

EUROPEAN CURRICULUM VITAE



PERSONAL INFORMATION

Name **STENDARDO STEFANO**
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Nationality Italian
Birthday 30/04/1975

WORK EXPERIENCE

- Date June 2023 - now
- Employer SNAM S.p.A.
- Job R&DI Manager leading activities on the field of CCUS, CDR activities. I participate in decision-making processes related to innovation strategy, resource allocation, and investment priorities. This may involve presenting recommendations to the board of directors based on their expertise and insights.
I am also a Member of the Open Innovation Scientific Committee (OISC) of SNAM to evaluate and provide feedback on proposals submitted by internal teams or external partners. This involves assessing the feasibility, novelty, and potential impact of proposed innovations. I act as facilitator for collaborations between different teams within the SNAM corporate, as well as with external partners such as academic institutions, startups, and industry experts. This may involve organizing workshops or networking events.
- Main tasks
 - Tracking existing and scouting for new CO₂ capture technologies aiming at creating and maintaining a detailed database, including relevant KPIs and potential future developments
 - Monitoring of the performances of existing large scale and pilot projects to allow for detailed levelized cost of capture and storage calculations.
 - Maintain relationships with the tech providers in coordination with the relevant Snam's internal functions.
 - Techno-economical assessment, analysis and design of the available CO₂ capture technologies for each different project and initiative. Projects will include, among others, flue gases from: industrial processes, power plants, cogeneration systems, Direct Air Capture (DAC) and others.
 - Techno-economical assessment and analysis of the best and most innovative CO₂ utilization solutions and technologies for each different project and initiative.
 - Tracking existing and scouting for new CO₂ utilization technologies aiming at creating and maintaining a detailed database, including relevant KPIs and developments
 - Involvement, alongside the relevant internal functions, to the techno-economical assessment, analysis and design of the best available CO₂ compression, storage, and transportation technologies for each different project and initiative
 - Managing technical interactions with external resources or third parties (like Universities, Incubators, Accelerators) and defining related areas of support or collaboration to improve or accelerate start-up focused on CCUS, DAC and other carbon dioxide removal (CRD) processes.
- Date January 2017 - Now
- Stakeholder Directorate-General for Research and Innovation - Industrial Transformation (RTD.E.3)
- Job **ITALIAN REPRESENTATIVE AT THE RESEARCH FUND FOR COAL AND STEEL (RFCS) COMMITTEE. PROT. ENEA / 2017/4858 / DTE-PCU**
- Main tasks As Italian national delegate, I contribute to the development of policies and strategies related to the coal and steel sectors at the Italian and European Union levels. I provide input based on my

knowledge of research priorities, industry trends, and the potential impact of research and innovation activities. I promote RFCS funding opportunities within Italy to encourage participation from research organizations, universities, and industry stakeholders. I raise awareness about the benefits of collaborating with the RFCS and provide guidance to potential applicants during the proposal submission process

