Curriculum Vitæ | Dr. Gianvito Vilé

Address:

Politecnico di Milano
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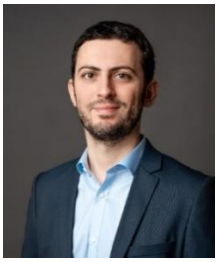
Personal information:

Date of birth: 26/11/1987 (**35 years**)
Place of birth: Mesagne (Italy)
Citizenship: Italian



RESEARCH INTERESTS

Catalysis engineering | Catalytic processes | Structured catalysts | Industrial chemistry

EDUCATION

2016 **Ph.D.** (*with medal*, highest grade), **ETH Zurich** (Switzerland), Thesis title: "Design of new nanostructured catalysts for selective hydrogenations in flow". Advisor: Prof. Dr. Javier Perez-Ramirez.

2011 **MSc** (*110/110 cum laude*) in Chemical Engineering, **Politecnico di Milano** (Italy)

2010 **Visiting Student**, Department of Chemical Engineering, **TU Delft** (The Netherlands) and Institute for Chemical and Bioengineering, **ETH Zurich** (Switzerland)

2009 **BSc** (*110/110 cum laude*) in Chemical Engineering, **Politecnico di Milano** (Italy)

CERTIFICATIONS & HABILITATIONS

2020 **National scientific habilitation** for Associate and Full Professorship positions in **Chemical industrial plants and processes** ("Impianti e processi industriali chimici", **09/D3**), Italian Ministry of University and Research (Italy)

2018 "Leadership for Research Group Leaders", Center for Creative Leadership (Belgium)

CURRENT ACADEMIC APPOINTMENT

2021 - today **Tenure-Track Assistant Professor**, Department of Chemistry, Materials and Chemical Engineering, **Politecnico di Milano** (Italy)

PREVIOUS ACADEMIC AND RESEARCH APPOINTMENTS

2020 - 2021 **Group Leader "Bracco"**, Department of Chemistry Engineering, **Politecnico di Milano** (Italy)

2016 - 2019 **Lab Head in "Catalysis"**, Department of Chemistry Technologies, **Idorsia Pharmaceuticals** (Switzerland)

2016 - 2016 **Scientist in "Chemical Development"**, **Sensirion AG** (Switzerland)

2011 - 2016 **Scientific Assistant in "Catalysis Engineering"**, Institute for Chemical and Bioengineering, **ETH Zurich** (Switzerland)

2010 - 2011 **Visiting Student**, Department of Chemical Engineering, **TU Delft** (The Netherlands)

FUNDING

2023 - today "SAC_2.0: Single-Atom Catalysts for a New Generation of Chemical Processes: from Fundamental Understanding to Interface Engineering" (**ERC StG 2022**), European Commission, **€ 1'499'681** (Role: Attracted funding. **International Competitive Call**. **Principal Investigator**).

2023 - today "GreenDigiPharma: Green and digital pharmaceutical manufacturing", European Commission, **€ 2'605'881.60** (of this, **€ 518'875** goes to my lab at POLIMI) (Role: Attracted funding. **International Competitive Call**. **Coordinator and Principal Investigator**).

2022 - today "SACforCO2: Heterogeneous Single-Atom Catalysts for Carbon Dioxide Reduction to Chemicals", European Commission, Marie Skłodowska-Curie Individual Fellowships for Dr. Vitthal Saptal, **€ 188'590** (Role: Attracted funding. **International Competitive Call**. **Coordinator and Principal Investigator**).

2022 - today "SusPharma: Merging Sustainable And Digital Chemical Technologiesfor The Development Of Greener-By-Design Pharmaceuticals", European Commission, **€ 6'897'657** (of this, **€ 1'018'125** goes to my lab at POLIMI) (Role: Attracted funding. **International Competitive Call**. **Principal Investigator**).

