

ANTONIO MARIA ASENSIO



EDUCATION

Master's Degree in Chemistry

(Faculty of Chemistry, Barcelona – Interuniversity master's degree)
September 2018–June 2019

Thesis title: "Electrochemical synthesis of Pd(Zn) and Pd(Cu) core-shell carbon supported nanoparticles as catalysts for oxygen reduction reaction". Supervisors: Pere L. Cabot - University of Barcelona

Bachelor's Degree in Chemistry

(University of Barcelona)
September 2013 – July 2018

Thesis title: "Fluorescent agents as special additive tracers for industry". Supervisors: Dr. Daniel Sainz - University of Barcelona, Pere Izquierdo – Kurita Ibérica S.L.

High School – (Science and Technology)

IES Bernat el Ferrer, Molins de Rei (Spain)
September 2011 – June 2013

WORKING EXPERIENCES

Visiting Researcher: IREC - Catalonia Institute for Energy Research (Spain)

Development of innovative SOC electrodes
January 2022 - July 2022

Pre-doctorate researcher (University of Genova, Italy)

Development of new materials for the application on Solid Oxide Cells
Fabrication of button solid oxide cells, Electrochemical analysis, DRT, Electrode synthesis, Exsolution, Co-doping materials..
November 2019 – Present

Laboratory Technician (SEAT Martorell – Eulen, Spain)

Control the paint depuration process from the priming of the car body
July 2019 – October 2019

Laboratory Technician (Kurita Ibérica S.L., Spain)

Sample collection and preparation, SAP ECC development, recording and analyse data from industrial water, water treatment, reports, risk assessment.
April 2018 – September 2018

Trainee (Kurita Ibérica S.L., Spain)

Wastewater analysis, suppliers contact
June 2017 – April 2018

PUBLICATIONS IN SCIENTIFIC JOURNALS

"Calcium doping in double perovskite $\text{SmBa}_{1-x}\text{Ca}_x\text{Co}_2\text{O}_{5+6}$ to enhance the electrochemical activity of solid oxide cell reversible oxygen electrode". *J. Alloys Compd.* IF 6.371, 2021.

Antonio Maria Asensio, Davide Clematis, Davide Cademartori, M. Paola Carpanese, Massimo Viviani, Cristina Carbone, Antonio Barbucci.

"Impregnation of microporous SDC scaffold as stable solid oxide cell BSCF-based air electrode". *Energy*. IF 7.147, 2021.

Antonio Maria Asensio, Davide Clematis, Massimo Viviani, M. Paola Carpanese, Sabrina Presto, Davide Cademartori, Pere L. Cabot, Antonio Barbucci.

"On the stabilization and extension of the distribution of relaxation times analysis". *Electrochimica Acta*. IF 6.901, 2021.

Davide Clematis, Tomaso Ferrari, Antonio Bertei, Antonio Maria Asensio, M. Paola Carpanese, Cristiano Nicoletta, Antonio Barbucci.

Chemistry, the science describing the world around us at a fundamental level in a logic manner has always been a fascination for me and it was at the university that it became a passion.

CURRENTLY

I am currently attending the third year of my PhD in Chemical, Materials and Process Engineering at the University of Genova, Italy. My research project focuses on the "**Development of new materials for the application on Solid Oxide Cells**".

CONTACTS



PERSONAL INTERESTS AND ACTIVITIES

- Reading and travelling
- Economics
- Outdoor sports

LANGUAGE SKILLS

- Spanish: Native
- Catalan: Native
- Italian: Fluent
- English: Advanced

SOFTWARE SKILLS

- Office, ImageJ, Origin, : Intermediate
- X'Pert Highscore, FullProf Suite, Matlab, Python, Photoshop, SAP : Basic

EXTRAS

- Driving license
- Basics of quality management systems

REFERENCES

University of Barcelona:
Pere L. Cabot - p.cabot@ub.edu

Università degli Studi di Genova:
Antonio Barbucci - barbucci@edu.unige.it

SEAT (Eulen):
Angel Tajahuerce - atajahuerce@eulen.com

IREC:
Marc Torrell – mtorrell@irec.cat

"I authorize the treatment of personal data contained in this CV in conformity with EU 679-2016".

