

PERSONAL INFORMATION



Papurello Davide

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Sex M | Date of birth 11/01/1984 | Nationality Italian

PROFESSIONAL EXPERIENCE

(09 /2018 –)

Researcher – Assistant Professor

Denerg – Energy center, Politecnico di Torino (TO)

The Energy Center Lab (EC_lab) is the Polytechnic's initiative that coordinates and promotes the scientific activities of the Center. The multidisciplinary research team includes competences deriving from different departments of the University and is active on various research topics related to energy. EC_lab provides integrated hardware-software tools to simulate future scenarios for energy supply and its end-use, taking account of environmental constraints and socio-economic aspects. The increasing amount of (energy) data available in real time is an integral part of the multi-layer approach carried out by the Center. The ultimate goal is not just to simulate the competition of different technologies - both at a local level (for example an urban district) and at a global level (for example a nation) - but also to verify the impact that energy policies and environmental issues have on their dissemination, and also the impact of social interactions (user behaviour).

Sector Scientific research

(09 /2013 – 09/2018)

Research fellowship

Denerg laboratorio LAQ Politecnico di Torino (TO)

Monitoring, experimentation and design of systems for the production and exploitation of biogas from organic waste on SOFC generators. Involvement in various research projects:

- ☐ PRIN 2008 (Energy from Biomass: Analysis, Experimental and Demonstration of Biogas use in Solid Oxide Fuel Cells),
- ☐ PRIN 2009 (Experimental and energy-strategy analysis of the use of syngas from coal and biomass to feed SOFC systems integrated with CO2 separation processes) – Syngas – fed SOFC: cleaning, processing, degradation issues; Technologies and processes for CO2 separation from anode exhausts,
- ☐ OZ-Box (Design of Balance of Plant of a integrated SOFC CHP system 2.5 kWe fed by natural gas – All issues connected to requirements of real installation of a SOFC system with BoP),
- ☐ SOFCOM (SOFC CCHP with poly-fuel: operation and maintenance)- (www.sofcom.eu),
- ☐ LAPIS, Adozione delle biomasse algali in un sistema energetico integrato,
- ☐ DEMOSOFC, DEMONstration of large SOFC system fed with biogas from WWTP,
- ☐ BIOGAS4ENERGY, Sewage sludge digested and activated for the gas cleaning and gas upgrading for the carbon dioxide removal, testing activities from laboratory scale to pilot plant experimentation,
- ☐ DBSOFC, direct biomass to fuel cell SOFC systems for the energy production,
- ☐ BRISK II, European project for the research laboratory sharing, test benches design and realization.

Sector Scientific research

(12 /2016 – 02/2017)

Energy systems responsible for Green Energy Storage company

Green Energy Storage Povo (TN)

Company, start up from Fondazione Bruno Kessler (TN) able to produce organic flow batteries. Responsible of the research laboratory for the energy purposes.

Sector Scientific research and batteries production

(03 /2015 – 03/2017)

Contractor

Fondazione Edmund Mach San Michele a/A (TN)

Monitoring, experimentation and design of systems for the production and exploitation of biogas from organic waste on SOFC generators. **BWS Project** – biowaste for sofc (SOLIDpower and Fondazione Edmund Mach) – The main purpose of the project BWS, in continuity with the VEGA project is to investigate the possibility of using biogas made from renewable sources (biomass) into high-efficiency micro-generation systems, such as fuel cells (solid oxid fuel cell). Project written, developed and managed from the beginning to the end. BWS (<https://www.fmach.it/CTT/Sperimentazione/Biomasse-ed-energie-rinnovabili/Progetti-Partnerships-Convenzioni/BioWaste-for-SOFCs-BWS>).

Sector Scientific research

(01 /2011 – 09/2013)

Contractor

Fondazione Edmund Mach San Michele a/A (TN)

Monitoring, experimentation and design of systems for the production and exploitation of biogas from organic waste on SOFC generators. **Vega project** (SOFCpower and Fondazione Edmund Mach) – SOFC stack fed by biogas from the dry anaerobic digestion of organic waste. Project developed and managed. Vega project (<http://www.sofcpower.com/30/local-government-in-trento-pat.html>).

Sector Scientific research

(01 /2010 -12/2010)

Post graduate stage (2nd level University Master degree)

MICHELIN – PIAZZALE R.DAUBREÈ CUNEO (CN)

PROJECT WORK during the internship made at Michelin spa (Cuneo): Risk analysis and maintenance for the kinematic chains for the production of tires.