2021 - today "SSEFR: Single-site electrocatalytic flow reactor for C-C coupling", European Commission, Marie Skłodowska-Curie Individual Fellowships for Dr. Mark Bajeda, **€ 171'473** (Role: Attracted funding. **International Competitive Call**. **Coordinator and Principal Investigator**).

2020 - 2022 "Catalytic conversion of vegetable oil into synthetic fuels", ENI Versalis, **€ 180'000** (Role: Task leader).

2019 - today "AFRICA: hArnessing the power of Flow chemistRy for the synthesIs of Complex phArmaceuticals", Fondazione Bracco, **€ 900'000** (Role: Attracted funding. **International Competitive Call**. **Principal Investigator**).

2020 - 2021 "Heterogeneously-catalyzed continuous flow process for organic synthesis", Procos Pharmaceuticals Spa, **€ 15'000** (Role: Attracted funding. **Principal Investigator**).

2020 - 2021 "Photocatalytic processes to recover iodine from wastewater", Bracco Imaging Spa, **€ 55'000** (Role: Attracted funding. **Principal Investigator**).

2020 - 2021 "Flow chemistry for the synthesis of a new contrast agent", Bracco Imaging Spa, **€ 76'842** (Role: Attracted funding. **Principal Investigator**).

2016 - 2019 "Engineering novel photocatalytic films for organic synthesis in flow reactors", Idorsia Pharmaceuticals, CHF 423'332 (ca. **€ 388'313**)

TEACHING

2019 - today **Lecturer** - "Laboratory of Chemical Engineering Project" (Undergraduate, 8 ECTS)
"Flow Chemistry" (Graduate, 5 ECTS), Politecnico di Milano (Italy).

2013 - 2016 **Teaching assistant** - "Catalysis Engineering" (Graduate, 8 ECTS), Institute for Chemical and Bioengineering, ETH Zurich (Switzerland)

2011 - 2015 **Lab instructor** - "Laboratory of Catalytic Materials" and "Laboratory of Flow Reactions", Chemical Engineering Laboratory II (Graduate, 8 ECTS), Institute for Chemical and Bioengineering, ETH Zurich (Switzerland)

STUDENTS' SUPERVISION

Postdoctoral fellows:

Dr. Mark Bajada	2021-today, Ph.D. from the University of Cambridge (UK)
Dr. Vitthal Saptal	2022-today, Ph.D. from the Indian Institute of Technology (India)

PhD students:

Alessandra Sivo	2020-today, Politecnico di Milano (Italy)
Vincenzo Ruta	2021-today, Politecnico di Milano (Italy)
Areti Mousiou	2022-today, Politecnico di Milano (Italy)
Jiachengjun Luo	2022-today, Politecnico di Milano (Italy)
Niccolò Allasia	2022-today, Politecnico di Milano (Italy)
Milla Vigliengo	2022-today, Politecnico di Milano (Italy)

Master and Bachelor students:

Edoardo Vittorio Pasini	Eleonora Ruffini	Michael Ehrenstein
Vittoria Granata	Francesco Iannacci	David Grivel
Martina Villa	Matteo Vergani	Patrick Dähler
Giuseppe Minerva	Leonardo Mineo	Sarah Correa
Maria Suanno	Massimiliano de Maron	Jonas Wichert
Alessandro Manfredi	Carola Romani	Leonard Floryan
Enrico Annoscia	Lara Amini	Jakub Jagielski
Gabriele Musati	Moritz Haus	

AWARDS

2022 "**ERC Starting Grant**", European Research Council

2022 "**Alfredo di Braccio Award**" for pioneering contributions in the field of single-atom catalysis, Accademia dei Lincei

2022 Named as "**Emerging Leaders 2022**", Journal of *Physics Condensed Matter*, Institute of Physics (IOP)

2021 Named as "**Chemical Engineering Rising Stars**", Frontiers in Chemical Engineering, Frontiers

2021 Named as "**Emerging Investigators in Chemical Engineering**", Reaction Chemistry & Engineering**, Royal Society of Chemistry**