- Date May 2010 – June 2023
- Employer Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), Rome
- Job **RESEARCHER / PROJECT COORDINATOR**
- Main tasks
 - Evaluate the technical and economic feasibility and environmental sustainability of projects and programmes related to Carbon Capture Use and Storage (CCUS) technologies. I am responsible for document analysis and data collection for the elaboration of project technical reports and scientific articles.
 - As Italian representative at IEA's TCP (Technical Collaborative Programme): Industrial and Energy-related Technologies (IETS) I am coordinating an Italian National Supporting Group on CCUS technologies.
 - I oversee the management of contracts with Italian Universities as partners of my funded projects for scouting innovative CO₂ Capture technologies from research to pilot scale.
 - Liaising with cross-functional research and modelling teams to validate technology value proposition and provide Levelized Cost of Technology targets.
 - The mass and energy balances I prepare have as their objective the Life Cycle Assessment (LCA) of low carbon emission processes and the preparation of GHG accounting and reporting. The main projects funded by the European Commission and the Italian government I am working on as scientific manager are:
 - 2022 – now. Task leader of the ECCSELENT project funded under the recovery and resilience plan of the Next Generation EU. The goals of the project are related to the strengthening of the ECCSEL-ERIC infrastructures in Italy thus increasing the ability of the Italian Network to cover all the needs of the users for the successful deployment of CCUS technologies in Italy and Europe.
 - 2022 – now. PNRR POR H₂ - experimental study of SEP (Sorption Enhanced Processes) according to these two approaches: (i) in a closed loop where the CO₂ will be separated into a concentrated gaseous stream by regeneration of the sorbent material (e.g. PSA Pressure Swing Adsorption or TSA Temperature Swing Adsorption), (ii) an open cycle where the CO₂ will be stored permanently in an inert solid matrix with the co-production of carbonates (e.g. CaCO₃).
 - 2022 – now. Scientific manager of a work-package in the project of Line 1.6 Energy efficiency of products and industrial processes of PTR22-24. The objective of this project is the development of materials and plant solutions which, through the use of H₂ in the industrial sector, guarantee both the efficiency of production processes and the reduction of the environmental impact. To achieve this objective, a residual biomass gasification reactor will be designed and built which will allow the production of gas at a pressure of about 10 bar and with a high H₂ content to be used as a reducing gas in pre-reduction and/or or as a fuel in energy processes.
 - May 2022- Nov 2022 – NTU Consultant for Technical Assistance for the identification of carbon capture suppliers for the preparation of techno-economic information to feed economic and financial models. In particular the tasks were: (i) Identification of potential carbon capture suppliers in Europe; (ii) Screening and pre-selection of carbon capture suppliers; (iii) Definition of quantitative and qualitative data for the carbon capture suppliers assessment, and definition storage and/or utilization routes.
 - 2022-now – Principal investigator of two industrially funded projects on the CO₂ mineralization in alkaline wastes.
 - 2021-now – ZEPHYRUS. The objective is the development of zero emission process for hydrogen production via reversible use of solid sorbents for CO₂ capture. The project is funded by Regione Lazio in the framework of Gruppi di Ricerca Lazioinnova.
 - 2021- now. The ChemPGM project is part of the H2020-MSCA-RISE program and aims to ensure a sustainable life cycle for strategic metals belonging to the platinum group and which are used for the development of catalysts for the reuse of CO₂.
 - 2021 – now. The H2020 StoRIES (Storage Research Infrastructure Eco-System) project provides Users with a world-class network of research infrastructures (IR) to promote

innovation for the development of new materials for energy storage devices and applications.

- 2021 – now. SISAL SLAG – The target is the use of an innovative CO₂ looping for the recovery of silicon from secondary materials. The project is funded by the European Innovation Technology (EIT).
- 2020-now - H2020 ECCSELERATE Accelerating user access, growing the membership and positioning internationally to ensure long-term sustainability of CCUS research infrastructures (Grant n ° 871143). This three-year European project aims to upgrade the ECCSEL research infrastructure.
- 2020-now – H2020 GICO: Gasification of Biomass with integrated CO₂ capture and valorisation. Scientific manager for the implementation of carbon capture process in situ during residual biomass gasification for H₂ intensified production. The CO₂ captured will be valorised via cold plasma for e-fuels productions.
- 2019-2021 - Scientific manager of the WP3.1 project of Line 1.6 Energy efficiency of products and industrial processes of PTR19-21. The activities summarized under the acronym: Flexible Systems for Energy through the Reuse of Carbon (SFERO) have the following objectives: (i) the demonstration of processes for the capture of CO₂ from industrial processes and the valorisation of carbon through plasma catalysis for the production of carbon-neutral renewable fuels suitable for powering land, sea and air propulsion systems; (ii) the recovery of thermal waste through networks of heat exchangers (pinch analysis).
- 2019-2020 - Scientific manager of the industrially funded project. This order has as its objective the study of the valorisation of CO₂ through its storage in waste-to-energy.
- 2019-2020. PoC Proof of concept - Chemical recycling of mixed plastics from WEEE. My role was the design of a fluid bed test bench for the pyrolysis of plastics and the simultaneous capture of CO₂.
- 2017-2018 - Member of the SIMTE project for the drafting of brief documents on the decarbonisation of the production of cement, iron and steel.
- 2014-2018 - FP7 ASCENT (Grant n ° 608512) Advanced Solids cycles with Efficient Novel Technologies. The goal of this European project was the construction of three prototypes for the production of H₂ from CH₄ with CO₂ capture through solid sorbents
- 2012-2016 FP7 UNIFHY (Grant n ° 299732) UNIQUE gasifier for hydrogen. The goal of the project is the development of a BECCS (Bio Energy with CCS) process for the production of H₂ from biomass gasification.
- 2010-present. Scientific manager of the CCUS activities in the ZECOMIX (Zero Emission of Carbon with Mixed Technologies) plant to produce hydrogen from methane and syngas conversion processes. Since 2018, ZECOMIX is an ECCSEL European research infrastructure.

