

Curriculum Vitae

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(google scholar H-index 74, March2025)

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Nationality: German/Brazilian



Education

1985-1986 Postdoc (Alexander von Humboldt Fellow), Johannes Gutenberg University, Mainz, Germany

1992 Livre Docencia ("Habilitation"), University of Campinas (UNICAMP), Brazil

Feb 1985 Doctor of Science, Chemistry, University of Campinas (UNICAMP), Brazil

Dec 1981 B. Sci. Technological Chemistry, University of Campinas (UNICAMP), Brazil

Dec 1980 B. Sci. Chemistry, University of Campinas (UNICAMP), Brazil

Previous Academic Appointments and Experience

2021-2024 KAUST Vice Provost for Faculty and Academic Affairs

2012-2017 Associate Dean, Division of Biological and Environmental Science and Engineering (BESE) at KAUST, Saudi Arabia

2012-2013 Associate Professor of Environmental Science and Engineering at KAUST

2010-2012 Associate Professor of Chemical and Biological Engineering at KAUST

1997-2009 Scientist, Head of Department of Membranes for Renewable Energy, Director of the Helmholtz Virtual Institute Asymmetric Structures for Fuel Cell, Helmholtz Association, Germany

1992-1997 Associate Professor, Physical Chemistry, University of Campinas, Brazil

1989-1997 Visiting scientist at GKSS (3-6 months/year), Helmholtz Research Center, Germany

1990 (3 months sabbatical) Visiting scientist at the Tokyo Institute of Technology, Tokyo, Japan

1988 (3 months sabbatical) Visiting scientist at Max-Planck-Institut für Polymerforschung, Mainz, Germany

1987-1992 Assistant Professor, Physical Chemistry, University of Campinas, Brazil

1986-1987 Senior Scientist, Pirelli Research Center

Awards, honors, scholarships, advisory boards

Elected Fellow of the TWAS, The World Academy of Sciences, effective from January 2025, “for outstanding achievements in chemistry, especially in the development of polymeric materials and membranes for sustainable separations in the chemical, pharmaceutical and petrochemical industry, and for water purification, to enable the implementation of zero-discharge, low carbon footprint economy; and dedication to higher education and to the training of a generation of scientists in Brazil, Germany, and Saudi Arabia.”

2023 L’Oréal-UNESCO *For Women in Science* Laureate for Africa and the Arab States, for the International Awards in Physical Sciences, Mathematics and Computer Science. International Award recognition for “outstanding achievements in Chemistry, which have contributed to the advancement of scientific knowledge worldwide”.

Honorary Member of European Membrane Society since September 2024.

Honor for a lifetime of dedication and contributions to the fundamentals and application of membrane surface science technology, Separations Division, American Industrial Chemical Engineering (AIChE), 3 honor sessions, November 2022, Phoenix, USA

LEWAS Award (Leading Award for Women in Energy Sector) for Academic Achievements, 2020

Fellow of the Royal Society of Chemistry UK

Fellow of the Academy of Science, State of Sao Paulo, Brazil

Postdoctoral Fellow of Alexander von Humboldt Postdoctoral (1985-1986)

Brazilian Research Council CNPq scholarship for scientific excellence (1990-1997)
Master/ PhD Scholarship Sao Paulo State Foundation FAPESP, Brazil (1981-1985)

Member of Advisory Board:

Chair of the Independent Advisory Board of the EPSRC-funded project SynHiSel (<https://synhisel.com>), UK, since 2022. The project’s consortium is constituted by prominent membrane groups in UK (Imperial College, Queen Mary University, Edinburgh, Manchester, New Castle, Bath University)

Member of the Advisory Board of the Barrer Membrane Center, Imperial College London, UK, since 2016

Member of the board of directors of scientific societies:

Director / Vice-President Brazilian Polymer Society (1993-1997)
Director council of the European Membrane Society (2005-2009)
Board of directors of the European Membrane House (2008-2010)

Member of Editorial Board

Associate Editor of ACS Applied Polymer Materials (from March 2022)

Member of the Editorial Board of the Journal of Membrane Science

Member of the Editorial Board of Scientific Reports (Nature Publishing) (until 2022)

Activity as Reviewer

Referee of scientific journals:

Science, Nature Materials, Nature Communication, RSC Advances, Macromolecules, Polymer, Macromolecular Physics and Chemistry, Journal of Polymer Science, Journal of Applied Polymer Science, Journal of Membrane Science, Desalination, Fuel Cells, International Journal of Hydrogen Energy, Journal of Physical Chemistry, Cellulose, ACS Environmental Science and Technology, ACS Industrial and Engineering Chemistry Research, Advanced Materials, etc.

Member of the jury of the Falling Walls Science award 2024 and 2025, Germany

Member of the jury of the L'Oreal UNESCO for Women in Science 2025

Reviewer of grants:

Evaluator in the 6th and 7th European Framework Program (Nanotechnology and Energy), European Commission, 2005, 2006, 2009, 2016, ERC 2023.

Strategic committee for evaluation of scientific activities of VITO Institute, Belgium in the field of Membrane Technology 2006; Evaluator for the Research Council KU Leuven, 2012; Evaluator for the Swiss Science Foundation, 2012, Evaluator for the Environment and Water Industry Programme Office (EWI), Singapore, 2012; Evaluator for the Serrapilheira Foundation, Brazil, 2017; Evaluator German-Israeli Foundation, 2019, Dutch Research Council 2019/2020, 2024.

Organization of conferences and workshops

Brazil: Co-organizer of the 2nd Brazilian Polymer Conference (1993), Sao Paulo; 2nd Ibero American Congress on Membrane Technology (1994) Rio de Janeiro; Ibero-American Polymer Conference (1994), Gramado.