2021 **Humboldt Junior Fellowship**, Humboldt Foundation and University of Bayreuth

2020 Nominated "**Expert for the Chemical and Materials Industry**", World Economic Forum

2020 Top Reviewers for ChemCatChem, Wiley-VCH and PubChemSoc Europe

2019 Named as "**Influential Researcher in Chemical Engineering**", I&EC Research, **American Chemical Society**

2019 Felder Award, Fondazione Bracco & Fondazione Politecnico di Milano, Italy

2016 **Dimistris N. Chorafas Award in Chemistry**, Weizmann Institute of Science, Israel

2016 Materials & Industrial Processes Award, MaP Competence Center of ETH Zurich

2016 **ETH Medal for Outstanding PhD Thesis**, ETH Zurich

2015 Outstanding Reviewer, Wiley-VCH, and PubChemSoc Europe

2014 "DSM award" for Best Poster Presentation in Catalysis, SCS Fall Meeting and DSM

2014 SCNAT/SCS Chemistry Travel award, Swiss Academy of Sciences & Swiss Chemical Society

2012 "Prix SGVC" award for young talents, Swiss Process and Chemical Engineers Society

2010 Erasmus/LLP Scholarship, European Union | ATHENS Scholarship, TU Delft

2010 "Make Science Make Sense" award, Bayer

PROFESSIONAL SERVICES

(a) Editorial services

2020 - today **Early-Career Editorial Board Member** of *ChemCatChem* (IF 5.5) and *Chemical Engineering and Processing: Process Intensification* (IF 4.3). **Board member** for other minor journals published by Frontiers (*Front. Chem. Eng*., *Front. Catal*.) and MPDI (*Processes*)

2022 - today Invited Guest Editor for the *Molecular Catalysis* special issue "Nano and single-atom catalysts for renewable chemicals", together with **Prof. Ning Yan**.

2021 - today Invited Guest Editor for the *ChemCatChem* special issue "Developments at the interface between surface organometallic and heterogeneous single-atom catalysts", together with **Prof. Angelika Bruckner** and **Prof. Botao Qiao**.

2021 - today Invited Guest Editor for the *Chemical Engineering and Processing: Process Intensification* special issue "Process intensification approaches for waste to value", together with **Prof. Dmitry Murzin** and **Prof. Emma Emanuelsson Patterson**.

2020 - today Invited Editor of a *Processes* special issue on "Catalytic Processes in Continuous Nanostructured Reactor", together with **Prof. Jiaxu Liu**.

2017 - 2018 Invited Guest Editor for the *Catalysis Today* special issue "Catalysis in continuous flow microreactors".

(b) Evaluation of competitive grants

2021 - today **Panel Member** for European Commission (call "HORIZON-WIDERA-2021-ACCESS-03"), evaluating 391 proposals to fund joint research projects between European and widening countries.

2021 - today **Remote Evaluator** for European Commission (**ERC CoG, Horizon FET, and COST COFUND actions**), Singapore National Research Foundation, Science Foundation Ireland, US National Science Foundation, Slovak Academy of Sciences, Czech Academy of Sciences.

2020 - today **Expert Evaluator** for the progress of the European Commission H2020 project FLIX ("FLow chemistry for Isotopic eXchange"), integrating catalysis and flow reactor design. Partners: Commissariat à l'Énergie Atomique et aux Énergies Alternatives, Leibniz Institute of Catalysis, National Institute of Applied Sciences of Toulouse, Aarhus University, ComInnex, Absiskey, University of Amsterdam.

(c) Organization of scientific meetings and other roundtables

2022 **Organizer** of the International Workshop on Single-Atom Catalysis (Milan, 6th Octoner 2022), which involved the participation of leading experts in the field ().

2018 **Organizer** of the Swiss industrial roundtable "Catalysis & Process Intensification in Switzerland", Allschwil (Switzerland) with experts from Novartis, Roche, Syngenta, Idorsia Pharmaceuticals, Firmenich, and Givaudan.