Sector Maintenance Management and Risk Analysis

(10 /2009 – 06/2010) – (03 /2011 – 09/2011)

University tutor

CEPU – SEDE (TO) / SEDE (TN)

Teaching of scientific and technical subjects to undergraduates (structural mechanics, analysis, energy, technical physics...).

Sector University assistance

(02 /2009 – 04/2009)

College internship

Environment Park spa – Via Livorno 60 (TO)

Optimization and energy analysis of an anaerobic digestion pilot plant for the hydrogen and methane production.

Sector Scientific research

(10 /2005 – 05/2009)

Various work during university studies

Ipercoop – Cuornè (TO), 3K – Rivarolo C.se (TO), Politecnico di Torino CEMED – Via Cavalli 22H (TO), Elin – Rivara C.se (TO)

Sector Bakery clerk, Maids room, Museum operator, Electrician

EDUCATION AND TRAINING

- 10, 2018 – 10, 2024 **Abilitazione Scientifica Nazionale – ASN MIUR BANDO D.D. 1532/2016 09/C2 FISICA TECNICA E INGEGNERIA NUCLEARE, Qualified for the sector 09/C2 ING-IND 10 with the title of Assistant Professor**
- (01, 2011 – 05, 2014) **Research doctorate in energy (Ph.D.)**
Politecnico di Torino Denerg (TO)
Biogas from anaerobic digestion of biomass (Organic Fraction of Municipal Solid Waste and sewage sludge): trace compounds characterization through an innovative technique (PTR-MS) and detrimental effects on SOFC energy generators, from single cells to short stacks.
Insights:
 - Power biogenic fuels for solid oxide electrochemical cells (SOFC)
 - Biogas Production, monitoring, removal of Volatile Organic Compounds
 - Management of solid waste - in detail those organic
 - Techniques of filtration and separation
 - Experimental techniques and data analysis
 - Experimental modeling and simulation
 - Danger of explosion and fire - safety analysis
 - Systems of energy production from fuel cells
 - Carbon dioxide capture
- (07, 2013 – 07,2013) **Summer School of Technical Physics, 2013, sixth edition. The measurement technique in Physics:** *Metrologia e riferibilità, Misure di energia e smart metering, Misura di grandezze ambientali outdoor, Termografia, Progettazione degli esperimenti e misure fisico tecniche, Misure in campo: tecniche di raccolta e trasmissione dei dati. Unisannio, Enea, Polito, Polimi, Università Padova, Università di Roma La Sapienza, Università di Roma Tor Vergata, Università di Cassino e Lazio Meridionale, Seconda Università degli Studi di Napoli, Università di Modena e Reggio Emilia, Università della Basilicata, INRIM, ISPRA, ACCREDIA, Telecom Italia.*
- (03, 2013 – 05,2013) **Writing scientific papers in English at CLA, Centro Linguistico di Ateneo – Politecnico di Torino**
- (04, 2013 – 04,2013) **Spring school on: “Smart energy Solutions in Urban Environment”**
Pracatinat, Regione Piemonte, in collaboration with Politecnico of Torino – Energy Department, organizes, in the framework of the EU project CLAIRE – Clusters Alpines Industry Research Energy, a high educational school about energy solutions in urban environment. Interventions of international professor as Sabonnadiere J., Goswami Y., Schleich J., Hens H., Mogensen M., Socolow R.
- (09, 2012 – 09, 2012) **Summer School Area Nano Scuola Interpolitecnica di Dottorato – Politecnico di Milano: Fabrication of nanostructures, Semiconductor nanostructures, Characterizing 2-dimensional nanostructures and Magnetic nanostructures.** *Andrea Cattoni, Hans von Känel, Geoff Thornton and Paolo Vavassori*
- (01, 2010 – 12, 2010) **2nd level University Master degree: RAMS & MTZ (Reliability, Maintenance and Saf Analysis and Management)**

Politecnico di Torino RAMSE + Michelin spa

Analysis of automatic powertrains: efficient recovery of failures and maintenance

Insights:

- Reliability Availability Maintainability Safety
- Safety and risk analysis
- Maintenance
- Statistics and forecasting methods

(03, 2007 – 07, 2009)

Master degree in energy engineering

Politecnico di Torino (TO)

