

CURRICULUM VITAE

FORMATO EUROPEO/EUROPEAN
FORMAT

PERSONAL INFORMATION

Name Surname Alberto Figoli
Place and Date of birth La Spezia, 26/12/1970
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Actual Position Director of the Institute on Membrane Technology

ACADEMIC AND RESEARCH ACTIVITIES

15 March 1996 Degree in Food Science and Technology at the Agriculture University of Milan. Title of thesis "oil extraction from vegetal matrixes through the use of supercritical CO₂".

1 May – 20 Dec. 1996 Working experience at Quest International Nederland B.V. (ICI), Naarden (NL), Process Research Group: Setting of a pilot plant for aromatic compounds extraction using the pervaporation membrane technology.

20 May 1997
- 26 Oct 2001 PhD in Chemical Technologies at Membrane Technology Group, University of Twente, Enschede (NL). Title of the thesis on "Synthesis of nanostructured mixed matrix membranes for facilitated gas separation".

14 June -24 July 2005 Stage at "Environmental Protection Agency of United States (USEPA)" presso "Sustainable Technology Division, Cincinnati (USA)" on "Volatile Organic Compounds (VOCs) removal using a novel asymmetric membrane by pervaporation" nell'ambito dello "Short Term Mobility Programme" funded CNR.

01-28 February 2004 Stage at "Environmental Protection Agency of United States (USEPA)" at Sustainable Technology Division, Cincinnati (USA) on "Aroma removal using a novel ceramic-polymeric membrane material by pervaporation" within "Short Term Mobility Programme" funded by CNR

1 Oct. -1 Dec. 2010 "Secondment at GVS, SpA in Bologna, within the EU project "Implementation of Membrane Technology to Industry (IMETI). Work on "Preparazione e caratterizzazione di membrane innovative per la rimozione di Composti Organici Volatili (VOCs)".

1 Sept-5 Nov. 2011 "Secondment at GVS, SpA a Bologna, within the EU project "Implementation of Membrane Technology to Industry (IMETI). Work on "Preparazione e caratterizzazione di membrane ibride per la rimozione di Composti Organici Volatili (VOCs)".

1 Feb 2015-1Feb 2019 Elected as Member of European Membrane Society (EMS), Awards and Price Responsible; EMS Secretary.

Research- related skills

Alberto Figoli is expert in the field of membrane technology, particularly in *membrane preparation and characterisation* and *application in environmental filed*. He is working on the preparation and characterisation of novel elastomeric and glassy membranes, both in flat and hollowfiber configuration, which are applied to the removal of VOC from water by pervaporation or water treatment by membrane contactors. Furthermore, he is also involved on polymeric capsules preparation by membrane process which aim to tailor their

morphology to the release of the species of interest for food packaging, chemical and environmental applications. He is also working on pervaporation applied to the removal of contaminants (i.e. VOC) from water and aroma recovery from natural matrix (fruit or vegetables).

Recent projects

- European Project (Horizon2020) for the research of “Integrated aquaculture based on sustainable water recirculating system for the Victoria Lake Basin”. Period: June 2016– June 2019, Position in the project: “ITM Scientific Responsible”.
- Research Project Agreement between ITM-CNR and Solvay Specialty Polymer for the research: “Hydrophobic flat membrane preparation for membrane contactors and pervaporation application”. Period: november 2012- December 2016. Position in the project: “Scientific Coordinator”.
- European Project (FP7) for the research of “Nanotechnology Application in Water Deasalisation (NAWADES)”. Period: September 2012– September 2016, Position in the project: “ITM Scientific Responsible”.
- Research project Agreement between ITM-CNR and IPM-filtri for the research: “Membrane preparation for water treatment”. Period: november May 2012- May 2013. Position in the project: “Scientific Coordinator”.
- European Project (FP7) for the research of “Biotechnology for Africa’s sustainable water supply (WATERBIOTECH)”. Period: September 2011– September 2013, Position in the project: “ITM Scientific Responsible”.
- European Project (FP7) for the research of “Development of the next generation membrane bioreactor system (BIONEXGEN)”. Durata progetto: September 2010 – May 2014, Position in the project: “ITM Scientific Responsible”.
- European Project (FP7): Marie Curie People for the research of ”Preparation of ionic liquid microcapsule membranes loaded and their application in NMVOCs removal”. Period: July 2010 – july 2012 Position in the project: “Scientific Coordinator”.
- Agreement between ITM-CNR and Chemical Engineering School in Baghdad (Iraq), “Memorandum of Understanding”. Period: Starting in July 2010. Position in the project: “Scientific Coordinator”.
- Agreement between ITM-CNR and Dipartimento di Scienze Farmaceutiche dell’Università della Calabria (Prof. Bartolo Gabriele) for research: “Study on synthesis and characterisation of polymerisable surfactants”. Period of the project: March 2011 - March 2012. Ruolo nell’ambito della convenzione: “Scientific Coordinator”.
- European Project (FP7) Erasmus Mundus External Cooperation Window, Lot 13: “EURINDIA”. Period: September 2009 – September 2013 Position in the project: “ITM Scientific responsible” . Period: September 2010- September 2014.
- Agreement between ITM-CNR e King Abdulaziz City for Science and Technology (KACST) for the research: “Hydrophobic membrane preparation for membrane contactors application”. Period: Spetmber 2009 – September 2012. Position in the project: “Key expert”.
- Agreement between ITM-CNR and Alteco Srl for the research: “Applicazioni di contattori a membrana nel settore medicale”. Period December 2006-December 2007. Position in the project: “key expert”.
- Progetto finanziato dalla Comunità Europea: “Membrane-based desalination: an integrated approach (MEDINA)”. Durata progetto: ottobre 2006 – gennaio 2010. Ruolo nell’ambito del progetto: partecipante. Durata dell’incarico: ottobre 2006 – gennaio 2010.
- European Project (FP7): “Promotion and focussing of current research activities of Membrane Technology in Water Treatment in the Mediterranean Region (PROMEMBRANE)”. Period of the project: August 2006- August 2008. Position in the project: “key expert”.

