CURRICULUM VITAE

Dr. Yousef S. SWESI
Date of Birth: 23/07/1969

CONTACT DETAILS Chemical Engineering Department, Tripoli University
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QUALIFICATIONS

PhD in Process Engineering, University Lyon-1 (2005): Proposal and evaluation of hydrogen–hydrocarbon separation processes.

Master's Degree in Process Engineering, Claude Bernard University Lyon-1 (2002): Study of laminar flow in a circular channel with transverse injection through a porous wall.

Master of Science in Chemical Engineering – Process Engineering, University of Tripoli (2000).

Engineering Degree in Chemical Engineering – Process Engineering, University of Tripoli. (1993)

EMPLOYMENT HISTORY

2018-2025 **Professor** and R**esearcher in** Process Engineering at the Laboratory of Catalysis, Polymers, Processes, and Materials CP2M/CPE of Lyon.

2016-2017 **Researcher** in Process Engineering - CNRS LGPC-CPE of Lyon.
Research subject: Optimization and intensification processes dehydrogenation of the n-butanol.

June-Dec. 2015 **Researcher** in Catalytic Process Engineering and Chemistry in the Institute of Researches on Catalysis and Environment in Lyon.
Research subject: Kinetic study and modeling of wood and cellulose conversion to lactic acid over ZrW heterogeneous catalyst.

2013– 2015 **Assistant professor**
Head of Chemical Engineering Department. University of Tripoli - Faculty of Engineering, Tripoli, Libya.

2010– 2013	**Lecturer** Department of Chemical Engineering, Faculty of Engineering, University of Tripoli, Libya.
2009-2010	**Researcher** in process engineering (Postdoctoral fellow). Research subject: Simulation catalytic reactor - Industrial project. Laboratory of Chemical Engineering and Catalyst LGPC-CNRS, University of Lyon I, France.
2008-2009	**Postdoctoral fellow** Laboratory of Chemical Engineering and Catalyst LGPC-CNRS, University of Lyon I, France. **Research subject**: Comparison performance a structured fixed bed reactor with catalytic foam (pressure drop measurements, catalytic of dehydrogenation and combustion reactions).
2006-2008	**Teaching assistant ATER**, IUT (University Institute Technology), Lyon – France In the Chemical Engineering Department. **Subjects**: Analytical chemistry and Instrumental analysis for first year students.
2005-2006	**Teaching assistant ATER**, IUT (University Institute Technology), Bourg en Bresse– France in the Biological and Engineering Department. Subjects: Thermodynamic and Automatism for students for second year students.
2002-2005	**PhD Candidate** School of Chemistry - University of Lyon I, France **Research thesis**: « Proposal and evaluation for processes of hydrogen separation - hydrocarbons ».
1993-2000	**Teacher assistant** in the Chemical Engineering Department. University of Tripoli, Tripoli - Libya Subjects: Introduction to Chemical Engineering, Fluid Mechanics, Unit Operation laboratory, and Physical Chemistry Laboratory in first and third year university degree up to engineering degree.

PUBLICATIONS

1. From Batch to Flow: Navigating the Selectivity Maze in Triphasic hydrogenation using terpenes as a Case Study Sara Almasi, **Yousef Swesi**, Frédéric Bornette, Regis Philippea, Claude de Bellefona, Laurent Vanoye Catalyse Polymérisation Procédés & Matériaux (CP2M) Université Lyon, UMR 5128 CNRS – CPE Lyon, 43 boulevard du 11 novembre 1918, F-69100 Villeurbanne (France) 2025

2. Heat Transfer Experimental Characterization and Modeling of Innovative Structured Internals in Counter-Current Gas-Liquid Flow: A CAIAIA, **Y SWESI**, D EDOUARD, R PHILIPPE, P FONGARLANDInsight View on Proceedings of the 11th World Congress on Mechanical, Chemical, and Material Engineering (MCM'25)
   Barcelona, Spain - Paris, France - August, 2025

3. Almasi, S., Vanoye, L., Philippe, R., Bornette, F., **Swesi Y.,** Bellefon. C., Selective hydrogenation under fixed bed catalytic reactors, CPAC (Center for Process Analysis and Control) workshop. University of Washington Rome Center, Piazza del Biscione, 95, Rome Italy, March 24-26, 2025, Oral presentation.

4. Almasi, S., Vanoye, L., Philippe, R., Bornette, F., **Swesi, Y.,** Bellefon. C., From Batch to Flow: Navigating the Selectivity Maze in Triphasic hydrogenation using terpenes as a Case Study. 9th European Process Intensification Conference (EPIC 2025), Athens, Greece, 4-6 June 2025, Oral presentation.

5. Comparison of Structured Reactors for Ozone Abatement in Aircrafts at Low Temperature, **Yousef Swesi,** Amaury Gillet, Alexandre Guérin, Marie-Line Zanota, Frédéric Bornette, Régis Philippe, and Valérie Meille, Industrial & Engineering Chemistry Research, 2021.

6. **Unexpected role of NOx during catalytic ozone abatement at low temperature** Houcine Touatia, Alexandre Guerin, **Yousef Swesi**, Catherine Batiot Dupeyrat, Régis Philippe,Valérie Meille, Jean-Marc Clacens, Catalysis Communications 148 (2021).

7. **Platelet Millireactor Filled with Open Cell Foam-Supported Pt Nanoparticles for a Three-Phase Catalytic System**, Thanh-Son Nguyen,**Yousef Swesi**, David Edouard and Pascal Fongarland, Ind. Eng. Chem. Res. 2019, 58, 9352−9361.

8. **Comparison of boron removal by ion-exchange resin in column and hybrid membrane process,** Assma Alharati, **Yousef Swesi** , Koffi Fiaty, Catherine Charcosset,. Desalination and Water Treatment, 2018(129), Pages 34–42.