(2nd (cycle) Laurea. Italian master-level degree of the Bologna Declaration.) Master degree in nuclear and energy. Energy field 110/110; with a thesis entitled: "Biogas utilization in SOFC's from anaerobic digestion. Analysis of the impurities, their effects and methodologies used to reduce negative impacts on various anodic structures and typologies"

(01, 2008 – 08, 2008)

Erasmus

Politechnika Gdanska (GDO – Gdansk University of Technology)

Insights:

- Air quality control
- Ecotoxicology
- Waste Management
- Meteorology
- Hazardous Waste Disposal
- Pollutant transfer phenomena

(06, 2009 – 07/2009)

Summer school on: "Wind Power Technology"

Halmstad University - Sweden

(01, 2004 – 03, 2007)

Bachelor degree in energy and nuclear engineering

Politecnico di Torino (TO)

Energy and nuclear thesis (1st (cycle) degree. Italian bachelor-level degree of the Bologna Declaration.) with a thesis entitled: "Analisi di un impianto a ciclo combinato e/o cogenerativo nell'ambito delle Migliori Tecnologie Disponibili (M.T.D.)"

(09, 1998 – 06, 2003)

Electrical engineering technician

ITIS A.Moro – Rivarolo Canavese (TO)

PERSONAL SKILLS

Native language

Italian

Other languages

English

French

UNDERSTANDING		ORAL		WRITING
Listening	Reading	Interaction	Oral production	
C1	C1	C1	C1	C1
PET and IELTS				
A1	A1	A1	A1	A1

Level: A1/2 basic level - B1/2 intermediate level - C1/2 advance level
Common European Framework of Reference for Languages

Communication and managerial skills

I have good communication and teamwork skills as well as technical and practical skills too, acquired during my experience in experimental research laboratories and during internship in industry

Professional skills

Good knowledge on the control processes and forecasting techniques for industrial maintenance, technical and scientific development of the experimentation process

Good knowledge of the Microsoft Office tool – AutoCad – Cool Pack – CEA – Factsage – Cantera (thermodynamic equilibrium tools...) – Matlab, Aspen, Solidworks, Risk analysis, P&ID design of test benches from laboratory scale up to pilot plant.