- Date July 2019 – June 2023
- Employer ENEA, Rome
- Job **ITALIAN REPRESENTATIVE AT IEA'S TCP (TECHNICAL COLLABORATIVE PROGRAMME): INDUSTRIAL AND ENERGY-RELATED TECHNOLOGIES (IETS). PROT. ENEA / 2019/39550 / COM-INT**
- Main tasks
 - Harmonize the efforts of the European and non-European industrial community for the development of integrated low-carbon energy systems.
 - Scientific coordinator of the subtask C within the task XXI on “Decarbonizing industrial systems in a circular economy framework” of the Technical Collaborative Programme on Industrial and Energy related Technology and Systems of the IEA (International Energy Agency).
- Date March 2014 – February 2018
- Employer ENEA, Rome
- Job **MAIN COORDINATOR OF THE EUROPEAN PROJECT ASCENT (GRANT N. 608512)**
- Main tasks
 - Make sure that the economic and scientific balance of the project respects the standards of the European Commission.
 - Coordinate and manage the resources of the project.
 - Inform the members of the consortium on the results achieved every six months.

- Supervise the progress of the project activities and the achievement of milestones and deliverables according to a shared calendar.
 - Design, organize and lead the EU-Australia workshop in Switzerland at the École Polytechnique Fédérale de Lausanne (EPFL). The objective of the event was to outline the state of the art of CCUS technologies and future collaborations between European and Australian researchers in the field of carbon-neutral technologies.
- Date March 2017 – December 2019
- Employer ENEA, Rome
- Job **ITALIAN FOCAL POINT OF THE CHALLENGE #3 CARBON CAPTURE OF MISSION INNOVATION**
- Main tasks
- Participation as a panellist in events (e.g. workshops, seminars) to identify the most promising future technologies in the field of CO₂ capture from high-carbon power plants and industrial processes;
- Date April 2017 – June 2023
- Employer ENEA, Rome
- Job **TECHNICAL-SCIENTIFIC FOCAL POINT ON “ADVANCED CO₂ SEPARATION TECHNOLOGIES AND ITS IMPLEMENTATION IN INDUSTRIAL PROCESSES”. PROT. ENEA / 201719352 / DTE**
- Main tasks
- Coordinate experimental, plant and modelling activities for the study of CCUS plants and processes.
 - Design, implement and manage national and European projects aimed at the development of CCUS technologies.
 - Monitor the state of the art in the field of energy technologies with particular reference to CCUS processes.
 - Communicate and disseminate the main results obtained by ENEA projects in the field of CCUS processes.
Find synergies between different actors operating in carbon capture and enhancement technologies: IEA, EERA, Mission Innovation, RFCS
- Date January 2016 – Now
- Employer ENEA, Rome
- Job **ENEA REPRESENTATIVE AT THE JOINT PROGRAMME OF THE EUROPEAN ENERGY RESEARCH ALLIANCE (EERA) ON CCS TECHNOLOGIES. PROT. ENEA / 2016/3772 / DTE**
- Main tasks
- Participate in the implementation of a single European strategy in the field of CCS technologies.
 - Exchange of information between the various European partners to facilitate the growth of work networks (networking).
- Date November 2009 – May 2010
- Employer European Commission, Joint Research Centre JRC, Petten – The Netherlands
- Job **POST-DOC**
- Main tasks
- Synthesis, characterization and functional tests of a highly regenerable synthetic material based on calcium supported by mayenite (Ca₁₂Al₁₄O₃₃) for the capture of CO₂.
 - Drafting of technical reports to support European policies on low-carbon technologies.
- Date October 2006 – November 2009
- Employer ENEA, Rome
- Job **POST-DOC**
- Main tasks
- Preliminary design of the carbonator installed in the European research platform ZECOMIX at the Casaccia research centre.
 - Modelling and simulation of processes and plants for CO₂ capture to be integrated into combined systems for the production of hydrogen and electricity.
 - Study of advanced thermodynamic cycles with zero emissions and high efficiency;