Europe: Coordinator of the European Marie Curie “Conferences and Training on Membrane Technology” project for organization of summer schools of the European Membrane Society (EMS) (2006-2009); Co-organizer of EMS workshops in Toulouse, France, and Geesthacht, Germany, 2002, 2004.

USA: Co-organizer of the North American Membrane Society (NAMS) Workshops on “Emerging Membrane Materials and Manufacturing Methods”, Honolulu 2008, Charleston 2009, Washington 2010, Las Vegas 2011, New Orleans 2012, Boise 2013, Houston 2014, Boston 2015; San Francisco 2017; Lexington 2018; MRS Spring Meeting 2017 – Symposium “Emerging Membrane Materials for Sustainable Separations”

Canada: Co-organization of the XXIX Interamerican Congress of Chemical Engineering as part of the 68th Canadian Chemical Engineering, Toronto, Canada (October 2018);

Saudi Arabia: Chair of KAUST Winter Enrichment Program WEP2013; Co-Chair of WEP2012; Organiser of the Symposium Sustainable Energy for All, 2012; Organiser of the Symposium Women in Science 2012; Chair of the “European Membrane Society – Middle East School on Membrane Technology for Sustainable Water Desalination and Reuse”, 2012; Chair of the KAUST Workshop of Membrane Science and Technology for Water, November 2014; Co-chair of the Workshop on Water, Ministry of Education, Riyadh, Saudi Arabia, April 2018; Co-chair of the KAUST Workshop “Nano-enabled Water Technologies: Opportunities and Challenges” January 27-30th, 2019.

Member of the S20 committee, 2020 (Task forces Circular Economy and Connecting the Dots); Co-chair of Women in Science (WISE) Workshop, March 2021, KAUST; Co-chair of Women in Science (WISER) Workshop, March 2022, KAUST; Chair of Organic Solvent Nanofiltration OSN2024, March 2024, KAUST.

Competitive awarded research grants

Brazil (1990-1997)

1990-1997 Grants (total > 1 Mio USD) of Brazilian Research Council (CNPq) and Sao Paulo State Foundation (FAPESP), DAAD-Probral, Brazil-European Commission

Germany (1999-2009)

2000-2003 Coordinator of the Helmholtz Strategic Project “Membranes and Electrodes for Direct Methanol Fuel Cell”, in collaboration with the German Aerospace Center (DLR). (total 3.5 Mio Euro)

2001-2004 DFG project New Membranes for DMFC (support of 1 PhD for 3 years)

2004-2008 Head of the Helmholtz Virtual Institute “Asymmetric Structures for Fuel Cell”, in collaboration with DESY (Hamburg Synchrotron), FZJ (Research Center Jülich) and Universities of Kiel, Ulm and Hamburg-Harburg (TUHH) (total 1 Mio Euro)

2007-2011 Partner in the Helmholtz-Allianz MEM-BRAIN coordinated by FZJülich for the development of polymeric membranes for CO₂ separation in coal power plants.

2008-2009 Coordinator of the NRC (Canada)-Helmholtz Collaboration “Development of membrane-electrode-assemblies for fuel cell operation at high temperature and low humidity conditions”; Collaboration with Industrial Materials Institute (Boucherville), Fuel Cell and Hydrogen Technologies (Vancouver) (total 0.5 Mio Euro)

2006-2007 Alexander von Humboldt on membranes for fuel cell (host of postdoc)

2009 Alexander von Humboldt on materials for hydrogen storage (host of postdoc)

2009 DAAD on membranes for fuel cell (PhD student)

2001-2005 Project on membranes for fuel cell (modelling of processes and membrane characterization) with the University of Porto, supported by FCT-Portugal (PhD student).

2002-2005 Project on membranes for fuel cell in collaboration with the Universidade Federal do Rio de Janeiro, supported by the MCT-Brazil (postdoc).

2003 Project on membrane development in collaboration with the Universidade Federal de Santa Catarina, Brazil, supported by CAPES-Brazil (PhD).

2006-2007 Project on fuel cell membranes in collaboration with the Universidade Estadual de Santa Catarina, Joinville, Brazil, supported by CAPES-Brazil (postdoc)
2006-2007 Project on fuel cell in collaboration with the University of Chulalongkorn, Bangkok, Thailand (PhD).
2007 DBU Project on hydrogen technology, University of Letland (PhD).

European Projects (2002-2009)

as Coordinator:

2004-2008 Coordinator of the European Strategic Targeted Project „Compact Direct (M)ethanol Fuel Cell for Portable Applications“ (MOREPOWER) (total 4 Mio Euro). Collaboration with 4 European industries (Fiat, Johnson Matthey, Solvay, Nedstack), 2 research centers (CNR-ITAE, IMM) and 1 university (Politecnico di Torino). The project aimed the development of new membranes and catalysts for fuel cells operating with ethanol and methanol, modelling and miniaturization. The final deliverable was a 500 W compact fuel cell prototype.

2002-2006 Coordinator of the European Marie Curie „Training Site on Membrane Technology“ for exchange and training of European PhD students on membrane science (total >0.5 Mio Euro)

2006-2009 Initiator and co-coordinator of the European Marie Curie Conferences and Training on Membrane Technology for the organization of 5 summer schools and workshops on new materials and membrane technology for PhD students and young scientists. (total 0.3 Mio Euro)

as Partner in:

2002-2006 European Project Ceramic Membranes for Hydrogen Separation (5th European Framework Program) (membrane development for gas separation in the petrochemical industry) coordinated by Shell.

2007-2008 European Coordination Action CARISMA (high temperature fuel cell polymeric membranes) coordinated by CNRS, Montpellier, France. Topic: coordination of the activities on membranes and catalysts for fuel cell in Europe.