Driver license

B

Publications

1. Papurello, D., Rolandi, C., Fogliacco, G., 2012. Catene cinematiche automatiche: ripristino efficiente dei guasti. *Manutenzione, Tecnica e Management* – Gennaio 2012.
2. Papurello, D., Soukoulis, C., Forlin, L., Biasioli, F., Silvestri, S., Santarelli, M., 2012. Detection of Volatile Compounds Released from Dry Anaerobic Digestion of Organic Fraction of Municipal Solid Waste by PTR-ToF-MS. Conference at 20th European Biomass Conference and Exhibition. Milan 2012. ISBN 978-88-89407-54-7. DOI 10.5071/20thEUBCE2012-2DV.3.1.
3. Papurello, D., Soukoulis, C., Tognana, L., Lanzini, A., Leone, P., Santarelli, M., Forlin, L., Silvestri, S., 2012. Experimental investigation on the cleaning of biogas from anaerobic digestion as fuel in an anode-supported SOFC under direct dry-reforming. 10th European SOFC Forum 2012.B1113.
4. Papurello, D., Soukoulis, C., Schufried, E., Cappellin, L., Gasperi, F., Silvestri, S., Santarelli, M., Biasioli, F. Monitoring of volatile compound emission during dry anaerobic digestion of Organic Fraction of Municipal Solid Waste by PTR-ToF-MS. *Bioresource Technology* 2012;126: 254-265. (0960-8524/\$ - <http://dx.doi.org/10.1016/j.biortech.2012.09.033>).
5. Papurello, D. Caratterizzazione del biogas per impieghi innovativi. Sessione orale Workshop – Aspetti tecnico-gestionali ed ambientali della digestione anaerobica. *Ecomondo* 2012.
6. Papurello, D., Lanzini, A., Silvestri, S., 2012. Biogas exploitation: from the dry anaerobic digestion of OFMSW to Solid Oxide Fuel Cell energy generator. II sessione: XIV Edizione della Conferenza Nazionale sul Compostaggio e Digestione Anaerobica. *Ecomondo* 2012. ISBN 883877708X
7. Papurello, D., Lanzini, A., Leone, P., Santarelli, M., Silvestri, S. Biogas from the organic fraction of municipal solid waste: dealing with contaminants for a Solid Oxide Fuel Cell energy generator. *Waste Management* 2014; 34: 2047-2056. (<http://dx.doi.org/10.1016/j.wasman.2014.06.017>).
8. Papurello, D., Lanzini, A., Santarelli, M., Silvestri, S., 2013. Biogas: una risposta contro l'effetto serra. *Chimica Ambiente Tecnoedizioni*. Gennaio – Febbraio 2013. ISBN 92-828-5368-3.
9. Papurello, D., Lanzini, A., Schufried, E., Silvestri, S., Biasioli, F., Santarelli, M., 2013. Proton Transfer Reaction-Mass Spectrometry (PTR-MS) as a rapid online tool for monitoring the removal of trace compounds with adsorption filters and for analyzing biogas produced by dry anaerobic digestion. 6th International PTR-MS Conference 2013, Obergurgl – Austria. ISBN 978-3-902811-91-2.
10. Papurello, D., Schufried, E., Lanzini, A., Romano, A., Cappellin, L., Märk, T.D., Silvestri, S., Biasioli, F., Santarelli, M. Proton transfer reaction-mass spectrometry as a rapid inline tool for filter efficiency of activated charcoal in support of the development of Solid Oxide Fuel Cells fueled with biogas. *Fuel Processing Technology* 2015; 130: 78-86. (<http://dx.doi.org/10.1016/j.fuproc.2014.09.042>).
11. Papurello, D., Schufried, E., Lanzini, A., Romano, A., Cappellin, L., Märk, T.D., Silvestri, S., Biasioli, F. Influence of co-vapors on biogas filtration for fuel cells monitored with PTR-MS (Proton Transfer-Reaction Mass Spectrometry). *Fuel Processing Technology* 2014; 118: 133-140.(0378-3820/\$ - <http://dx.doi.org/10.1016/j.fuproc.2013.08.011>).
12. Papurello, D., Borchiellini, R., Bareschino, P., Chiodo, V., Freni, S., Lanzini, A., Pepe, F., Ortigoza, G.A., Santarelli, M., 2013. Performance of a Solid Oxide Fuel Cell short-stack with biogas feeding. *Applied energy* 2014; 125: 254-263. (<http://dx.doi.org/10.1016/j.apenergy.2014.03.040>).
13. Papurello, D., Lanzini, A., Smeacetto, F., Tognana, L., Silvestri, S., Santarelli, M., 2013. Effect of sulfur and carbon contaminants on a Solid Oxide Fuel Cell (SOFC) fed with anaerobic digestion biogas. The 3rd edition of the International Conference on Microgeneration and Related Technologies. Naples 15-17 April 2013. ISBN 9788890848902.
14. Papurello, D., Lanzini, L., Santarelli, M., Leone, P., 2013. Solid Oxide Fuel Cell energy production from biogas – impact of contaminants (COS, C2H4) on fuel cell performance. *ATI* 2013.
15. Papurello, D., Lanzini, L., Santarelli, M., Leone, P., 2013. Solid Oxide Fuel Cell energy production from biogas – impact of contaminants (COS, C2H4) on fuel cell performance. *La termotecnica* Maggio 2014.
16. Papurello, D., Lanzini, A., Smeacetto, F., Santarelli, M. Sorbent materials for the cleaning of sewage biogas in high temperature fuel cell plants. *Environmental Engineering and Management Journal* November 2013, Vol.12, No. S11, 1-276, SUPPLEMENT.
17. Papurello, D., Lanzini, A., Smeacetto, F., Santarelli, M. Sorbent materials for the cleaning of sewage biogas in high temperature fuel cell plants – Biowaste sessione tecnica – Comitato Italiano Compostatori. *Ecomondo* 2013.
18. Silvestri, S., Bona, D., Cristoforetti, A., Forlin, L., Papurello, D. Combination of dry anaerobic digestion, composting and energy exploitation of biogas for innovative utilization in a pilot plant. 4th Central European Biomass Conference 2014, Graz 15-18 January 2014 - Austria.
19. Papurello, D., Lanzini, A., Ferrero, D., Smeacetto, F., Leone, P., Biasioli, F., Santarelli, M. Covapors influence on activated carbon filter performance removal from a biogenous fuel suitable for SOFC application using a rapid and online tool. Proceedings of EFC2013 Fifth European Fuel Cell Technology & Applications Conference - Piero Lunghi Conference December 11-13, 2013, Rome, Italy.