- Date June 2004 – May 2006
 - Employer ENEA, Roma
 - Job **GRANTHOLDER**
 - Main tasks
 - Modeling and simulation of a plant for the production of hydrogen from methane with integrated CO₂ capture. The results of these studies were used as a pre-feasibility study of the ZECOMIX implant.
 - Preparation of a pre-feasibility study of a plant for the combined production of hydrogen and electricity called HYPOGEN.
 - Modeling and simulations of IGCC, NGCC reactors, processes and plants.
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- Date January 2004 – May 2004
 - Employer Catanzaro Costruzioni, Agrigento
 - Job **ENGINEER**
 - Main tasks
 - Analysis and research of solutions to problems inherent in a waste to energy plant.
 - Drafting of a fleet maintenance plan.

EDUCATION

- Date November 2006 – April 2009
 - University University of L'Aquila
 - Main courses The main studies concerned the advanced modelling techniques of multiphase and multi-particle chemical reactors, processes and plants with reference to the production of H₂ with CO₂ capture through solid sorbents. Settore scientifico-disciplinate Principi di Ingegneria Chimica ING/IND24.
 - Degree PhD in Engineering and Physical-Mathematical Modeling
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- Date 2002
 - Association Register of Engineers
 - Degree Qualified to practice as an engineer
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- Date September 1993 – April 2002
 - University University of L'Aquila
 - Main courses The degree course, in addition to deepening the study of the design of machines and their use in industrial plants, was focused on the production of both energy and cold and the management of refrigeration and energy systems.
The thesis work concerned the energy characterization of a cogeneration plant with a gas turbine cycle.
 - Degree Doctor in Mechanical Engineering with specialization in Energy (Old Law).
Graduation grade 110 cum laude / 110.

SKILLS

MOTHER TONGUE

ITALIAN

OTHER LANGUAGES

ENGLISH

- Capacità di lettura Very Good
- Capacità di scrittura Very Good
- Capacità di espressione orale Very Good

RELATIONAL SKILLS AND COMPETENCES

- Collaboration with a highly interdisciplinary team made up of technicians, chemists, industrial chemists and physicists.

ORGANIZATIONAL SKILLS

- Coordination of the ASCENT project whose consortium was made up of 15 European members and 2 Australian partners. 105 people collaborated in various capacities in the

project. The activities provided for funding from the European Commission of approximately € 7.0. The 48-month project concluded with an evaluation report drawn up by two independent experts and signed by a project officer as representative of the European Commission;

- Coordination of the SFERO project within WP3.1 of Line 1.6 Energy efficiency of products and industrial processes of PTR19-21. The project currently underway provides for funding from the Ministry of Economic Development of approximately € 1.39 million.

TECHNICAL SKILLS

- Calculation software: Matlab, Barracuda, ChemCAD;
- Modelling and simulation of chemical fluidized bed reactors
- Design of circulating bed reactors to produce H₂ from mixtures of CH₄, CO, H₂O

FURTHER INFORMATION

- Guest editor of the Special Issue on MDPI entitled "Heterogeneous Catalysis for CO₂ valorisation" Impact Factor 2.753
- Topic Editor of two volumes on the special issue of Frontiers in Sustainability entitled "Circular Carbon Systems and Processes"
- Reviewers of major journals including International Journal of Hydrogen Energy, Chemical Engineering Science, Fuel, Applied Energy, Chemical Engineering Journal, Applied Thermal Engineering
- ORCID: 0000-0002-6698-4538
- Web of Science ResearcherID: AAD-5411-2020
- Scopus H-index: 17; Citations: 646; Google H-index:18;
- Key lecturer at the Venice International University (VIU) on the CO₂ capture and utilisation
- Member of the Advisory Committee of the project Audit – to – Measure
- Member of the working group #2 of the P4P of the A.SPIRE. The main objectives are: (i) Mid/long term sustainable carbon cycle for EU process industry; (ii) Update Process optimization & CCU issues (portfolio, gap)

