Curriculum Vitae

DE MARON JACOPO

Personal Informations

Date of birth 19/11/1990
Nationality: Italian

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Education

01/11/2016 – 01/04/2020
PhD in Chemistry - Bologna University
Research theme: *"New catalytic processes for the transformation of renewable raw materials into chemical compounds"*
Thesis title: "*Catalytic upgrading of carboxylic acids and esters to biofuels and biochemicals*"
Supervisor: Prof. Fabrizio Cavani

23/03/2016
Master Degree in Industrial Chemistry - Bologna University
Final Grade: 110/110 with honors
Thesis title: "*Alchilazione in fase gassosa del fenolo con reagenti green in catalisi basica eterogenea*"
Supervisor: Prof. Fabrizio Cavani

19/12/2013
Bachelor Degree in Industrial Chemistry - Pisa University
Final Grade: 110/110 with honors
Thesis title: "*Fibre naturali rigenerate come supporti per sensori biomedicali*"
Supervisor: Prof. Fabio Di Francesco

Work Experience - Scholarships & Research Fellowships

01/03/2023 – to date
Fixed-term researcher (A) - Bologna University
Research theme "Sviluppo di processi chimici e tecnologie catalitiche per la produzione di idrogeno, di vettori energetici e per la neutralità climatica"
Supervisor: Prof. Francesco Basile

02/03/2022 – 28/02/2023
Research Fellowship - Bologna University in collaboration with **ENI**
Research theme ""Sviluppo e test di materiali per la produzione e l'utilizzo di idrogeno e energie rinnovabili"
Supervisor: Prof. Francesco Basile

02/03/2021 - 01/03/2022
Research Fellowship - Bologna University in collaboration with **International Flavors & Fragrances**

Research theme "Studio e sviluppo di catalizzatori per ossidazioni selettive in fase liquida"
Supervisor: Prof. Fabrizio Cavani

02/03/2020 - 01/03/2021
Research Fellowship – Bologna University in collaboration with **International Flavors & Fragrances**
Research theme "Studio e sviluppo di catalizzatori per ossidazioni selettive in fase liquida"
Supervisor: Prof. Fabrizio Cavani

02/12/2019 – 01/03/2020
Research Scholarship – Bologna University
Research theme "Sviluppo di catalizzatori per la trasformazione di acidi carbossilici (e rispettivi esteri) in fase vapore"
Supervisor: Prof. Fabrizio Cavani

11/04/2016 – 31/10/2016
Research Scholarship - Bologna University in collaboration with **ENI**
Research theme "Studio di catalizzatori per l'ossidazione selettiva di alcani ed alcoli"
Supervisor: Prof. Fabrizio Cavani

Educational Roles

- **Laboratory Tutoring**

1. 16/01/2020 – 28/02/2020
   Tutoring for Laboratory Activity (10 hours)
   Course: 88363 - Green Chemistry And Sustainable Chemical Technologies - Bachelor Degree in Low Carbon Technology and Sustainable Chemistry (cod. 9246) – Bologna University.

2. 28/01/2019 – 01/02/2019
   Tutoring for Laboratory Activity (10 hours)
   Course: 88363 - Green Chemistry And Sustainable Chemical Technologies - Bachelor Degree in Low Carbon Technology and Sustainable Chemistry (cod. 9246) – Bologna University.

3. 24/09/2018 – 30/09/2019
   Tutoring Contract for Laboratory Activity (40 hours)
   Course: 66693 - Fondamenti Di Chimica Industriale Con Laboratorio - Bachelor Degree in Industrial Chemistry (cod. 8513) – Bologna University.

Co-Supervisor of 2 PhD Thesis, 4 Master Thesis and 4 Bachelor Thesis

Research Areas of Interest

Synthesis and characterization of advanced catalytic materials, investigation of the kinetics and mechanism of interaction between reactants/intermediates with catalytic surfaces, as well as development of innovative catalytic processes both in the liquid- and the gas-phase, both in batch and continuous flow reactors. Each of the following topics is being investigated at the lab scale but keeping an eye on the potential application of the new synthetic strategy on a bigger scale.

- Production of hydrogen and other renewable energy vectors.
- Synthesis and use of organic carbonates as alternative, benign, reagents for the development of innovative catalytic processes.