20. Papurello, D, Lanzini, A, Leone, P, Smeacetto, F, Tognana, L, Santarelli, M. Direct biogas steam reforming on Nickel anode supported cell effect of higher hydrocarbons and sulfur impurities on the cell performance. Proceedings of EFC2013 Fifth European Fuel Cell Technology & Applications Conference - Piero Lunghi Conference December 11-13, 2013, Rome, Italy.
21. Lanzini, A, Ortigoza-Villalba, G.A, Papurello, D, Santarelli, M, Singh, R, Leone, P. The effect of various biogas contaminants on SOFC performance. Proceedings of EFC2013 Fifth European Fuel Cell Technology & Applications Conference - Piero Lunghi Conference December 11-13, 2013, Rome, Italy.
22. Papurello, D, Lanzini, A, Ortigoza, GA, Santarelli, M, Singh, R. Effects of biogas contaminants on SOFC short-stack: Tolerable concentration limits for chlorine and siloxane. 11th European SOFC & SOE Forum 2014.B0608.
23. Papurello, D, Tognana, L, Lanzini, A, Modena, S, Silvestri, S, Santarelli, M. SOFC stack feeding with biogas from dry anaerobic digestion of organic fraction of municipal solid waste. 11th European SOFC & SOE Forum 2014.A1214.
24. Papurello, D., Tognana, L., Lanzini, A., Smeacetto, F., Santarelli, M., Belcari, I., Silvestri, S., Biasioli, F. Proton transfer reaction mass spectrometry technique for the monitoring of volatile sulfur compounds in a fuel cell quality clean-up system. *Fuel Processing Technology* 2015; 130: 136-146. (<http://dx.doi.org/10.1016/j.fuproc.2014.09.041>).
25. Papurello, D., Tognana, L., Lanzini, A., Santarelli, M., Silvestri, S., Biasioli, F., 2014. Energy production from biogas to SOFC energy system: pilot plant experience. 5th International Symposium on Energy from Biomass and Waste. Venice.
26. Madi, H., Lanzini, A., Diethelm, S., Papurello, D., Van herle, J., Luaidi, M., Larsen J.G., Santarelli, M. Solid oxide fuel cell anode degradation by the effect of siloxanes. *Journal of Power Sources*, 2015; 279, 460-471. (<http://dx.doi.org/10.1016/j.jpowsour.2015.01.053>).
27. Chiodo, V., Galvagno, A., Lanzini, A., Papurello, D., Urbani, F., Santarelli, M., Freni, S. Biogas reforming process investigation for SOFC application. *Energ. Convers. Manage.* 2015; 98: 252-258. ([doi:10.1016/j.enconman.2015.03.113](https://doi.org/10.1016/j.enconman.2015.03.113)).
28. Papurello, D., Lanzini, A., Tognana, L., Silvestri, S., Santarelli, M. Waste to energy: Exploitation of biogas from organic waste in a 500 Wel solid oxide fuel cell (SOFC) stack. *Energy* 2015; 85: 145-158. ([doi:10.1016/j.energy.2015.03.093](https://doi.org/10.1016/j.energy.2015.03.093)).
29. Papurello, D., Lanzini, A., Fiorilli, S., Smeacetto, F., Singh, R., Santarelli, M. Sulfur poisoning in Ni-anode solid oxide fuel cells (SOFCs): Deactivation in single cells and a stack. *Chem. Eng. J.* 2016; 283: 1224-1233 ([doi:10.1016/j.cej.2015.08.091](https://doi.org/10.1016/j.cej.2015.08.091)).
30. Papurello, D., Lanzini, A., Drago, D., Leone, P., Santarelli, M. Limiting factors for planar solid oxide fuel cells under different trace compound concentrations. *Energy* 2016; 95: 67-78 ([doi:10.1016/j.energy.2015.11.070](https://doi.org/10.1016/j.energy.2015.11.070)).
31. Lanzini, A., Gandiglio, M., Papurello, D., Santarelli, M. Harvesting energy from wastewater: the SOFCOM polygeneration plant. Proceedings of EFC2015 Sixth European Fuel Cell Technology & Applications Conference - Piero Lunghi Conference December 16-18, 2015, Naples, Italy. ISBN 978-88-8286-324-1.
32. Papurello, D., Lanzini, A., Santarelli, M. Crossing effects of contaminants on SOFC single cells fed by biogas. Proceedings of EFC2015 Sixth European Fuel Cell Technology & Applications Conference - Piero Lunghi Conference December 16-18, 2015, Naples, Italy. ISBN 978-88-8286-324-1.
33. Papurello, D., Belcari, I., Smeacetto, F., Fiorilli, S., Santarelli, M., Silvestri, S., Tomasi, L. New sorption materials, trace compounds removal for SOFC applications. Proceedings of ECOMONDO XVII National conference on composting and anaerobic digestion. November 03-06, 2015, Rimini, Italy.
34. Papurello, D., Tomasi, L., Silvestri, S., Belcari, I., Santarelli, M., Smeacetto, F., Biasioli, F. Biogas trace compound removal with ashes using proton transfer reaction time-of-flight mass spectrometry as innovative detection tool. *Fuel Processing Technology* 2016; 145: 62-75 ([doi:10.1016/j.fuproc.2016.01.028](https://doi.org/10.1016/j.fuproc.2016.01.028)).
35. Papurello, D. 2016. Utilizzo di materiali di scarto per ottenere BIOGAS di qualità per generatori SOFC. *Chimica Ambiente Tecnoedizioni*. Gennaio – Febbraio 2016. ISBN 92-828-5368-3.
36. Papurello, D., Tomasi, L., Silvestri, S., Santarelli, M. Evaluation of the Wheeler-Jonas parameters for biogas trace compounds removal with activated carbons. *Fuel Processing Technology* 2016; 152: 93-101. (doi.org/10.1016/j.fuproc.2016.06.006).
37. Papurello, D., Tomasi, L., Silvestri, S., Belcari, I., Santarelli, M., Biasioli, F. Wastes as sorbent materials for SOFC applications. Proceedings SUM2016, Third Symposium on Urban Mining, 23 - 25 May 2016.
38. Lanzini, A., Papurello, D., Ferrero, D., Santarelli, M. Dealing with fuel contaminants degradation in Ni-anode SOFCs. 12th EUROPEAN SOFC & SOE FORUM – Lucerne, Switzerland 5 - 8 July 2016.