2009 European project SOLHYDROMICS (“Nanodesigned Electrochemical Converters of Solar Energy into Hydrogen based on Natural Enzymes or their Mimics”)

Coordinated by Politecnico di Torino for the development of biomimetic systems for the production of hydrogen by “water splitting”.

Saudi Arabia, KAUST

(in addition to KAUST baseline funding)

KAUST Seed-Fund Award “PQ03-094-I isoporous membrane”, US\$248, starting in 2011, 30 months (co-PI: Suzana Nunes, PI: Klaus-Viktor Peinemann)

Geometric Modeling and Scientific Visualization Collaborative Award, "Visualization and Pore Tuning of Asymmetric Membranes", start Dec 2011, 3 years project, 100 kUS\$/year (PI: Suzana Nunes, Co-PI: Markus Hadwiger, Ganesh Sundaramoorthi, Victor Calo)

KAUST-IBM-Program Simulation of pore formation in membranes by self-assembly (PI: Suzana Nunes, Co-PI: Jed Pitera (IBM)), Total Award Amount: US\$200000, US\$ 50000 own base budget contribution, start Jan 2012, 1 year

KAUST Workshop European Membrane Society – Middle East School on Membrane Technology for Sustainable Water Desalination and Reuse”, 2012

SRI-Numerical Porous Media (NumPor), start 2012, 3 years (1 PhD student)

Coordinators: Yalchin Efendiev (Texas A M University), Victor Calo, Co-PI Suzana Nunes, Markus Hadwiger, Ganesh Sundaramoorthi

Innovation Award Proposal "Interaction Between IAMCS and NumPor on Simulation of Complex Processes in Porous Media", Texas A & M University (collaboration with Yalchin Efendiev and Victor Calo). Total Award Amount: US\$ 40 000, 2012, 1 year

AEA Proposal “Primary colonizers eco-physiology in submerged UF membranes for wastewater treatment and reuse: effect of cleaning and composition of membrane,”

PI: Pascal Saikaly (KAUST) and W. Liu (Illinois), Co-PI: Suzana Nunes. Total Award US\$ 530 000 (KAUST+Illinois)

Competitive Research Grant (CRG-2): Charge-mosaic and biomimetic block copolymer membranes Total Award US\$ 800 000 (cooperation with K. Peinemann and N. Hadjichristidis) 2013-2016

KAUST-ARAMCO Project Membrane Distillation for Produced Water 2014-2016

KAUST Workshop on Membrane Science and Technology for Water (CS4), November 2014, total US\$ 600,000.00

Competitive Research Grant 2017-2021 (collaboration with Prof. Andrew Livingston, Imperial College, London): Ultra-stable membranes for molecular separations in high temperature solvent systems, total US\$ 1,050,000

CARF-AMPM Jul2017-Jun2018 Nanofiltration block copolymer composite membranes

Wedge Fund FCC/1/1972-24-01, (Collaboration with K. Peinemann and N. Hadjichristidis, total US\$ 40,000)

CARF-WDRC Jul2018-Jun2019 Membrane manufacture, as part of the project coordinated by P. Saikaly (“System scale-up of biotechnologies for agriculture), FCC/1/1971-33-01/FCC/1/1971-32-01 US\$ 160,000.

KAUST-KSU Project “Multilayer integrated polymeric membranes”, 2018-2021 (collaboration with Nikos Hadjichristidis and Gilles Lubineau at KAUST and Hamad F. Alharbi, Mohammad R. Karim, Nabeel H. Alharthi, Sajjad Haider, Abdulaziz A. Al-Ghyamah, Mahir M. Alrashid at KSU), total US\$ 160,000/year.

KAUST-Cooling Initiative, 2019-2022, project “Advanced Membrane Development and Application for Membrane Desiccant Dehumidification Systems Cooling Initiative (REP/1/3988-06-01); Porous “foams” tailored for confinement of emerging solid adsorbents” (REP/1/3988-09-01), 2019-2022.

AMPM-CCF High-performance porous polymeric membranes and supports (FCC/1/1972-47-01), US\$ 80,000/year, 2019-2022

AMPM-CCF Polymerized macrocycles for membrane applications (collaboration with Nivine Khashab)

AMPM-CPF High-performance hollow fibers with optimum fluid dynamics for air dehumidification and liquid separation (collaboration with Matthias Wessling's group, RWTH Aachen), US\$ 100,000

Competitive Research Grant 2019 “3D Image of porous polymeric membranes by in-situ advanced methods (collaboration with F. Meneau, Sirius Synchrotron, Brazil),

Total US\$ 400,000.

Competitive Research Grant 2020 “Development of porous electrocharged absorbent system to enhance virus concentration and detection in water matrices” (collaboration with Peking Hong, KAUST), US\$ 200,000.

Translation Grant “Sustainable Polymeric Membranes for Molecular Separations” (KAUST, total US\$ 1,000,000)

Tight emulsions (ARAMCO 2022, 75kUSD, 1 year)

Nanofiltration membranes with anchored binding groups for selective ions harvesting (SWCC, total US\$ 350,000, 3 years from 2023)

Opportunity grant “Sustainable membrane fabrication” 200kUSD, 18 months, start Jan 2024.

Teaching

Brazil

University of Campinas (1987-1997)

For undergraduate students (Chemistry and Chemical Engineering):

1. General Chemistry (1988, 1995)
2. Applied Chemistry (1991, 1993, 1994, 1996)
3. Experimental physical chemistry (1989, 1990, 1991, 1992, 1993, 1994)

For PhD and Master students (Chemical Science):

4. Introduction in polymer science (1991, 1993)
5. Physical chemistry of polymer solutions (1987, 1988, 1989, 1996)
6. Characterization of polymers (1992)
7. Polymer Blends (1993)
8. Microscopy (1991, 1992, 1993)

Implementation of new lectures for the industry:

9. Polymer Center Initiative 1992-1997: courses for the industry in the field of polymer materials (Introduction to Polymer science, Polymer Characterization, Polymer Blends, Methods of Polymerization).