2019 - 2020 **Board member** of the Swiss industrial roundtable "Process Intensification, FlowChemistry & Green Industrial Processes in Switzerland".

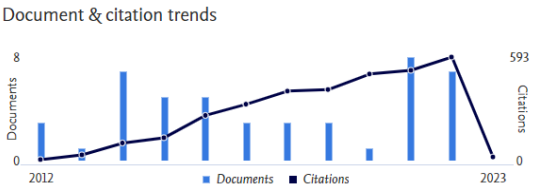
(d) Peer reviewer for scientific journals

2012 - today **Reviewer** for *Nat. Nanotechnol*., *Nat. Commun*., *Nat. Synthesis*, *ACS Catal*., *Chem*, *Appl. Catal. B*, *Nanoscale*, *ChemSusChem*, *J. Catal*., *Chem. Eur. J*., *Chem. Commun*., *Catal. Sci.Technol*., *ChemCatChem*, *React. Chem. Eng.*, *Catal. Commun*., *Ind. Eng. Chem. Res*., *ChemistrySelect*, *ChemMedChem*, *J. Mol. Catal.*, *Eur. J. Org.Chem*.(**>20 papers per year**)

PEER-REVIEWED PUBLICATIONS (* denotes publications with corresponding authorship)

Citation summary (accessed 11/2022)

3285 citations
10 papers cited >100 times
Average citations per paper: 71
H-index: 23