39. Madi, H., Lanzini, A., Papurello, D., Diethelm, S., Ludwig, C., Santarelli, M., Van herle, J. Solid oxide fuel cell anode degradation by the effect of hydrogen chloride in stack and single cell environments. *J Power Sources*, Volume 326, 15 September 2016, Pages 349-356, ISSN 0378-7753, (<http://dx.doi.org/10.1016/j.jpowsour.2016.07.003>).
40. Papurello, D., Lanzini, A., Leone, P., Santarelli, M. The effect of heavy tars (toluene and naphthalene) on the electrochemical performance of an anode-supported SOFC running on bio-syngas. *Renewable Energy*, Volume 99, December 2016, Pages 747-753. (<http://dx.doi.org/10.1016/j.renene.2016.07.029>)
41. Papurello, D., Silvestri, S., Tomasi, L., Belcari, I., Biasioli, F., Santarelli, M. Biowaste for SOFCs. 71st Conference of the Italian Thermal Machines Engineering Association, ATI2016, 14-16 September 2016, Turin, Italy.
42. Papurello, D., Silvestri, S., Tomasi, L., Belcari, I., Biasioli, F., Santarelli, M. Natural gas trace compounds analysis with innovative systems: PTR-ToF-MS and FASTGC. 71st Conference of the Italian Thermal Machines Engineering Association, ATI2016, 14-16 September 2016, Turin, Italy.
43. Papurello, D., Silvestri, S., Tomasi, L., Belcari, I., Biasioli, F., Santarelli, M. Biowaste for SOFCs *Energy Procedia*, Volume 101, November 2016, Pages 424-431.
44. Papurello, D., Silvestri, S., Tomasi, L., Belcari, I., Biasioli, F., Santarelli, M. Natural gas trace compounds analysis with innovative systems: PTR-ToF-MS and FASTGC. *Energy Procedia*, Volume 101, November 2016, Pages 536-541.
45. Papurello, D., Belcari, I., Tomasi, L., Silvestri, S. Innovative technique to monitor the removal of siloxane with sorbent materials: biochar and activated carbons. 5th Central European Biomass Conference 2016, Graz 18-20 January 2016 - Austria.
46. Santarelli, M., Briesemeister, L., Gandiglio, M., Herrmann, S., Kuczynskic, P., Kupecki, J., Lanzini, A., Llovel, F., Papurello, D., Spliethoff, H., Swiatkowski, B., Torres-Sanglas, J., Vega, L.F. Carbon recovery and re-utilization (CRR) from the exhaust of a solid oxide fuel cell (SOFC): Analysis through a proof-of-concept. *Journal of CO2 Utilization*, Volume 18, March 2017, Pages 206-221. (<http://dx.doi.org/10.1016/j.jcou.2017.01.014>)
47. Drago, D., Gandiglio, M., Lanzini, M., Molino, G., Papurello, D., Santarelli, M. The DEMOSOFC Project: Industrial-Size Demonstration of a Biogas-Fed Solid Oxide Fuel Cell. *Fundamentals & Development of Fuel Cells* January 31st, Stuttgart – Germany.
48. Lanzini, A., Madi, H., Chiodo, V., Papurello, D., Maisano, S., Santarelli, M., Van herle, J. Dealing with fuel contaminants in biogas-fed solid oxide fuel cell (SOFC) and molten carbonate fuel cell (MCFC) plants: Degradation of catalytic and electro-catalytic active surfaces and related gas purification methods. *Review Article Progress in Energy and Combustion Science*, Volume 61, July 2017, Pages 150-188. (<https://doi.org/10.1016/j.pecs.2017.04.002>)
49. Lanzini, A., Ferrero, D., Papurello, D., Santarelli, M. Reporting Degradation from Different Fuel Contaminants in Ni-anode SOFCs. *Fuel Cells*, 2017. (<https://doi.org/10.1002/fuce.201600184>)
50. Papurello, D., Iafate, C., Lanzini, A., Santarelli, M. Trace compounds impact on SOFC performance: Experimental and modelling approach. *Applied Energy*, 2017. (<http://dx.doi.org/10.1016/j.apenergy.2017.09.090>)
51. Papurello, D., Menichini, D., Lanzini, A. Distributed relaxation times technique for the determination of fuel cell losses with an equivalent circuit model to identify physicochemical processes. *Electrochimica Acta*, 2017. (<https://doi.org/10.1016/j.electacta.2017.10.052>)
52. Kupecki, J., Motylinski, K., Blesznowski, M., Papurello, D., Lanzini, A., and Santarelli, M. The numerical model for predictive simulation of the as-SOFC Stack operated in DIR SOFC mode with presence of hydrogen sulphide in the feeding gas. (2017) *Proceedings of EFC2017 European Fuel Cell Technology & Applications Conference – Piero Lunghi Conference*, ISBN 978-88-8286-356-2, pp 139-140.
53. Papurello, D., Lanzini, A., Santarelli, M. Trace compounds impact on SOFC performance: experimental and modelling approach. (2017) *Proceedings of EFC2017 European Fuel Cell Technology & Applications Conference – Piero Lunghi Conference*, ISBN 978-88-8286-356-2, pp 177-178.
54. Papurello, D., Lanzini, A., Santarelli, M. Distributed relaxation times technique for the determination of fuel cell losses. (2017) *Proceedings of EFC2017 European Fuel Cell Technology & Applications Conference – Piero Lunghi Conference*, ISBN 978-88-8286-356-2, pp 207-208.
55. Papurello, D., Modena, S., Silvestri, S., Biasioli, F., Bona, D., Tomasi, L. Waste to energy with an SOFC generator system – pilot plant experimentation. (2017) *Proceedings of EFC2017 European Fuel Cell Technology & Applications Conference – Piero Lunghi Conference*, ISBN 978-88-8286-356-2, pp 209-210.
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Reviewer of the following international journals:

- Sustainability, MDPI AG - ISSN 2071-1050; CODEN: SUSTDE
 - Energies, MDPI AG - ISSN 1996-1073; CODEN: ENERGA
 - International Journal of Environmental Research and Public Health, MDPI AG - ISSN 1660-4601; CODEN: IJERGQ; ISSN 1661-7827 for printed edition)
 - Journal of Environmental Chemical Engineering, Elsevier
 - Energy, Elsevier
 - Chemical Engineering Journal, Elsevier
 - Journal of Energy Storage, Elsevier
 - Journal of Power Sources, Elsevier
 - Process Biochemistry, Elsevier
 - Management of Environmental Quality, Emerald
 - Journal of Solid State Electrochemistry, Springer
 - Energies, MDPI AG
 - International Journal of Hydrogen Energy, Elsevier
 - ChemSusChem, Wiley
 - Chemistry Journals, Wiley
 - Catalysis Today, Elsevier
 - Journal of The Electrochemical Society, The electrochemical society (ECS)
 - Electrochemical Journal of Biotechnology, Elsevier
 - Electrochimica Acta, Elsevier
 - Journal of Pharmaceutical Analytics and Insights, Sci Forschen Inc.
 - International Journal of Ambient Energy, Thomson Reuters
 - Journal of Alloys and Compounds, Elsevier
 - Electronic Journal of Biotechnology, Elsevier
 - Detritus, IWWG
 - Renewable Energy, Elsevier
 - Applied energy, Elsevier
 - Electronic Journal of Biotechnology, Elsevier
 - Environmental Technology & Innovation, Elsevier
 - Nano Energy Journal, Elsevier
 - PLOS ONE, Public Library of Science – ISSN 1932-6203
 - CATALYST, MDPI AG - ISSN 2073-4344
 - Inorganics, MDPI AG - ISSN 2304-6740
 - IJERPH, MDPI AG - ISSN 1660-4601
 - Energy Science & Engineering, ScholarOne Manuscripts
 - Journal of Energy Storage, Elsevier
 - Processes, MDPI AG EISSN 2227-9717
- Reviewer of the European Fuel Cell Technology & Applications - Piero Lunghi Conference Naples, December 16-18, 2015.
 - Reviewer of the 2016 International Conference on New Energy and Future Energy System(NEFES 2016) - August 19th-22nd, 2016, Beijing, China.
 - Reviewer of the International Conference on Environmental Contamination and Clean Technologies (ECCT 2016) - Oct. 21-23, 2016 Beijing, China.
 - Reviewer of the 2018 International Conference on New Energy and Future Energy System(NEFES 2018) - August 21st - 24th, 2018, Shanghai, China.

