

Curriculum Vitae

Dr. Claudia Espro



Prof. Claudia Espro

Affiliation: (Department of Engineering, University of Messina, Messina, Italy)

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Interests: *heterogeneous catalysis; catalytic conversion of renewable biomass for the production of bulk chemicals, development of innovative catalytic materials for sensing applications.*

Claudia Espro received her MS Degree (110/110) in Industrial Chemistry at the University of Messina in 1998 with the thesis "Selective Oxidation of Propane into liquid oxygenates on superacid catalysts in a Three phase membrane reaction system.

From 1998 to 2000 she has been a postgraduate student of the school of Chemical Process Technologies at the University of Messina. In 2000 she obtained the postgraduate qualification in Chemical Process Technologies.

From 2003 to 2006 she has been a PhD fellow in Chemical Technologies and Innovative Processes at the University of Messina. In 2007 she received her PhD from the University of Messina with the dissertation: "Development and Optimization of innovative Membrane Based Systems for the catalytic Conversion of Natural Gas and Light Alkanes".

In 2003 she received a four years research contract for the project theme: "Development of innovative catalytic systems for the conversion of natural gas and light alkanes into valuable products" at the University of Messina. The research contract has been extended for a further four years, until 2012.

In 2012 she received a one year research contract for the project theme: "Characterization and catalytic reduction of liquid and gaseous pollutants". In 2013 she received a one year research contract for the project theme: "Technological and Processing Innovation for the Manufacturing Industry".

Since 2014 she is Assistant Professor of Chemical Foundations of Technologies (03/B2) working at the Engineering Department of the University of Messina.

From 2016 she is member of the Committee of the Doctoral Course in "Engineering and Chemistry of Materials And Constructions" of the University of Messina.

In 2017 she receives the National Scientific Qualification as Associate Professor of Chemical Foundations of Technologies (03/B2).

In 2017 she has been a visiting researcher at the University of Volos, Thessaly (Greece) performing research activity in the field of the environmental catalysis and delivering a series of lectures concerning the “design and development of new nanostructured catalysts for environmental purposes”.

Since 2014 she conducts her teaching activity in the “Laurea, BS” and “Laurea Magistrale, MS” Courses in Engineering at University of Messina. Claudia Espro conducts her research activity in the following areas: heterogeneous catalysis and development of novel catalytic green processes. In this area she is pursuing fundamental and applied research objectives. The main topic of her scientific activity lies in the catalytic conversion of natural gas and light alkanes into intermediates, fuels and chemicals of higher added value. Her scientific activity is also devoted to other research subjects related to the conversion of renewable biomass for the production of bulk chemicals. She has participated to various research projects in the framework of national and international research programmes and R&D activities of chemical and petrochemical industries.

Claudia Espro is Guest Editor of the Journal Nanomaterials, Special Issue “*Advanced Nanomaterials for sustainable energy, environment and sensing applications*”, Guest Editor of the Journal Catalysts, Special Issue “*Catalytic Processes for The Valorisation of Biomass Derived Molecules*” and Guest Editor of the Journal Materials, Special Issue “*Catalysis with Mesoporous Materials*”.

BIBLIOMETRIC INDICATORS (last 10 years)

She is author of about 129 papers, (63 articles on SCOPUS/WOS indexed International journals, 65 communication and conference proceedings at National and Int. Congresses; 1 patent) with an i-10 h-index 31 (Google-Scholar).

CURRENT POSITION

Claudia Espro is Assistant Professor Assistant Professor (RTD- B, ex Lgs 240/2010) of Chemical Foundations of Technologies (03/B2) and since 2014 she is with the Department of Engineering at the University of Messina.

FIELDS OF RESEARCH

heterogeneous catalysis and development of novel catalytic green processes. Catalytic conversion of natural gas and light alkanes into intermediates, fuels and chemicals of higher added value. Conversion of renewable biomass for the production of bulk chemicals. Development of innovative catalytic materials for sensing applications.

EDUCATION

1998 Industrial Chemistry MS Degree, University of Messina (I).

1998 Chemist Profession Qualification, University of Messina (I).

2000 Postgraduate Qualification in Chemical Process Technologies.

2007 Ph.D. Degree in Chemical Technologies and Innovative Processes, University of Messina (I).

2017 National Scientific Qualification as Associate Professor of Chemical Foundations of Technologies (03/B2).

UNIVERSITY POSITIONS

1998-2000 Postgraduate student at School of Chemical Process Technologies, University of Messina (I)

2003-2006 PhD Student in "Chemical Technologies and Innovative Processes", University of Messina (I).

2004-2014 Research Activity Contract, University of Messina (I).

2014-todate Assistant Professor of Chemical Foundations of Technologies (03/B2), University of Messina(I).

UNIVERSITY SERVICES

2005-2008 "Cultore della Materia S.S.D. CHIM /04 at the Faculty of Sciences, University of Messina (I).