- European Project (FP6), Asia Pro Eco programme: “Innovative Water Treatment (INNOWA)”. Period of the project: April 2005- April 2007. Position in the project: “principal investigator”.
- Network of excellence “Nano-technologies and nano-sciences, knowledge-based multifunctional materials, and new production processes and devices (Nanomempro)”, European Project in FP6. Period of the project: September 2004- August 2008. Position in the network: WP7 ITM-CNR responsible “Characterisation of membrane function”,
- Project funded by MIUR, cluster 9: “Nuovi sistemi d’imballaggio in materiale polimerico a ridotto impatto ambientale”. Period of the project: 2000 - 2003. Final technical report: A. Figoli, A. Torchia, G. Clarizia, E. Drioli “Nuovi sistemi d’imballaggio in materiale polimerico a ridotto impatto ambientale” del 17/07/03. Position in the project: participant.

SCIENTIFIC ACITIVITY

h-index 29 (Scopus); 32 (Google scholar)

Articles Alberto Figoli published more than 160 peer-review papers on membrane science and technology

Some selected newest articles :

1. C. Ursino, E. Di Nicolò, B. Gabriele, A. Criscuoli, A. Figoli, Development of a novel perfluoropolyether (PFPE) hydrophobic/hydrophilic coated membranes for water treatment, *Journal of Membrane Science*, 581 (2019) 58-71
2. T. Marino, F. Galiano, A. Molino, A. Figoli, New frontiers in sustainable membrane preparation: Cyrene™ as green bioderived solvent, *Journal of Membrane Science*, 580 (2019) 224-23
3. R. Castro-Muñoz, J. Buera-González, Ó. de la Iglesia, F. Galiano, V. Fíla, M. Malankowska, C. Rubio, A. Figoli, C. Téllez, J. Coronas, Towards the dehydration of ethanol using pervaporation cross-linked poly(vinyl alcohol)/graphene oxide membranes, *Journal of membrane science* 582 (2019) 423-434
4. C. Ursino, E. Di Nicolò, B. Gabriele, A. Criscuoli, A. Figoli, Development of a novel perfluoropolyether (PFPE) hydrophobic/hydrophilic coated membranes for water treatment, *Journal of Membrane Science*, 581 (2019) 58-71
5. G. Bagnato, A. Figoli, C. Ursino, F. Galiano, A. Sanna, A novel Ru–polyethersulfone (PES) catalytic membrane for highly efficient and selective hydrogenation of furfural to furfuryl alcohol, *Journal of Materials Chemistry A* 6 (12) (2018) 4955-4965
6. F. Galiano, I. Friha, S. A. Deowan, J. Hoinkis, Y. Xiaoyun, D. Johnson, R. Mancuso, N. Hilal, B. Gabriele, S. Sayadi, A. Figoli, Novel low-fouling membranes from lab to pilot application in textile wastewater treatment, *Journal of Colloid and Interface Science*, 515 (2018) 208–220
7. S. A. Deowan, F. Galiano, J. Hoinkis, D. Johnson, S.A. Altinkaya B. Gabriele, N. Hilal, E. Drioli, A. Figoli, Novel low-fouling membrane bioreactor (MBR) for industrial wastewater treatment, *Journal of Membrane Science*, 510 (2016) 524-532
8. A. Figoli, C. Ursino, F. Galiano, E. Di Nicolò, P. Campanelli, M.C. Carnevale, A. Criscuoli, Innovative hydrophobic coating of perfluoropolyether (PFPE) on commercial hydrophilic membranes for DCMD application, *J. of Membrane Science* 522 (2017) 192-201
9. F. Galiano, A. Figoli, S. A. Deowan, D. Johnson, S. A. Altinkaya, L. Veltri, G. De Luca, R. Mancuso, N. Hilal, B. Gabriele, J. Hoinkis, A step forward to a more efficient wastewater treatment by membrane surface modification via polymerizable bicontinuous microemulsion, *J. of membrane science* 482 (2015) 103-114