Associate Editorial Board Member of The Open Fuels & Energy Science Journal.

Committee member of the 2018 4th International Conference on Energy Science and Chemical Engineering (ICESCE 2018) Kunming, China.

Scientific Advisory Board (SAB) of the Renewable Energy Sources - Research and Business (RESRB) 2018

- Reviewer of the European Fuel Cell Technology & Applications - Piero Lunghi Conference Naples, December 16-18, 2015.
- Reviewer of the 2016 International Conference on New Energy and Future Energy System(NEFES 2016) - August 19th- 22nd, 2016, Beijing, China.
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- Reviewer of the 2018 International Conference on New Energy and Future Energy System(NEFES 2018) - August 21st - 24th, 2018, Shanghai, China.

Guest Editor for Processes MDPI, Special issue on: Gas Cleaning with Adsorption Processes, Experimental and Model

Investigation.

Total citations	Indice di Hirsch (o simili – specificare)	Fonte Banca dati
649	H-INDEX 16	SCOPUS
591	H-INDEX 15	WEB OF SCIENCE
767	H-INDEX 18	GOOGLE SCHOLAR
		ALTRO (specificare la Fonte della Banca Dati)

Awards and prizes

- Winner of the Leonardo prize assigned on the dissertation of my master degree thesis for the scientific innovation and development of renewable resources in Italy – GSE 2009 – Premiazione al Quirinale in presenza del capo dello stato e di alcuni ministri. 20/01/2010. (3000 euro)
- Winner of the Mario Ornelli 2010 prize, assigned on the dissertation of my master degree thesis on renewable energy –Alma Mater Università di Bologna prize, renewable energy development. (2500 euro)
- Winner of the 5th IPHE H2igher Educational Rounds, Rome – 2014. (500 \$)
- Winner of the best PhD thesis promoted by Chimica Verde Bionet, Legambiente, CremonaFiere e la fondazione tedesca DLG, during the congress BioEnergy Italy 2016 at Cremona.

Membership of groups / associations

- Blood Donor Group FIDAS
- Member of the Italian technical physic association, 2017-2018, 2018-2019. <http://www.fisicatecnica.org/>
- Member of the ENSIEL, Consorzio interuniversitario nazionale per energia e sistemi elettrici - <http://www.consorzioensiel.it/eng/eng.shtm> (2018-2021)
- Member of the research group STEPS, Polito - <http://www.steps.polito.it/>

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