2013-2014 "Cultore della Materia S.S.D. CHIM /07 at the Faculty of Engineering, University of Messina (I).

2016- todote Member of the Committee of the Doctoral Course in "Engineering and Chemistry of Materials and Constructions", the University of Messina (I).

TEACHING ACTIVITY

2004-2005 Teaching assistant of Fundamentals of Industrial Chemistry, University of Messina (I).

2005-2006 Teaching assistant of Chemical Production, University of Messina (I).

2007-2008 Contract Professor of Structure of Industrial Chemistry (2CFU), University of Messina (I).

2008-2009 Contract Professor of Organic Industrial Chemistry (6CFU), University of Messina (I).

2014-2015 Teaching assistant of Chemistry, University of Messina (I).

2015-todate Professor of Technologies for the reduction of pollutants (6CFU), University of Messina (I).

2016-todate Professor of Chemical Technologies for the energy production (6CFU), University of Messina (I).

2017-todate Professor of Chemical treatment of wastewaters (3CFU), University of Messina (I).

FUNDING AND PRIZE

- "Funding of University Research Basic Activities" (FFABR Unime) 2019
- Scientific Leader of the Research Project "PRA 2004 Young Researcher "Development of Innovative catalytic Systems for the selective oxidation of cyclohexane to cyclohexanol and cyclohexanone", funded by MIUR (2004-07)

RESEARCH ACTIVITY

2020-todate Unity member of the Research Project P.O. FESR SICILIA 2014/2020 08RG7211000341 -"PKU-Smart-Sensor - Realization and validation of a Point-of-Care system for the home-testing monitoring of phenylalanine in patients suffering from hyperphenylalaninemia".

2020-todate Unity member of the Research Project P.O. FESR SICILIA 2014/2020 08ME7219090182 - "SIMARE Innovative Solutions for Energy Saving Vessels"

2018-todate Unity member of the Research Project PON 2014-2020 : ARS01_00697 - AGM for CuHe - New generation materials for the restoration of Cultural Heritage: a new approach to fruition.

2018-todate Unity member of the Research Project PON 2014-2020 ARS01_00293- THALASSA - TecHnology And materials for safe Low consumption And low life cycle cost veSSels And crafts

2018-todate Unity member of the Research Project PON 2014 - 2020 B66C18000360005 -" Development of advanced technologies and systems for car safety through platforms ADAS – ADAS+"

2014-18 Unity Member in National PON Ricerca e Competitività 2007-2013 (PON 01_02309/4 - CUP B44B14000060008) Progetto "MAGINOT- Day and Night Environmental Monitoring"

2012-2015 Unity Member in National PO FESR 2007-2013-4.1.2. INTEP: Technical Innovation for the manufacturing industry (ATP/S/R/9423/J41J12000110002)

2012-2015 Unity Member in National PON 2007-2013 ; Progetto PON02_00153_2849085 (CUP B61C12000840005) "STI-TAM: Development of Innovative technologies for the treatment of fluid wastes from shipping activities and for marine environment protection."

2012-2015 Unity Member in National PON 2007-2013, Asse 1: "Sostegno ai mutamenti strutturali", Obiettivo Operativo 4.1.1.4: "Center for Sustainable Energy, Environment and Mobility (CSEEM)"

2006-2007 Unity member of the Research Project PRA 2007 "Innovative catalytic technologies for the conversion of Natural gas into oxygenated valuable products (ORME07C84N), University of Messina

2005-2006 Unity member of the Research Project PRA 2006 "Innovative catalytic technologies for the conversion of Natural gas into hydrogen and syngas(ORME053885) , University of Messina

2003-2005 Unity member of the Research Project PRIN 2003 " Innovative catalytic technologies for the production of hydrogen and syngas from biomass , CDR and natural gas (Cod: 2003031189)

2003-2006 Unity member of the Research Project FIRB 2001 "Electric propulsion vehicle for traction vehicles: study of a membrane reformer for the production of hydrocarbons from hydrocarbons (RBAU01K4HJ_003)

2002-2004 Unity member of the Research Project PRIN 2002, "Selective conversion of light hydrocarbons (C1-C3) in new membrane catalytic systems (cod:20020331847_00)

2001- 2002 Unity member of the Research Project PRA 2001 "development of thin layer catalysts for the partial oxidation of methane to formaldehyde "(ORME029790).

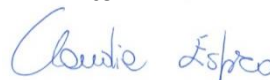
1999-2001 Unity member of the Research Project COFIN '99 " New membranes for the development of catalytic membrane reactors (cod:9903055971_003)"

PATENT

EUROPEAN PATENT n. 3609983 (mention of the grant published in the European Patent Bulletin 20/42 of 14/10/2020) title: "PROCESS FOR SOLUBILIZING RESIDUES OF CITRUS FRUIT"

Messina, 10/11/2020

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Claudia Espro