"Electrochemical and sonoelectrochemical degradation of Allura Red and Erythrosine B dyes with Ti-PbO₂ anode". J. Of Electrochemical Chemistry. IF 4.464, 2021.

Sabrina Kacem, Sourour C. Elaoud, Antonio Maria Asensio, Marco Panizza, Davide Clematis.

CONGRESS PARTICIPATION

- 1) Synthesis of carbon-supported pd(zn) and pd(cu) core-shell nanoparticles as catalysts for oxygen reduction, XL Meeting on Electrochemistry, July 2019, Huelva (Spain) – Thesis presentation
 - 2) Electrochemical synthesis of carbon-supported Pd(Zn) and Pd(Cu) core-shell nanoparticles as catalysts for oxygen reduction reaction: A. Maria Asensio, E. Brillas, I. Sirés, F. Centellas, P. L. Cabot, Hycelltech19 July 2019, Barcelona (Spain)
 - 3) Estabilidad del bscf infiltrado en sdc microporoso como electrodo de oxígeno para las celdas de óxido sólido, V Workshop Red E3TECH, October 2020, Barcelona (Spain)
 - 4) Towards the stability of air electrode in solid oxide cells by bscf infiltration into microporous sdc backbone: A. M. Asensio, D. Clematis, M. Viviani, M. P. Carpanese, S. Presto, A. Barbucci, EFE2020, December 2020, Krakow (Poland) - Online
 - 5) Reversible Solid Oxide Cells, a key technology for the future energy scenario: the role of the air electrode: A. M. Asensio, M. P. Carpanese, D. Clematis, D. Cademartori, A. Barbucci, March 2021, IVWFC, Milan (Italy) - Online
 - 6) Infiltration of microporous SDC backbone as stable solid oxide cell BSCF-based air electrode: A. M. Asensio, D. Clematis, D. Cademartori, M. Viviani, A. Barbucci, EIA12 November 2021, Germany – Online
 - 7) High entropy oxides as novel electrode materials for SOCs, A. M. Asensio, L. Bernadet, S. Schweidler, M. Botros, M. Torrell, A. Barbucci, A. Tarancón, EFCF 2022, June 2022, Lucerne (Switzerland) - Poster
 - 8) Co-doped layered perovskite material as promising oxygen electrode for Intermediate-Temperature Solid Oxide Cells: A. M. Asensio, D. Clematis, D. Cademartori, L. Bernadet, M. Torrell, A. Barbucci, ISE 32nd Topical Meeting of the International Society of Electrochemistry, June 2022, Stockholm (Sweden) – In Presence
 - 9) Effective calcium doping of double perovskite SmBaCo₂O_{5+δ} as promising oxygen electrode for Intermediate-Temperature Solid Oxide Cells, A. M. Asensio, D. Clematis, D. Cademartori, M. P. Carpanese, M. L. Bernadet, M. Torrell, A. Barbucci, 8th ASEEE meeting, July 2022, Graz (Austria)
 - 10) High entropy oxides towards electrode stability for Solid Oxide Cells, A. M. Asensio, L. Bernadet, Simon Schweidler, Miriam Botros, M. Torrell, A. Barbucci, Albert Tarancón, 1st ISE Regional Meeting, August 2022, Prague (Czech Republic) *
- * ISE Award: Congress expenses covered by ISE

Laboratory Experience

- Electrode / Electrolyte synthesis
- Fabrication of button solid oxide cells
- Electrolyte and cathode supported SOC
- Screen-printing, infiltration, co-doping, exsolution
- Reducing and oxidizing atmospheres
- Characterization techniques: SEM, TEM, EDX, XRD, IR, TGA, DSC..
- Other electrochemical techniques: EIS, CV, LSV, CA, CP..
- Equivalent Circuit Modelling and Distribution of relaxation Times