Patents

- A. Figoli, F. Galiano, G. Barbieri, A. Brunetti, L. Giorno, B. Gabriele, R. Mancuso, C. S. Pomelli, C. Chiappe, Y. Itami, Innovative polymerised ionic liquid membranes for gas separation, Patent n. 102018000003374, filed on 08/03/2018.
- A. Figoli, J. Hoinkis, B. Gabriele, G. De Luca, F. Galiano, S. A. Deowan, Bicontinuous microemulsion polymerized coating for water treatment, Publication date 02/04/2013; WO 2013/041335
- S. Sikdar, K. Dutta, J. Burkle, A. Figoli, E. Drioli, Fabrication of an asymmetric membrane constructed of a hydrophobic elastomeric polymer for separation applications, US filed in Nov. 2006 and published in the United States of America, May 2008. Requested extension in Europe, 13th November 2007, US 07425717.1
- A. Figoli, J. Hoinkis, B. Gabriele, De Luca Giorgio, F. Galiano, S. Deowan, Bicontinuous Microemulsion Polymerized Coating For Water Treatment, Patent filed on 27/09/2013; WO2014/EP070603, 2014.

Books

- A. Figoli, A. Cassano, A. Basile, Membrane Technologies for Biorefineries, 1st Edition, Woodhead Publishing, Elsevier (2016) ISBN9780081004517
- A. Basile, A. Figoli, M. Khayet, Pervaporation, Vapour Permeation, Membrane Distillation: Principles and Applications, Woodhead Publishing, Elsevier (2015) ISBN9781782422563
- A. Figoli, J. Hoinkis, J. Bundschuh, Membrane Technologies for Water Treatment: Removal of Toxic Trace Elements with Emphasis on Arsenic, Fluoride and Uranium, CRC Press, (2016) ISBN9781138027206
- A. Figoli, J. Hoinkis, S. Altinkaya, J. Bundschuh, Application of Nanotechnology in Membranes for Water Treatment, , CRC Press, (2017) I 9781138896581
- A. Figoli, A. Criscuoli, Sustainable Membrane Technology for Water and Wastewater Treatment, Springer (2017) ISBN9789811056239
- A. Basile, A. Cassano, A. Figoli, Renewable Energy Integrated with Membrane Operations, Elsevier (2018) 9780128135464

Book Chapters

More than 20 chapters have been published in International Books dealing with membrane science and Technology

Honours and awards

- Alberto Figoli, 1st price for the Scientific Productivity 2006 in “Food Packaging Research – GSICA Awards”, given by Prof. Piergiorgio, President of the Italian Scientific Group in Food Packaging, Catania, 22 June 2006.
- Alberto Figoli, Best Article selected among 14000 scientific articles to represent at CNR headquarters the Environmental Section in the Highlights of CNR publications for the years 2010 and 2011 by CNR, July 2011 and 16 July 2012, CNR headquarter, Rome. Selected article: A. Figoli, A. Cassano, A. Criscuoli, S. Mozumder, T. Uddin, A. Islam, E. Drioli, Influence of operating parameters on the arsenic removal by nanofiltration, Water Research 44 (2010) 97-104.
- Alberto Figoli, invited to present at CNR Headquarter in Rome, as representative of the macroarea “Environment”, the work selected within the Highlights of CNR for the years 2010/2011: A. Figoli, A. Cassano, A. Criscuoli, M. S. I. Mozumder, M. T. Uddin, M. A. Islam, E. Drioli, Influence of operating parameters on the arsenic removal by nanofiltration, Water Research 44 (2010) 97-104. Presentation at CNR, Sala Marconi, Piazzale Aldo Moro 7, Rome: July 2012.
- Alberto Figoli, invited to present at CNR Headquarter in Rome, as representative of the macroarea “Water Sustainability”, the work selected within the Highlights of CNR for the years 2009/2010: A. Figoli, A. Cassano, A. Criscuoli, M. S. I. Mozumder, M. T. Uddin, M. A. Islam, E. Drioli, Influence of operating parameters on the arsenic removal by nanofiltration, Water Research 44 (2010) 97-104. Presentation at CNR, Sala Marconi, Piazzale Aldo Moro 7, Rome: 27 July 2011.

Referee activity

Referee for several international journals: Water Research, Journal of Membrane Science, Hazardous Material Journal, J Phys Chemistry B, Separation Science and Technology, Desalination, Journal of Chemical Technology and Biotechnology, Separation and Purification, etc.

Invited Chairman

Alberto Figoli has been invited as chairman in more than 10 Conferences

- Supervising and mentoring activities** Supervisor of more than 50 undergraduate and Master students in Italy and Europe (1998-2017)
Supervisor of 10 PhD students in the field of Membrane Technology
- Conference proceedings** More than 100 conference proceedings including oral and poster presentations
- Membership** - Member of the European Membrane Society (EMS).
- Member of the Italian Food Packaging Society (GISCA).

Albino Epifani

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CONSENSO**

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Albino Epifani

(barrare la casella) **Si, acconsento**