Federal Universities of Bahia (UFBA), Salvador (1988, 1989)

10. Polymer materials

Federal Universities of Minas Gerais (UFMG), Belo Horizonte (2002)

11. Membrane Technology

Saudi Arabia, KAUST

CBE-230/330 CHEMS-230 Physical Chemistry of Macromolecules

Spring Semester 2010, Spring Semester 2011, Spring Semester 2012

CBE-213/313 Interface Science, Engineering and Technology, 2010, 2011, 2012

EnSE-310 Colloids, Interfaces and Surfaces, 2014, 2015, 2016, 2017, 2019, 2020, 2021, 2022

EnSE-394B Contemporary Topics in Environmental Science and Engineering, 2019.

ChemS-394 Contemporary Topics Sustainability in Chemistry, Spring 2022 (co-teaching)

Supervision of students, postdocs and scientists:

Brazil: 4 MS, 6 PhD and 1 postdoc; Germany: 7 full-time PhD supervision, 4 part-time PhD co-supervision, 12 postdocs; Saudi Arabia: 10 MS, 18 PhD, 19 postdocs; currently 2 PhD students and 5 postdocs/scientists.

Fields: Chemistry / Chemical Engineering / Materials Science and Engineering / Environmental Science and Engineering

Brazil**Master students supervised at the University of Campinas**

1. Denise Freitas Siqueira, Adhesion and Morphology of Polymer Pairs, Master of Science, 1990
2. Edmir Carone Junior, Blends of polyamide/ poly (methyl methacrylate), Master of Science, 1995
3. Katia Fraga Silveira, Organic/inorganic polymer hybrids, Master of Science, 1995
4. Mauricio Luis Sforca, Hydrophilic Membranes for Ultrafiltration, Master of Science, 1995

PhD students supervised at the University of Campinas

1. Denise Freitas Siqueira, Block copolymer solutions in selective solvents, Doctor of Science, 1992
2. Edvani Curti Muniz, Miscibility and Phase Separation of Polymer Blends, Doctor of Science, 1993
3. Dario Windmöller, Extraction of Carboxylic Acids through Membranes, Doctor of Science, 1995
4. Edmir Carone Junior, Impact modification of polyamides, Doctor of Science, 1998
5. Mauricio Luis Sforca, Membranes from polymer hybrids, Doctor of Science, 1998
6. Jair Maggioni, Thermodynamics of Membrane Formation, Doctor of Science, 1998

Postdocs at the University of Campinas

Dr. Rita Zoppi, Nanocomposites, 1994-1996

Germany**Co-supervision of PhD students:**

1. Alexander Dyck, Membranes for fuel cell, PhD, 2003, Universität Paderborn, Germany (full time supervision)
2. Yolanda Alvarez-Gallego, Polyimides for fuel cell membranes, PhD, 2005, CSCIC Madrid, Spain (full time supervision)
3. C. Karthikeyan, Polymer composites for fuel cell, PhD, 2005, TU Hamburg Harburg, Germany (full time supervision)
4. Mariela Ponce, Heteropolyacid membranes for fuel cell, PhD, 2005, University Hamburg, Germany (full time supervision)
5. Vasco Silva, Membranes for DMFC, PhD, 2005, University of Porto, Portugal (full time supervision)

6. Jerusa Roeder, Membranes for hydrogen separation, PhD, 2005, collaboration with University of Santa Catarina, Brazil
7. Dominique Gomes, Membranes for gas separation, PhD, 2003, collaboration with University of Rio de Janeiro, Brazil
8. Carmen Nistor, Membranes for environmental application, PhD, 2009, IASI, Romania (full time supervision)
9. Rapee Gosalawit, Nanocomposites for proton conductive membranes. PhD, 2008, collaboration with University of Chulalongkorn, Thailand
10. Husnul Maab, Membranes for direct alcohol fuel cell, PhD, 2009, University of Kiel, Germany (full time supervision)
11. Yaowapa Treekamol, Membranes for fuel cell, PhD, collaboration with TU Hamburg Harburg, 2009-2014.

Supervision of postdocs and scientists

1. Dr. Eckard Rickowski (1998-2001), fuel cell
2. Dr. Kai Jakoby (1999-2002), fuel cell
3. Dr. Bastian Ruffmann (2000-2004), fuel cell
4. Dr. Serge Vetter (2001-2004), fuel cell
5. Dr. Luis Prado (2001-2004), fuel cell
6. Dr. Dominique Gomes (2003-2007), fuel cell and gas separation
7. Dr. Mariela Ponce (2005-2009), fuel cell
8. Dr. Jerusa Roeder (2006-2007), fuel cell (Alexander von Humboldt fellow)
9. Dr. Sergey Shishatiskii (2002-2009), gas separation
10. Prof. Sergio Pezzin (2007), fuel cell
11. Dr. Mauricio Schieda (2007-2009), fuel cell
12. Dr. Rapee Gosalawit (2009), nanoporous materials for hydrogen storage (Alexander von Humboldt fellow)

Saudi Arabia, KAUST

Directed Research

CBE-299 Directed Research:

1. Monise Masuchi (Fall Semester 2010)
2. Muhammad Suhaimi Ismail (Fall Semester 2010)
3. Octavio Salinas (Fall Semester 2010)
4. Iran Prada (Summer Semester 2011)
5. Hashim Kamakhi (Spring Semester 2012)
6. Nooruddin Jamali (Fall Semester 2011)
7. Pia Latorre (Fall Semester 2011)

ChemS-299 ChemS Directed Research:

8. Agnes Sweileh (Summer Semester 2011)

EnSE-299 Directed Research:

9. Yihui Xie (Summer Semester 2011)

Supervised Master Students (graduated)

Chemical Engineering (CBE)/Environmental Science and Engineering (EnSE):

1. Iran David Charry Prada, „Synthesis and modification of nanoparticles for surface nanostructuration of polymeric membranes“, graduated in April 2012
2. Pia Wiche Latorre, „Water Footprint and Energy Consumption of King Abdullah University of Science and Technology“, graduated in May 2012
3. Yihui Xie, “Nanocomposite Membrane via Magnetite Nanoparticle Assembly”, graduated in 2012
4. Giada Soldan, „Functionalized nanostructured membranes for separation and recovery of monoclonal antibodies”, graduated in December 2017 (CBE)
5. Juan Alvarez, graduated in December 2018
6. Banan Alhazmi (CE), Interfacially Polymerized Thin-Film Composite Membranes Based on Biophenolic Material for Liquid Separation, graduated in July 2020.
7. Malinalli Ramirez Martinez, graduated in December 2021.
8. Shanshan Hong, graduated in November 2022.
9. Daniyah Althobaiti, graduated in January 2023.
10. Balqees Alshareef, graduated in July 2023.

Supervised PhD Students (graduated)

Materials Science and Engineering (MSE):

1. Debora Marques, on block copolymer membranes (SAXS and microscopy characterization), graduated in November 2013.

Environmental Science and Engineering (EnSE):

1. Poornima Madhavan, on block copolymer membranes, copolymer rheology, graduated in June 2016
2. Nicolas Moreno Chaparro, on modelling of block copolymer assembly in solutions, graduated in May 2016.
3. Sara Livazovic, on interfacial polymerization for membrane formation, graduated in June 2016.
4. Meixia Shi, on simulation of transport in FO and NF membranes and correlation with different properties, graduated in May 2016.
5. Yihui Xie, on synthesis of polysulfone copolymers for membrane preparation, graduated in May 2016.
6. Taghreed Jalal, on membranes for chemical industry, graduated in October 2016.
7. DooLi Kim, on green membrane manufacture, graduated in June 2017.
8. Bruno Ponce de Leon on polymeric membranes for high temperature, graduated in December 2019.
9. Dinesh Mahalingam on nanocomposites for membranes, graduated in December 2019.
10. Gheorghe Falca on hollow fiber membranes, graduated in December 2021.
11. Ainur Sabirova, graduated in December 2021.
12. Sandra Aristizabal, graduated in October 2022.
13. Fadhila Alduraiei (graduated in December 2023, co-supervision)
14. Rebecca Esposito (graduated in Feb 2025)

15. Banan Alhazmi (graduated in March 2025)

Chemical Engineering (CE):

1. Burhannudin Sutisna, on block copolymer membranes, graduated in June 2018.
2. Eyad Qasem (graduated in August 2024)

Previous Research Scientist and Posdocs at KAUST

1. Dr. Russell Tayouo (May 2010- July 2014), Research Scientist
2. Dr. Munirasu Selvaraj (January 2011- July 2013)
3. Dr. Husnul Maab (January 2011- November 2013)
4. Dr. Srivatsa Bettahalli Narasimha (July 2013- 2016)
5. Dr. Duong Phuoc (January 2014- 2016)
6. Dr. Ngoc L. Le (January 2014-2017)
7. Dr. Christopher Waldron (2015-2017)
8. Dr. Priyanka Manchanda (June 2018-2020)
9. Dr. Yifan Li (May 2019-2020)
10. Dr. Chi Sian Ong (2019-2020)
11. Dr. Tiefan Huang (2018-2020)
12. Dr. Shaofei Wang (2017-2019)
13. Dr. Valentina Musteata (2015-2019, Research Scientist since October 2019)
14. Dr. Giuseppe Genduso (Research Scientist, 2021)
15. Dr. Jiangtao Liu (March 2019-February 2021)
16. Dr. Stefan Chisca (2013-2015, Research Scientist 2015-2023)
17. Dr. Abaynesh Yihdego Gebreyohannes (2019-2023)
18. Dr. Xiang Li (2021-2023)
19. Dr. Livia Mesquita (2022-April 2024)

Current group

Current PhD students:

1. Malinalli Ramirez Martinez (started Jan 2022, Environmental Science and Engineering)
2. Shanshan Hong (started Jan 2023, Chemistry)

Current Research Scientist and Postdocs

1. Dr. Lakshmeesha Upadhyaya (start February 2019, Research Scientist since 2021)
2. Dr. Maria di Vincenzo (start 2021, Research Scientist since 2024)
3. Dr. Radoslaw Gorecki (start 2021, Research Scientist since 2024)
4. Dr. Syed Usman Taqui (start 2022, Postdoc)
5. Dr. Iuliana Andrei (start Sept 2024, Postdoc)
6. Dr. Rui Zhao (start Feb 2025, Postdoc)

List of Publications

Google Scholar: h-index 74 (March 2025)

Books

1. S. P. Nunes and K. V. Peinemann, editors and authors of the first half of the book. "Membrane Technology in the Chemical Industry", Wiley-VCH, Weinheim, Germany, 1st edition 2001.
2. S. P. Nunes and K. V. Peinemann, editors and authors of the first half of the book. "Membrane Technology in the Chemical Industry", Wiley-VCH, Weinheim, Germany, 2nd edition 2006, translation to Chinese 2005.
- 3-6. S. P. Nunes and K. V. Peinemann, editors, Membrane Technology, Wiley-VCH, Weinheim, Germany, series of 4 books:
Vol. 1. Membranes for Life Science, 2007.
Vol. 2 Membranes for Energy Conversion, 2007.
Vol. 3 Membranes for Food Application, 2010.
Vol. 4 Membrane Technology for Water Treatment, 2010.
7. A. Basile and S. P. Nunes, editors. Advanced membrane science and technology for sustainable energy and environmental applications, Woodhead Publishing Limited, Cambridge, UK, 2011.