1. V. Saptal, M.A. Bajada, V. Ruta, **G. VILÉ***, "Single-atom catalysis for thermally and light-driven organic synthesis" *ChemCatChem* (under review)
2. A. Sivo, V. Ruta, V. Granata, A. Savateev, M.A. Bajada, **G. VILÉ***, "Modulating the nanostructure of carbon nitride for improved continuous-flow trifluoromethylation of (hetero)arenes" *ACS Sustainable Chemistry & Engineering* (under review)
3. M.A. Bajada, J. Sanjosé-Orduna, G. Di Liberto, S. Tosoni, G. Pacchioni, T. Noël, **G. VILÉ***, "Interfacing single-atom catalysis with continuous-flow organic electrosynthesis" *Chem. Soc. Rev*. **2022**, *51*, 3898. Link
4. **G. VILÉ***, D. Ng, Z. Xie, I. Martinez Botella, J. Tsanaktsidis, C.H. Hornung, "3D-printed structured reactor with integrated single-atom catalyst film for hydrogenation" *ChemCatChem* **2022**, *14*, e202101941. Link
5. **G. VILÉ***, G. Di Liberto, S. Tosoni, A. Sivo, V. Ruta, M. Nachtegaal, A.H. Clark, S. Agnoli, Y. Zou, A. Savateev, M. Antonietti, G. Pacchioni, "Azide-alkyne click chemistry over a heterogeneous copper-based single-atom catalyst" *ACS Catal*. **2022**, *12*, 2947-2958. Link
6. V. Ruta, A. Sivo, L. Bonetti, M.A. Bajada, **G. VILÉ***, "Structural effects of metal single-atom catalysts for enhanced photocatalytic degradation of Gemfibrozil" *ACS Appl. Nano Mater*. **2022**, *5*, 14520. Link
7. A. Sivo, T. Keun Kim, V. Ruta, R. Luisi, J. Osorio-Tejada, M. Escriba-Gelonch, V. Hessel, M. Sponchioni, **G. VILÉ***, "Enhanced flow synthesis of small molecules by in-line integration of sequential catalysis and benchtop twin-column continuous chromatography" *React. Chem. Eng*. **2022**, *7*, 2650. Link
8. J. Liu, Z. Zhang, X. Jiang, N. He, W. Zhou, Y. Zhao, P. Guo, Y. Jiang, G. Xiong, J. Su, **G. VILÉ***, "Influence of the zeolite surface properties and potassium modification on the Zn-catalyzed CO_2-assisted oxidative dehydrogenation of ethane" *Appl. Catal. B* **2022**, *304*, 120947. Link
9. J. Liu, Z. Zhang, C. Liu, **G. VILÉ**, G. Xiong, N. He, "Structured binder-free BEA zeolite in hierarchical form for enhanced acid-catalyzed dehydration" *ACS Appl. Nanomater.* **2021**, *4*, 11997. Link
10. A. Sivo, V. Ruta, **G. VILÉ***, "Gram-scale domino synthesis in batch and flow modes of azetidinium salts" *J. Org. Chem.* **2021**, *86*, 14113. Link
11. **G. VILÉ***, J. Liu, Z. Zhang, "Surface engineering of a Cu-based heterogeneous catalyst for efficient azide-alkyne click cycloaddition" *React. Chem. Eng.* **2021**, doi: 10.1039/d1re00199j Link
12. **G. VILÉ***, P. Sharma, M. Nachtegaal, F. Tollini, D. Moscatelli, A. Sroka-Bartnicka, O. Tomanec, M. Petr, J. Filip, I.S. Pieta, R. Zbořil, M.B. Gawande, "An Earth-abundant Ni-based single-atom catalyst for selective photodegradation of pollutants" *Solar RRL* **2021**, *5*, 2100176 Link
13. J. Liu, Y. Zou, D. Cruz, A. Savateev, M. Antonietti, **G. VILÉ***, "Ligand-metal charge transfer induced via adjustment of textural properties controls the performance of single-atom catalystsduring photocatalytic degradation" *ACS Appl. Mater. Interfaces* **2021**, *13*, 25858. Link
14. J. Liu, N. He, Z. Zhang, J. Yang, X. Jiang, J. Su, M. Shu, R. Si, G. Xiong, H.-B. Xie, **G. VILÉ***, "Highly-dispersed zinc species on zeolites for the continuous and selective dehydrogenation of ethane with CO_2 as soft oxidant" *ACS Catal*. **2021**, *11*, 2819. Link
15. A. Sivo, R. Galaverna, G. Gomes, J. Pastre, **G. VILÉ***, "From circular synthesis to materials manufacturing: advances, challenges, and future steps for using flow chemistry in novel application areas" *React. Chem. Eng*. **2021**, *6*, 756. Link
16. **G. VILÉ***, "Photocatalytic materials and light-driven continuous processes to remove emergingpharmaceutical pollutants from water and selectively close the carbon cycle" *Catal. Sci. Technol*. **2021**, *11*, 43. Link
17. S. Tortoioli, A. Friedli, A. Prud'homme, S. Richard-Bildstein, P. Kohler, S. Abele, **G. VILÉ***, "Development of an efficient and sustainable synthesis of 2-(3-methyl-1 H-1, 2, 4-triazol-1-yl) acetic acid under continuous-flow conditions" *Green Chem*. **2020**, *22*, 3748. Link
18. L. Amini-Rentsch, E. Vanoli, S. Richard-Bildstein, R. Marti, **G. VILÉ***, "A novel and efficient continuous-flow reactor to prepare trifluoromethylated *N*-fused heterocycles for drug discoveryand pharmaceutical manufacturing" *Ind. Eng. Chem. Res*. **2019**, *58*, 10164. Link
19. E. Vorobyeva, E. Fako, Z. Chen, S. M. Collins, D. Johnstone, P. A. Midgley, R. Hauert, O. V. Safonova, **G. VILÉ**, N. López, S. Mitchell, J. Pérez-Ramírez, "Atom-by-atom resolution of structure-function relations over low-nuclearity metal catalysts" *Angew. Chem. Int. Ed*. **2019**, *58*, 8724. Link
20. **G. VILÉ***, G. Schmidt, S. Richard, S. Abele, "Enantiospecific cyclization to 2-methylproline derivative via 'memory of chirality' in flow" *J. Flow Chem*. **2019**, *9*, 19. Link
21. **G. VILÉ***, S. Richard, A. Lhuillery, G. Rueedi, "Electrophile, substrate functionality, and catalyst effects in the synthesis of

mono and disubstituted benzylamines via visible-light photoredox catalysis in flow" *ChemCatChem* **2018**, *10*, 3786. Link

