory/Company:

<https://www.heia-fr.ch/fr/recherche-appliquee/instituts/chemtech/>

Fields of expertise:

- Process-scale up from laboratory to production scale
- R&D activities in organic, analytical and physical chemistry
- Process and scale-up risk assessment
- Flow chemistry
- Polymer chemistry and material sciences

5 Main publications or patents:

- Roger Marti, Ennio Vanoli, Sandrine Aeby, Manuel Happe, Fabian Fischer (HEIA-FR), WO 2013008172 (2013) Zwitterionic liquid as co-catalyst for the enzymatic esterification.
- Benoit Plomb, Jérémie Geinoz, Roger Marti, Ennio Vanoli, Jean-Pascal Bourgeois (Applicant: Belenos Clean Power Holding AG) US 2015/0218002 Method of Production of Graphite Oxide and Uses Thereof
- Stephane Demotz, Olivier Martin, Estelle Boivineau, Sophie Front, Julie Charollais-Thoenig, Roger Marti, Jean-Pascal Bourgeois, Sofia Almeida, WO2016174131 (A1) 4-Epi-Isofagomine Enantiomer Derivatives for the Treatment of Lysosomal Storage Diseases.
- Pierre Brodard, Michal Dabros, Roger Marti, Ennio Vanoli, Manfred Zinn, Urban Frey, Christian Adlhart, Lucy Kind, Franziska Koch, Floriana Burgio, Johan Stenqvist, Sina Saxer, Uwe Piele, Patrick Shahgaldian, and Sebastian Wendeborn,



Chimia 2019, 73, 645–655. Materials Science at Swiss Universities of Applied Sciences.

- Lara Amini-Rentsch, Ennio Vanoli, Sylvia Richard-Bildstein, Roger Marti, Gianvito Vilé, Ind. Eng. Chem. Res. 2019, 58, 10164–10171. A Novel and Efficient Continuous-Flow Route To Prepare Trifluoromethylated *N*-Fused Heterocycles for Drug Discovery and Pharmaceutical Manufacturing.

Collaborations:

Numerous collaborations with leading academic, research and industrial partners across the EU and worldwide.

Facilities:

- Research and development laboratories for organic, analytical and physical chemistry
- Flow chemistry lab fully equipped with different types of mixers, pumps and PAT equipment (Raman, NIR, IR)
- BioPat Lab with small bio-reactors for ... (DAB...)
- KiloLab and scale-up facilities with reactors from 1 to 50 [l] including RC1, Thin Layer Distillation, Rectification column, Stability room, kneader reactor for highly viscous reactions mixtures, Parallel reactors for process optimizations (EasyMax)...
- Pilot plant facility (ATEX) with reactors from 100 to 630 [l] including Rectification unit, Thin Layer Distillation, Counter-current extraction, Washing Column, Centrifuge, Filter Press, Tray dryer...