PEER REVIEWED PAPERS

- Lisi, Nicola; Pasqual Laverdura, Umberto; Chierchia, Rosa; Luisetto, Igor; Stendardo, Stefano. A water cooled, high power, dielectric barrier discharge reactor for CO₂ plasma dissociation and valorization studies. Scientific Reports Open Access Volume 13, Issue 1 December 2023 Article number 7394
- Di Nardo, Antonio; Savuto, Elisa; Calchetti, Giorgio; Stendardo, Stefano. Computational particle fluid dynamics 3D simulation of the sorption-enhanced steam methane reforming process in a dual fluidized bed of bifunctional sorbent-catalyst particles. Powder Technology Volume 424 15 June 2023 Article number 118568
- Carbone, Claudio; Ferrario, Daniele; Lanzini, Andrea; Verda, Vittorio; Agostini, Alessandro; Stendardo, Stefano. Calcium looping in the steel industry: GHG emissions and energy demand. International Journal of Greenhouse Gas Control Open Access Volume 125 May 2023 Article number 103893
- Ferrario, Daniele; Stendardo, Stefano; Verda, Vittorio; Lanzini, Andrea. Solar-driven calcium looping system for carbon capture in cement plants: Process modelling and energy analysis. Journal of Cleaner Production Open Access Volume 39425 March 2023 Article number 136367
- Antonio Di Nardo, Giorgio Calchetti, Andrea Di Carlo, Stefano Stendardo. Sorption enhanced steam methane reforming in a bubbling fluidized bed reactor: Simulation and analysis by the CFPD method. Computers and Chemical Engineering 169 (2023) 108080;
- Hoxha A, Palone O, Cedola L, Stendardo S, Borello D. Development of a novel carbon capture and utilization approach for syngas production based on a chemical looping cycle. Fuel, ISSN: 0016-2361 (2022);
- Savuto, E. Stendardo, S. Di Carlo, A. Modelling and design of a novel calcination reactor integrated with a CO₂ capture process for intensified hydrogen production (2022) Fuel Processing Technology 231. DOI 10.1016/j.fuproc.2022.107253;
- Igor Luisetto, Stefano Stendardo, Sakkarapalayam Murugesan Senthil Kumar, Karupppiah Selvakumar, Jagadesh Kopula Kesavan, Giovanna Iucci, Umberto Pasqual Laverdura and Simonetta Tuti. One-Pot Synthesis of Ni_{0.05}Ce_{0.95}O₂-delta Catalysts with Nanocubes and Nanorods Morphology for CO₂ Methanation Reaction and in Operando DRIFT Analysis of Intermediate Species. Processes 2021, 9(11), 1899;
- Renato Baciocchi, Giulia Costa, Paola Librandi, Stefano Stendardo, and Daniela Zingaretti. Assessment of a Carbonation-Based CO₂ Utilization Process for the Valorization of CFBC Ash. Ind. Eng. Chem. Res. 2021, 60, 29, 10814–10825