22. Z. Chen, E. Vorobyeva, S. Mitchell, E. Fako, M.A. Ortuño, N. López, S.M Collins, P.A Midgley, S. Richard, **G. VILÉ**, J. Pérez-Ramírez, "A heterogeneous single-atom palladium catalyst surpassing homogeneous systems for Suzuki coupling" *Nature Nanotechnol*. **2018**, *13*, 702. Link
23. **G. VILÉ***, "Flow Chemistry & Catalysis-Where do we stand and where do we need to go?" *Catal. Today* **2018**, *308*, 1. Link
24. D. Albani, M. Capdevila, **G. VILÉ**, S. Mitchell, N. López, J. Pérez-Ramírez, "Semi-hydrogenation of acetylene on indium oxide: proposed single-ensemble catalysis" *Angew. Chem. Int. Ed*. **2017**, *56*, 10755. Link
25. N. Almora-Barrios, **G. VILÉ**, M. Garcia-Ratés, J. Pérez-Ramírez, N. López, "Electrochemical effects at surfactant-platinum nanoparticle interfaces boost catalytic performance" *Appl. Catal.B* **2017**, *9*, 604. Link
26. D. Albani, Q. Li, **G. VILÉ**, S. Mitchell, N. Almora-Barrios, P.T. Witte, N. López, J. Pérez- Ramírez, "Interfacial acidity in ligand-modified ruthenium nanoparticles boosts the hydrogenation of levulinic acid to gamma-valerolactone" *Green Chem*. **2017**, *19*, 2361. Link
27. D. Albani, **G. VILÉ**, M.A. Beltran Toro, R. Kaufmann, S. Mitchell, J. Pérez-Ramírez, "Structuring hybrid palladium nanoparticles in metallic monolithic reactors for continuous-flow three-phase alkyne hydrogenation" *React. Chem. Eng*. **2016**, *1*, 454. Link
28. M. Capdevila-Cortada, **G. VILÉ**, D. Teschner, J. Pérez-Ramírez, N. López, "Reactivity descriptors for ceria in catalysis" *Appl. Catal. B* **2016**, *197*, 299. Link
29. Z. Chen, S. Pronkin, T. Fellinger, K. Kailasam, **G. VILÉ**, D. Albani, F. Krumeich, R. Leary, J. Barnard, J.M. Thomas, J. Pérez-Ramírez, M. Antonietti, D. Dontsova, "Merging single-atom- dispersed silver and carbon nitride to a joint electronic system via copolymerization with silvertricyanomethanide" *ACS Nano* **2016**, *10*, 3166. Link
30. **G. VILÉ**, D. Albani, N. Almora-Barrios, N. López, J. Pérez-Ramírez, "Advances in the design of nanostructured catalysts for selective hydrogenation" *ChemCatChem* **2016**, *8*, 21. Link
31. D. Albani, **G. VILÉ**, S. Mitchell, P.T. Witte, N. Almora-Barrios, R. Verel, N. López, J. Pérez- Ramírez, "Ligand ordering determines the catalytic response of hybrid palladium nanoparticles in hydrogenation" *Catal. Sci. Technol.* **2016**, *6*, 1621. Link
32. M. Moser, **G. VILÉ**, S. Colussi, F. Krumeich, D. Teschner, L. Szentmiklósi, A. Trovarelli, J. Pérez-Ramírez, "Structure and reactivity of ceria-zirconia catalysts for bromine and chlorine production via the oxidation of hydrogen halides" *J. Catal.* **2015**, *331*, 128. Link
33. **G. VILÉ**, D. Albani, M. Nachtegaal, Z. Chen, D. Dontsova, M. Antonietti, N. López, J. Pérez- Ramírez, "A stable single-site palladium catalyst for hydrogenations" *Angew. Chem. Int. Ed*. **2015**, *54*, 11265. Link