Book Chapters

1. M. C. P. Costa, A. W. Hechenleitner, S. P. Nunes, F. Galembeck. Osmosedimentation in Density Gradients. In: B. Sedlacek, J. Kahozec, editors, "Synthetic Polymeric Membranes", Gruyter, Berlin, Germany, 1987, p. 581-588.
2. K. V. Peinemann and S. P. Nunes, Membrane Application, in Schüth, Ferdi / Sing, Kenneth S. W. / Weitkamp, Jens, editors, „Handbook of Porous Solids“, Wiley VCH, Weinheim, 2002.
3. V. S. Silva, A. M. Mendes, L. M. Madeira, S. P. Nunes, Membranes for direct methanol fuel cell applications: analysis based on characterization, experimentation and modeling. In: X. W. Zhang, editor, "Advances in Fuel Cells", Research Signpost, Trivandrum, India, 2005, p. 57-80.
4. K. V. Peinemann and S. P. Nunes, Polymer membranen In: K. Ohlrogge and K. Ebert, editors, "Membranen", Wiley-VCH, Weinheim, Germany, 2006, p. 1-22
5. S. P. Nunes, Membranen für die Brennstoffzelle In: K. Ohlrogge and K. Ebert, editors, „Membranen“, Wiley-VCH, Weinheim, Germany, 2006, p. 453-468.
6. S. P. Nunes, Organic-inorganic membranes for fuel cell application. In: S. M. J. Zaid, Takeshi Matsuura, editors, "Polymer membranes for fuel cells", Springer, 2008.
7. S. P. Nunes, Organic-inorganic membranes. In: R. Mallada and M. Menendez, editors, "Inorganic Membranes: Synthesis, Characterization and Applications", Membrane Science and Technology, 13, 2008, pages 121-134, Elsevier.
8. S. P. Nunes, D. Gomes, M. Ponce, Nanocomposites based in ionomers. In: S. Thomas, S. V. Valsaraj, A. P. Meera, Zaikov, G. E. editors, "Recent Advances in Polymer Nanocomposites, Brill, ISBN-13The ISBN (International Standard Book Number) has been changed from 10 to 13 digits on 1 January 2007: 978 90 04 17297 5; ISBN-10: 90 04 17297 1, 2010.

9. S. P. Nunes and K. V. Peinemann, Advanced polymeric and organic-inorganic membranes for pressure driven processes, In: E. Drioli, editor, „Comprehensive Membrane Science and Engineering“, Elsevier, ISBN-978-0-444-53204-6, 2010.
10. S. P. Nunes, Membranes for Energy, In: G. Rios, G. Centi and N. Kanellopoulos, editors, “Nanoporous Materials for Energy and the Environment”, Pan Stanford, 2011, ISBN-10: 9814267171, ISBN-13: 978-9814267175.
11. S. P. Nunes, Preparation and characterization of polymeric membranes for fuel cells. In: M. G. Buonomenna and G. Golemme, editors, “Advance Materials for Membrane Preparation”, e-Book, Bentham Science Publishers.
12. N. L. Le, D. Phuoc, S. P. Nunes, Advance Polymeric and Organic-Inorganic Membranes for Pressure-Driven Processes, Reference Module in Chemistry, Molecular Sciences and Chemical Engineering, Elsevier, 2017.
13. S. P. Nunes, Block copolymer membranes, In: G. Szekely and A. Livingston, editors, “Sustainable Nanoscale Engineering”, Elsevier 2020.
14. S. P. Nunes, In: K. Matyjaszewski, Y. Gnanou, N. Hadjichristidis, M. Muthukumar, editors, “Macromolecular Engineering: From Precise Synthesis to Macroscopic Materials and Applications, Wiley-VCH, 2nd ed, 2022.