- Andrea De Silvestri, Stefano Stendardo, Massimiliano Della Pietra, Domenico Borello. Decarbonizing cement plants via a fully integrated calcium looping-molten carbonate fuel cell process: Assessment of a model for fuel cell performance predictions under different operating conditions. *International Journal of Hydrogen Energy*. Volume 46, Issue 28, 21 April 2021, Pages 14988-15007
- Di Giuliano, Andrea; Gallucci, Katia; Di Carlo, Andrea; Stendardo, Stefano; Courson, Claire; Foscolo, Pier Ugo; Sorption enhanced steam methane reforming by Ni/CaO/mayenite combined systems: Overview of experimental results from European research project ASCENT, *Can J Chem Eng*. 2020;1–17.
- Luisetto, Igor; Mancini, Maria Rita; Della Seta, Livia; Chierchia, Rosa; Vanga, Giuseppina; Grilli, Maria Luisa; Stendardo, Stefano; CaO–CaZrO₃ Mixed Oxides Prepared by Auto–Combustion for High Temperature CO₂ Capture: The Effect of CaO Content on Cycle Stability, *Metals*, 10,6,750,2020, Multidisciplinary Digital Publishing Institute
- Cannone, Salvatore F; Stendardo, Stefano; Lanzini, Andrea; Solar-Powered Rankine Cycle Assisted by an Innovative Calcium Looping Process as an Energy Storage System, *Industrial & Engineering Chemistry Research*, 59,15,6977–6993,2020, American Chemical Society
- Librandi, Paola; Costa, Giulia; Stendardo, Stefano; Baciocchi, Renato; Carbonation of BOF Slag in a Rotary Kiln Reactor in View of the Scale-Up of the Wet Route Process, *Environmental Progress & Sustainable Energy*, 38,3, e13140,2019, "John Wiley & Sons, Inc. Hoboken, USA"
- Tania Antonini, Andrea Di Carlo, Pier Ugo Foscolo, Katia Gallucci, Stefano Stendardo. Fluidized bed reactor assisted by Oxygen Transport Membranes: Numerical simulation and experimental hydrodynamic study. *Chemical Engineering J*. Volume 377, 1 December 2019, 120323
- Vanga, G., Mirabile Gattia Daniele, Stendardo S., and Scaccia S. Novel synthesis of combined CaO-Ca₁₂Al₁₄O₃₃-Ni sorbent-catalyst material for sorption enhanced steam reforming processes. *Ceramics International*. (2019). Vol 45. Pp7594-7605
- Herce, Carlos; Cortés, Cristóbal; Stendardo, Stefano; Numerical simulation of a bubbling fluidized bed reactor for sorption-enhanced steam methane reforming under industrially relevant conditions: Effect of sorbent (dolomite and CaO-Ca₁₂Al₁₄O₃₃) and operational parameters, *Fuel Processing Technology*, 186,137-148,2019, Elsevier;
- Savuto, Elisa; Di Carlo, Andrea; Gallucci, Katia; Stendardo, Stefano; Rapagnà, Sergio; 3D-CFD simulation of catalytic filter candles for particulate abatement and tar and methane steam reforming inside the freeboard of a gasifier, *Chemical Engineering Journal*, 377,120290,2019, Elsevier
- Scaccia, Silvera; Vanga, Giuseppina; Gattia, Daniele Mirabile; Stendardo, Stefano; Preparation of CaO-based sorbent from coal fly ash cenospheres for calcium looping process, *Journal of Alloys and Compounds*, 801,123-129,2019, Elsevier
- Della Pietra, M; Santarelli, M; Stendardo, S; McPhail, S; Perez-Trujillo, Juan Pedro; Elizalde-Blancas, Francisco; Integration of a calcium looping process (CaL) to molten carbonate fuel cells (MCFCs), as carbon concentration system: First findings, *Journal of CO₂ Utilization*, 25,14-21,2018, Elsevier
- Di Nardo, A; Calchetti, G; Stendardo, S; Modeling and Simulation of an Oxygen-Blown Bubbling Fluidized Bed Gasifier using the Computational Particle-Fluid Dynamics (CPFD) Approach, *Journal of Applied Fluid Mechanics*, 11,4,825-834,2018,
- Paola Librandi, Giulia Costa, Ana Carolina Bello de Souza, Stefano Stendardo, Aderval Severino Luna, Renato Baciocchi. Carbonation of steel slag: testing of the wet route in a pilot-scale reactor. *Energy Procedia* 114 (2017) 5381 – 5392
- Herce, Carlos; Cortés, Cristóbal; Stendardo, Stefano; Computationally efficient CFD model for scale-up of bubbling fluidized bed reactors applied to sorption-enhanced steam methane reforming, *Fuel Processing Technology*, 167,747-761,2017, Elsevier
- Milena Morone, Giulia Costa, Evangelos Georgakopoulos, Vasilije Manovic, Stefano Stendardo and Renato Baciocchi. Granulation-Carbonation Treatment of Alkali Activated Steel Slag for Secondary Aggregates Production. *Waste and Biomass Valorization* (8)1381-1391 (2017)
- Marika Benedetti, Lorenzo Cafiero, Doina De Angelis, Alessandro Dell’Era, Mauro Pasquali, Stefano Stendardo, Riccardo Tuffi and Stefano Vecchio Cipriotti. Pyrolysis of WEEE plastics using catalysts produced from fly ash of coal gasification. *Frontiers of Environmental Science & Engineering*. (2017) Vol 11;
- Di Carlo, Andrea; Aloisi, Ilaria; Jand, Nader; Stendardo, Stefano; Foscolo, Pier Ugo; Sorption enhanced steam methane reforming on catalyst-sorbent bifunctional particles: A CFD fluidized bed reactor model, *Chemical Engineering Science*, 173,428-442,2017, Elsevier
- Stendardo, Stefano; Foscolo, Pier Ugo; Nobili, Mirko; Scaccia, Silvera; High quality syngas production via steam-oxygen blown bubbling fluidised bed gasifier, *Energy*, 103,697-708,2016, Elsevier
- Aloisi, Ilaria; Jand, Nader; Stendardo, Stefano; Foscolo, Pier Ugo; Hydrogen by sorption enhanced methane reforming: A grain model to study the behavior of bi-functional sorbent-catalyst particles, *Chemical Engineering Science*, 149,22-34,2016, Elsevier
- Tania Antonini, Katia Gallucci, Valentina Anzoletti, Stefano Stendardo, Pier Ugo Foscolo. Oxygen transport by ionic membranes: Correlation of permeation data and prediction of char burning in a membrane-assisted biomass gasification process. *Chemical Engineering and Processing - Process Intensification*. Volume 94, August 2015, Pages 39-52