34. **G. VILÉ**, N. Almora-Barrios, N. López, J. Pérez-Ramírez, "Structure and reactivity of supported hybrid platinum nanoparticles for the flow hydrogenation of functionalized nitroaromatics" *ACS Catal*. **2015**, *5*, 3767. Link
35. **G. VILÉ**, P. Dähler, J. Vecchietti, M. Baltanás, S. Collins, M. Calatayud, A. Bonivardi, J. Pérez-Ramírez, "Promoted ceria catalysts for alkyne semi-hydrogenation" *J. Catal.* **2015**, *324*, 69. Link
36. **G. VILÉ**, J. Pérez-Ramírez, "Beyond the use of modifiers in selective alkyne hydrogenation: silver and gold nanocatalysts in flow mode for sustainable alkene production" *Nanoscale* **2014**,*6*, 13476. Link
37. E. Oakton, **G. VILÉ**, D. Levine, E. Zocher, D. Baudouin, C. Copéret, "Silver nanoparticles supported on passivated silica: preparation and catalytic performance in alkyne semi- hydrogenation" *Dalton Trans*. **2014**, *43*, 15138. Link
38. **G. VILÉ**, S. Colussi, F. Krumeich, A. Trovarelli, J. Pérez-Ramírez, "Opposite face sensitivity of CeO_2 in hydrogenation and oxidation catalysis" *Angew. Chem. Int. Ed*. **2014**, *53*, 12069. Link
39. **G. VILÉ**, S. Wrabetz, L. Floryan, M.E. Schuster, F. Girgsdies, D. Teschner, J. Pérez-Ramírez, "Stereo and chemoselective character of supported CeO_2 catalysts for continuous-flow three- phase alkyne hydrogenation" *ChemCatChem* **2014**, *6*, 1928. Link
40. **G. VILÉ**, N. Almora-Barrios, S. Mitchell, N. López, J. Pérez-Ramírez, "From the Lindlar catalyst to supported ligand-modified palladium nanoparticles: selectivity patterns and accessibility constraints in the continuous-flow three-phase hydrogenation of acetylenic compounds" *Chem.Eur. J.* **2014**, *20*, 5926. Link
41. J. Carrasco, **G. VILÉ**, D. Fernández-Torre, R. Pérez, J. Pérez-Ramírez, M.V. Ganduglia- Pirovano, "Molecular-level understanding of CeO_2 as a catalyst for partial alkyne hydrogenation" *J. Phys. Chem. C* **2014**, *118*, 5352. Link
42. Q.M. Kainz, R. Linhardt, R. Grass, **G. VILÉ**, J. Pérez-Ramírez, W.J. Stark, O. Reiser, "Palladium nanoparticles supported on magnetic carbon-coated cobalt nanobeads: highly active and recyclable catalysts for alkene hydrogenation" *Adv. Funct. Mater*. **2014**, *24*, 2020. Link
43. **G. VILÉ**, D. Baudouin, I.N. Remediakis, C. Copéret, N. López, J. Pérez-Ramírez, "Silver nanoparticles for olefin production: New insights into the mechanistic description of propyne hydrogenation" *ChemCatChem* **2013**, *5*, 3750. Link
44. **G. VILÉ**, B. Bridier, J. Wichert, J. Pérez-Ramírez, "Ceria in hydrogenation catalysis: high selectivity in the conversion of alkynes to olefins" *Angew. Chem. Int. Ed.* **2012**, *51*, 8620. Link
45. D. Verboekend, **G. VILÉ**, J. Pérez-Ramírez, "Mesopore formation in USY and beta zeolites bybase leaching: selection