- Derivatization of phenolic compounds by selective alkylation processes.
- Selective oxidations, both in the liquid- and the gas-phase.
- Innovative synthetic routes (e.g., ketonization) toward bio-based intermediates or other value-added compounds.
- Upgrading of alcohols or use of bio-alcohol as new reducing or alkylating agents.
- Upgrading of renewable carboxylic acids towards bio-based fuels, lubricants, and waxes.
- Development of catalytic, continuous flow, processes both in liquid and in gas-phase.

Scientific Society Membership

Member of the **Industrial Chemistry Division** of the **Italian Chemical Society**, and of the **Interdivisional Groups** of **Catalysis** and **Green Chemistry**.

Publications

1. **2023**
   R. Bacchiocchi, J. De Maron, T. Tabanelli, D. Bianchi and F. Cavani, "*Supported rhenium catalysts for the hydrogenation of levulinic acids derivatives: limits and potential*", *Sustainable Energy & Fuels,* 2023, **accepted with major revisions,** Manuscript ID: SE-ART-11-2022-001583.R1.

2. **2023**
   J. De Maron, T. Tabanelli, F. Ospitali, C. Lopez Cruz, P. Righi and F. Cavani, "*Gas-phase oxidative dehydrogenation of long chain alkenols for the production of key fragrances ingredients: from Rosalva isomers to Costenal analogues*", *Catalysis Science and Technology,* 2023, **accepted with minor revisions,** Manuscript ID: CY-ART-10-2022-001836.

3. **2023**
   J. De Maron, R. Mafessanti, P. Gramazio, E. Orfei, A. Fasolini and F. Basile "*H_2 production by methane oxy-reforming: effect of catalyst pretreatment on the properties and activity of Rh-$Ce_{0.5}Zr_{0.5}O_2$ synthetized by microemulsion*", *Nanomaterials*, 2023, **13**, 53. **DOI: https://doi.org/10.3390/nano13010053**

4. **2023**
   A. Matayeva, A. Fasolini, D. Bianchi, S. Chiaberge, J. De Maron and F. Basile "*Production of biocrude from organic waste: Influence of feedstock composition on hydrodenitrogenation reactivity in biocrude upgrading*", *Fuel,* 2023, **335**, 126981. **DOI: https://doi.org/10.1016/j.fuel.2022.126981**

5. **2022**
   G. Galletti, P. Prete, S. Vanzini, R. Cucciniello, A. Fasolini, J. De Maron, F. Cavani and T. Tabanelli, "*Glycerol carbonate as a versatile alkylating agent for the synthesis of β-aryloxy alcohols*", *ACS Sustainable Chemistry & Engineering,* 2022, **10**, 10922–10933.
   DOI: https://doi.org/10.1021/acssuschemeng.2c02795

6. **2022**
   J. De Maron, L. Bellotti, A. Baldelli, A. Fasolini, N. Schiaroli, C. Lucarelli, F. Cavani and T. Tabanelli, "*Evaluation of the catalytic activity of metal phosphates and related oxides in the ketonization of propionic acid*", *Sustainable Chemistry,* 2022, **3**, 58-75.
   DOI: https://doi.org/10.3390/suschem3010005

7. **2021**

J. De Maron, M. Eberle, F. Cavani, F. Basile, N. Dimitratos, P. J. Maireles-Torres, E. Rodriguez-Castellón and T. Tabanelli, "Continuous-flow methyl methacrylate synthesis over gallium-based bifunctional catalysts", *ACS Sustainable Chemistry & Engineering*, 2021, **9**, 1790–1803. **DOI: https://doi.org/10.1021/acssuschemeng.0c07932**

8. **2020**
   PhD Thesis (XXXII Cycle, CHIM/04 03/C2) title: "*Catalytic upgrading of carboxylic acids and esters to bio fuels and bio chemicals.* Supervisor: Prof. Fabrizio Cavani.

9. **2019**
   C. Bandinelli, B. Lambiase, T. Tabanelli, J. De Maron, N. Dimitratos, F. Basile, P. Concepcion, J. M. Lopez Nieto and F. Cavani, "*A study of the oxidehydration of 1,2-propanediol to propanoic acid with bifunctional catalysts", Applied Catalysis A: General*, 2019, **582**, 117102. DOI: **https://doi.org/10.1016/j.apcata.2019.05.036**

19 contributions (poster or oral presentation) to national and international scientific congresses