- Herce, Carlos; Stendardo, Stefano; Cortés, Cristóbal; Increasing CO₂ carrying capacity of dolomite by means of thermal stabilization by triggered calcination, Chemical Engineering Journal, 262, 18-28, 2015, Elsevier
- T Antonini, P U Foscolo, K Gallucci and S Stendardo. Influence of temperature on oxygen permeation through ion transport membrane to feed a biomass gasifier. J. Phys.: Conf. Ser. 655 012034 (2015)
- Morone, Milena; Costa, Giulia; Stendardo, Stefano; Baciocchi, Renato; Characterization and density separation of coal gasification residues generated from the ZECOMIX research infrastructure, Fuel Processing Technology, 139, 204-215, 2015, Elsevier
- Zhenissova, Akbota, Micheli, Francesca, Rossi, Leucio, Stendardo, Stefano, Foscolo, Pier Ugo, Gallucci, Katia. Experimental evaluation of Mg- and Ca-based synthetic sorbents for CO₂ capture. Chemical Engineering Research and Design – (2014) vol 92
- Carlos Herce, Benedetta de Caprariis, Stefano Stendardo, Nicola Verdone and Paolo De Filippis. Comparison of global models of sub-bituminous coal devolatilization by means of thermogravimetric analysis. Journal of Thermal Analysis and Calorimetry volume 117, pages 507–516 (2014)
- Stendardo, Stefano; Andersen, Lars K.; Herce, Carlos; Self-activation and effect of regeneration conditions in CO₂-carbonate looping with CaO–Ca₁₂Al₁₄O₃₃ sorbent, Chemical Engineering Journal, 220, 383-394, 2013, Elsevier
- Stefano Stendardo, Luca Di Felice, Katia Gallucci and Pier Ugo Foscolo. CO₂ capture with calcined dolomite: the effect of sorbent particle size. Biomass Conversion and Biorefinery volume 1, Article number: 149 (2011)
- Stendardo, Stefano; Foscolo, Pier Ugo; Carbon dioxide capture with dolomite: a model for gas–solid reaction within the grains of a particulate sorbent, Chemical Engineering Science, 64, 10, 2343-2352, 2009, Elsevier
- Gallucci, Katia; Stendardo, Stefano; Foscolo, Pier Ugo. CO₂ capture by means of dolomite in hydrogen production from syn gas. International Journal of Hydrogen Energy Volume 33, Issue 12, June 2008, Pages 3049-3055
- Antonio Calabrò, Paolo Deiana, Paolo Fiorini, Giuseppe Girardi, Stefano Stendardo. Possible optimal configurations for the ZECOMIX high efficiency zero emission hydrogen and power plant Energy Volume 33, Issue 6, June 2008, Pages 952-962
- Saponelli, Roberto; Milani, Massimo; Montorsi, Luca; Rimini, Bianca; Venturelli, Matteo; Stendardo, Stefano; Barbarossa, Vincenzo; A novel Carbon Capture and Utilisation concept applied to the ceramic industry, E3S Web of Conferences, 116, 00069, 2019, EDP Sciences

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

FIRMA

Stefano Stendardo 