Special Issues

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86. C. Nistor, S. Shishatskiy, M. Popa, S. P. Nunes, K. V. Peinemann, "Optimisation of solvent/non-solvent composition of Matrimid membranes for hydrogen separation", Proceedings STEPI 7 Symposium, May 9-11, 2005, Montpellier, France, p.188 (poster).
87. J. Peter, S. Nunes, K. V. Peinemann, "Multilayer composite membranes for gas separation", Proceedings STEPI 7 Symposium, May 9-11, 2005, Montpellier, France, p.185 (poster).
88. S. Nunes, D. Gomes, I. Buder, Functionalized organic-inorganic membranes for fuel cell, Proceedings of the 9th International Conference on Inorganic Membranes, Norwegen (Lillehammer), 2006 (keynote lecture).
89. S. P. Nunes, S. Vetter, G. Goerigk, D. Gomes, I. Buder and V. Abetz, Functionalized polyketones and polyoxadiazoles for fuel cell application, Proceedings of the World Polymer Congress- Macro, Brazil (Rio de Janeiro), 2006 (invited lecture, chair person).
90. S. P. Nunes, EMS Summer School, Prague, September 2006 (invited lecture).
91. D. Gomes, I. Buder and S. P. Nunes, Novel Proton Conductive Membranes containing Sulfonated Silica, Proceedings of the Euromembrane, Italy (Taormina), 2006 (oral presentation).
92. S. P. Nunes, S. Vetter, G. Goerigk, I. Buder and V. Abetz, Proceedings of the Euromembrane, Italy (Taormina), 2006 (oral presentation, chair person).
93. S. Shishatskiy, C. Nistor, M. Popa, S. P. Nunes, K. V. Peinemann, Comparison of asymmetric and thin-film composite membranes having Matrimid 5218 selective layer, Euromembrane 2006, 24-28 September 2006, Giardini Naxos, Taormina, Italy (oral presentation).
94. G. Goerigk, S. Vetter, S. P. Nunes, V. Abetz, Polyetherketones for Fuel Cell Applications Analyzed by Anomalous Small-Angle X-ray Scattering, Hasylab User Meeting 2006 (poster).
95. M. L. Ponce, D. Gomes, J. Roeder, V. Abetz and S. P. Nunes, Sulfonated Polytriazole for fuel cells applications, Proceedings of the Symposium on polymer architecture – from structure to functional control, Hungary (Budapest), 2006 (poster).
96. V. Antonucci, A. S. Arico, V. Baglio, J. Brunea, I. Buder, N. Cabello, M. Hogarth, R. Martin, S. Nunes, Membranes for portable direct alcohol fuel cells, Euromembrane, 24-28 September 2006, Giardini Naxos, Taormina, Italy (poster).
97. K. Prehn, S. P. Nunes, K. Schulte, Application of carbon nanotube/polymer composites as electrode for polyelectrolyte membrane fuel cells. Materials Research Society Symposium Proceedings (2006), Volume Date 2005, 885 (Hydrogen Cycle--Generation, Storage and Fuel Cells), 89-94.
98. S. P. Nunes, Fuel cell membranes, Hyschool, Bardonecchia, Italy, January 21-26, 2007. (invited lecture)
99. S. Pezzin, N. Stock, S. P. Nunes, Modification of Proton Conductive Polymer Membranes with Phosphonated Polysilsesquioxanes, New Materials for Membranes, GKSS, Geesthacht, June 4-6, 2007 (poster).
100. Husnul Maab, Sergey Shishatskiy, Suzana P. Nunes, Bilayer carbon / polymer membrane for DMFC application, New Materials for Membranes, GKSS, Geesthacht, June 4-6, 2007 (poster).
101. C. Nistor, S. Shishatskiy, M. Popa, S. P. Nunes, CO₂ selective membranes based on epoxy silane, New Materials for Membranes, GKSS, Geesthacht, June 4-6, 2007 (poster).
102. D. Gomes, J. Roeder, M. L. Ponce, S. P. Nunes, Novel Sulfonated Membranes for Fuel Cell Devices, New Materials for Membranes, GKSS, Geesthacht, June 4-6, 2007 (poster).
103. R. Gosalawit, S. Chirachanchai, S. P. Nunes, Sulfonated MMT (SMMT)/Sulfonated PEEK (SPEEK) Composite Membrane for Direct Methanol Fuel Cells (DMFCs), New Materials for Membranes, GKSS, Geesthacht, June 4-6, 2007 (poster).
104. D. Gomes, M. Ponce, J. Roeder, S. P. Nunes, China-Europe Seminar on the Application of Membrane Technology, Weihai, China, 8.-12.7.07 (invited lecture)
105. S. P. Nunes, Membranes for Energy, PERMEA 2007, Hungary, September 3-6, 2007 (plenary lecture).
105. S. P. Nunes, Polymers for fuel cell, XXIV EMS Summer School on Membranes (Membranes for reactive processes), Genoa, September 11-14, 2007 (invited lecture).

106. S. P. Nunes, Project MOREPOWER, Technical Review Days European Commission, Brussels, October 10-11, 2007 (invited lecture).
107. M.L. Ponce, D. Gomes, G. Goerigk and S. P. Nunes, ASAX characterization of functionalized polyoxadiazoles and polytriazoles, Hasylab, Annual Report 2007.
108. S. P. Nunes, D. Gomes and M. Ponce, Proton Conductive Membranes Based on Polytriazole and Polyoxadiazole, Materials Crossroads, INNO 2008, April 21-23, 2008 (invited lecture).
109. D. Gomes, M. Ponce and S. P. Nunes, Functionalized polyoxazole and polytriazole membranes for fuel cell application, Engineering with Membranes, Vale do Lobo, Portugal, May 25-28, 2008 (keynote lecture).
110. S. P. Nunes, New Materials for Fuel Cell Membranes, ACI/PCI-Kolloquium Universität Hannover (invited lecture), June 30th, 2008.
111. D. Gomes and S. P. Nunes, Polyoxadiazole Nanocomposite Fuel Cell Membranes Operation above 100°C, ICOM 2008, July 12-19, 2008 (keynote Lecture, Chair person).
112. S. P. Nunes, K. V. Peinemann and B. Hinds. Emerging Membrane Materials and Manufacturing Methods, Workshop at ICOM 2008, July 12-19, 2008.
113. S. P. Nunes, Polymeric Membranes, EMS Summer School, Leuven, September 2008 (invited lecture, Chair person).
114. M. L. Ponce, D. Gomes, S. P. Nunes, Proton Conductive Membranes Based on Polyoxadiazole and Polytriazole Polymers for High Temperature Operation, Progress MEA 2008, La Grande Motte, September 2008 (poster).
115. M. L. Ponce, U. Vainio, S. P. Nunes, Morphology Study of Polyoxadiazole and Polytriazole Polymers by ASAXS and DMTA, HASYLAB user meeting, January 2009 (poster).
116. M. L. Ponce, U. Vainio and S.P. Nunes, Proton conductive membranes based on fluorinated polytriazoles, E-MRS 2009, June 2009 in Strasbourg, France.
117. Yaowapa Treekamol, Mauricio Schieda, Dominique Gomes, K. Schulte and Suzana P. Nunes, Silica with amphoteric functionalization for proton conductive membranes, E-MRS 2009 June 2009 in Strasbourg, France.
118. S. Shishatskiy, J. R. Pauls, S.P.Nunes, K.-V.Peinemann, CO₂ selective membranes for coal power plants, Euromembrane 2009, September 2009, Montpellier.
119. M. Schieda, I. Ternes and S. P. Nunes, Poly (diphenylsulfone-oxadiazole) as materials for fuel cells, Euromembrane 2009, September 2009, Montpellier.
120. S. P. Nunes, Nanocomposite membranes for energy application, Advanced Membranes IV-ECI, Trondheim, June 2009 (invited lecture, chair person).
121. S. P. Nunes, Polymeric Membranes, China-Europe, Summer School, Weihai, China (invited lecture), October 2009.
122. S. P. Nunes, Membranes for Energy, Biovision, Alexandria, Egypt, April 2010 (invited lecture).
123. S. P. Nunes, Tailoring new membranes with polymeric materials, Summer School of the European Membrane Society, Bucharest, Romania, June 2010 (invited lecture).
124. S. P. Nunes, DESY-HASYLAB, User Meeting, January 2011 (invited lecture).
125. S. P. Nunes, A. Behzad, B. Hooghan, R. Sougrat, N. Pradeep, K.-V. Peinemann, Nanoporous membranes by block-copolymer micelle assembly, 32 Australasian Polymer Symposium, February 13-16, 2011 (oral presentation).
126. S. P. Nunes, Klaus-Viktor Peinemann, Pradeep Neekalanda, Madhavan Karunakaran, Rachid Sougrat, Bobby Hooghan, Ali Reza Behzad and Ulla Vainio, Designing nanochannels by block copolymer micelles assembly, 11th Annual UNESCO/IUPAC Workshop and Conference on Functional Polymeric Materials & Composites, 26-29 April 2011, Stellenbosch, South Africa (oral presentation).
127. S. P. Nunes, Invited participant (discussion of research strategy) of the International Energy Workshop of Vale Technological Institute, June 14-18th, Buzios, Rio de Janeiro, Brazil.
128. S. P. Nunes, K. V. Peinemann, N. Pradeep, M.Karunakaran, A. Reza Behzad, R. Sougrat, B. Hooghan. From block copolymer micelles to pH-responsive membranes, ICMAT 2011 (International Conference on Materials for Advanced Technology), June 26th-July 1st 2011, Singapore
129. S. P. Nunes, Nanomaterials and Recent Developments In Membrane Technology In the Middle East, AIChE Meeting, Minneapolis, USA, October 2011 (Invited Lecture)
130. S. P. Nunes, Chemical Engineering Programs at King Abdullah University of Science and Technology King Fahd University of Petroleum and Minerals and King Saud University, International Perspectives on Chemical Engineering Education, AIChE Meeting, Minneapolis, USA, October 2011 (Invited Lecture)