criteria and optimization of pore-directing agents" *Cryst. Growth Design* **2012**, *12*, 3123. Link

46. D. Verboekend, **G. VILÉ**, J. Pérez-Ramírez, "Hierarchical Y and USY zeolites designed by post-synthetic strategies" *Adv. Funct. Mater.* **2012**, *22*, 916. Link

OTHER PUBLICATIONS (* denotes publications with the corresponding authorship)

1. V.B. Saptal, S.M. Gade, **G. VILÉ**, J. Walkowiak, B.M. Bhanage, "Organocatalytic reductive functionalization of carbon dioxide" (book chapter) in "Sustainable Utilization of Carbon Dioxide - From Waste to Product" (Eds: M. Jawaid, A. Khan), Springer Nature **2023**.
2. **G. VILÉ***, "Silica-based materials as catalysts or supports in solvent-free organic reactions" (book chapter) in "Solvent-free Methods in Nanocatalysis: From Catalyst Design to Applications" (Eds: R. Luque, M.B. Gawande, E. Doustkhah, A. Goswami), Wiley **2023**.
3. **G. VILÉ***, "Synthesis of surface-modified nanomaterials" (book chapter) in "Surface Modified Nanomaterials for Applications in Catalysis" (Eds: M.B. Gawande, C.M. Hussain, Y. Yamauchi), Elsevier **2022**, pages 53-71.
4. A. Sivo, J. Ilare, M. Maraldi, N. Manfredini, J. M. G. Alcântara, D. Moscatelli, **G. VILÉ***, "Flow chemistry and single-atom catalysis: resources for a sustainable pharmaceutical industry" *La Chimica e l'Industria.* **2021**, *5*, 48.
5. **G. VILÉ***, "The transformation of the chemical and advanced materials industry" *World Economic Forum* **2020**.
6. **G. VILÉ***, "Chimica in flusso: microreattori e sostenibilità" *Scienza in Rete* **2020**.
7. **G. VILÉ***, "A panel discussion on flow catalysis" *Chim. Oggi - Chem. Today* **2020**, *38*, 14.

JOURNAL FRONT COVERS

CONFERENCES AND PRESENTATIONS

I was invited to deliver **46 talks at major conferences and top universities**.

Specifically, I was the **keynote/featured speaker** at:

- Innovations in API Manufacture 2022 and Flow Chemistry Summit 2022
- ChemCat 2021, USA, 2021
- European Symposium in Flow Chemistry, University of Cambridge, UK, 2020

Among the **oral talks** at major conferences, I would like to highlight:

- 26th North American Catalysis Meeting in New York, USA, 2022
- 13th European Congress of Chemical Engineering (sponsored by EFCE), 2021

- 24th International Conference on Chemical Reactors (ChemReactor-24), 2021
- AIChE Annual Meeting, 2019 and 2022
- RSC Automated Synthesis Forum, Glasgow, UK, 2019
- 6th International Conference on Structured Catalysts and Reactors, Germany, 2019
- International Symposium on Synthesis and Catalysis, Lisbon, Portugal, 2019
- 2nd International Symposium on Nanoparticles, Nanomaterials & Applications, PT, 2016
- 24th North American Catalysis Meeting in Pittsburg, USA, 2015
- EuropaCat XI, Lyon, France, 2013 (Talk highlighted in *Platinum Metals Review*)

Among the **plenary/department lectures at major universities**, I would like to highlight:

- Leibniz Institute for Catalysis, Germany, 2022
- University of Ghent, Belgium, 2022
- University of Stuttgart, Germany, 2021
- Dalian University of Technology, China, 2019
- University of California at Berkeley, USA, 2018
- National University of Singapore, Singapore, 2018
- Nanyang Technological University, Singapore, 2018
- Delft University of Technology, Netherlands, 2018

Among the **seminars to industrial R&D departments**, I would like to highlight:

- Procos Pharmaceuticals, 2021
- Bracco Pharmaceuticals, 2020
- Actelion Pharmaceuticals, Switzerland, 2016&2018

In compliance with the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for thepurpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance to art. 7 of the above mentioned decree.