9. **Boron removal from seawater using a hybrid sorption/microfiltration process without continuous addition of resin,** Assma Alharati, Jean-Pierre Valour, Sébastien Urbaniak, **Yousef Swesi**, Koffi Fiaty, Catherine Charcosset, Chemical Engineering & Processing: Process Intensification, 131 (2018), Pages 227–233.

10. **Deeper Mechanistic Insight into Ru Pincer-Mediated Acceptorless Dehydrogenative Coupling of Alcohols: Exchanges, Intermediates, and Deactivation Species,** Duc Hanh

Nguyen, Xavier Trivelli, Frédéric Capet, **Yousef Swesi**, Alain Favre-Réguillon, Laurent Vanoye, Franck Dumeignil, and Régis M. Gauvin, ACS Catalaysis, 8 (2018), Pages 4719−4734

11. **Direct solid lewis acid catalyzed wood conversion into lactic acid: kinetic evidences that delignification pretreatment might not be a prerequisite**, **Youssef Swesi**, Chuc Nguyen, Thi Thu Ha Vu, Pascal Fongarland, *ChemCatChem Catalysis, WILY* , Volume 9, Issue 12, June 2017, Pages 2377–2382.

12. **Boron removal in water using a hybrid membrane process of ion exchange resin and microfiltration without continuous resin** Assma Alharati, **Yousef Swesi**, Koffi Fiaty, Catherine Charcosset, , *Journal of Water Process Engineering, Volume 17, June 2017, Pages 32-39*

13. **Acceptorless dehydrogenative coupling of alcohols catalysed by ruthenium PNP complexes: Influence of catalyst structure and of hydrogen mass transfern,** Lei Zhang, Guillaume Raff, Duc Hanh Nguyen, **Yousef Swesi**, Louis Corbel-Demailly, Frédéric Capet, Xavier Trivelli, Simon Desset, Sébastien Paul, Jean-François Paul, Pascal Fongarland, Franck Dumeignil, Régis M. Gauvin, , *Journal of Catalysis 340 (2016) 331–343*

14. **Separation of CO2 Using MFI-Alumina Nanocomposite Hollow Fiber Ion-Exchanged with Alkali Metal Cation** Alshebani, **Y. Swesi**, S. Mrayed, F. Altaher, I. Musbah, **,** *International Science Index Vol: 8 No: 9 Part VIII-2014*

15. **Physicochemical Characterization of MFI–Ceramic Hollow Fibres Membranes for CO2 Separation with Alkali Metal Cation** Alshebani, **Y. Swesi**, S. Mrayed, F. Altaher, , *International Science Index Vol: 8 No: 9 Part VIII-2014*

16. **Utilization of Cement Kiln Dust in Adsorption Technology,Yousef SWESI** , Asia Elmeshergi , Abdelati Elalem, Walid Alfoghy, *world academy of science, engineering and technology , December 2013.*

17. **Investigate the Effects of anionic Surfactant on Tetrahydrofuran Hydrate,** Salah Ali Al-Garyani, **YOUSEF SWESI**, *world academy of science, engineering and technology , December 2013.*

18. **Performances of metallic foams as supports for catalysts**, **Y. Swesi**, S. Mrayed, V. Meille, I. Pitault and S. AL Garyan**,** , *Journal of Engineering Research University of Tripoli* -Libya Issue (18) March 2013 (17).

19. **Use of catalytic oxidation and dehydrogenation of hydrocarbons reactions to highlight improvement of heat transfer in catalytic metallic foams Löfber, A. Essakh, S. Pau, Y. Swesi, M.-L. Zanota, V. Meille, I. Pitault, P. Supio, B. Mutel, V. Le Courtoi and E. Bordes-Richard**, **,** *Chemical Engineering Journal* ; 176– 177 (2011) 49– 56.

20. **Total catalytic oxidation of a side-product for an autothermal restoring hydrogen process**, **P. Kerleau, Y.** Swesi**, V. Meille , I. Pitault and F. Heurtaux,** , *Catalysis Today* , Volume 157, Issues 1-4, 17 November 2010, Pages 321-326.

21. **Adsorption Parameters of Toluene on Amberlite Adsorbent for Purification Unit Useful in Vehicle Application, Yousef Swesi**, Philippe Kerleau, Violaine Lamotte, Isabelle Pitault and Didier Ronz, , LGPC, CNRS *, Ind. Eng. Chem. Res*. 2010, 49, 817–821 817.

22. **Innovative multilayer antimicrobial films made with Nisaplin® or nisin and cellulosic ethers: Physico-chemical characterization, bioactivity and nisin desorption kinetics,** W. Guiga , Y. Swesi, S. Galland, E. Peyrol, P. Degraeve, I. Sebti, , *Innovative Food Science and Emerging Technologies* 11 (2010) 352–360.

23. **Monitoring nisin desorption from a polyethylene-based film and diffusion in an agarose gel by an immunoassay (ELISA) method and a numerical modeling,** Chollet E. , **Swesi Y.** , Peyrol E. , Martial-Gros A. , Degraeve P. , and Sebti I, *Innovative Food Science and Emerging Technologies* 10 (2009) 208–214.

24. **Purification of hydrogen from hydrocarbons by adsorption for vehicles application,** Swesi Yousef, Kerleau Philippe, Pitault Isabelle, Heurtaux, Fabien, Ronze Didier, Separation and Purification Technology, vol. 56, pp 25–37, 2007.

25. **Purification process for chemical storage of hydrogen for fuel cell vehicles applications**, **Y Swesi**, Ronze D. , Pitault I, Dittmeyer R. , Heurtaux F. , International Journal of Hydrogen Energy, vol. 32, pp 5059- 5066 , 2007.