131. H. Maab, A. Alsaaid, L. Francis, N. Ghaffour, G. Amy, S. P. Nunes, Gordon Conference, August 2012, USA (presented by Maab)
132. S. P. Nunes, Workshop Stimuli-Responsive Materials San Sebastian, Spain, (Invited Lecture), June 2012
133. S. P. Nunes, Self-assembly and Superhydrophobicity in Membrane Development for Water Application, AIChE Meeting, Pittsburgh, USA, October 2012 (Keynote Lecture), November 2012
134. S. P. Nunes, invited lecture, Numpore Workshop, KAUST, 2012
135. S. P. Nunes, Self-assembly and porosity control in polymeric membranes, UNESCO Polymer Conference, Stellenbosch, March 2013 (Oral Presentation)
136. H. Maab, L. Francis, Ahmad Al Saadi, N. Ghaffour, G. Amy and S. P. Nunes, Hydrophobic Polyazole Membranes for Membrane Distillation, International Desalination Association, October 20-25, Tianjin, China (Oral Presentation)
137. L. Francis, N. Ghaffour, A. Al-Saadi, S. Nunes, G. Amy, Nanostructured fibrous membranes for seawater desalination, 1st International Conference on Desalination Using Membrane Technology, April 2013, Spain (presented by Francis).
138. L. Francis, A. Al-Saadi, H. Maab, S. Nunes, N. Ghaffour, G. Amy, High Performance Membranes for Red Sea Water Desalination using Direct Contact Membrane Distillation, AMTA/AWWA Membrane Technology Conference, San Antonio, USA, Feb 2013, (presented by Francis)
139. A. S. Alsaadi, L. Francis, J.-D. Li, H. Maab, S. Nunes, S. Gray, G. Amy, N. Ghaffour, Modeling of Air-Gap Membrane Distillation Process, AMTA/AWWA Membrane Technology Conference, San Antonio, USA, Feb 2013, (presented by Alsaadi).
140. N. Ghaffour, L. Francis, A. Al-Saadi, H. Maab, S.P. Nunes, G. Amy, Scaling-up membrane distillation process: challenges and potential applications, International Desalination Association World Congress, October 2013, Tianjin, China (presented by Ghaffour)
141. K.-V. Peinemann, S. P. Nunes, M. Karunakaran, N. Pradeep, H. Yu, X. Qiu, Membrane Manufacturing by Block Copolymer Self-assembly: Drawbacks and Promises, ICMAT 2013, Singapore, July 2013 (presented by Peinemann).
142. S. P. Nunes and D. Marques, Analysis of the Self-Assembly of Block Copolymer Micelles by Small Angle X-ray Scattering (SAXS) for Membrane Application, ICMAT 2013, Singapore, July 2013 (presented by Marques).
143. N. Moreno Chaparro, V. Calo and S. P. Nunes, Generating and Predicting Nanostructures for Membranes, 5th International Conference on Porous Media, May 2013, Prague (invited lecture)
144. S. P. Nunes, Functionalized Isoporous Membranes, Engineering with Membranes, September 4-7, 2013, Saint-Pierre d'Oléron, France (Invited Keynote Lecture and Member of Scientific Committee).
145. S. P. Nunes, Membrane Technology for Water Desalination and Reuse, Middle East Process Engineering, Bahrain, September 29-October 2, 2013 (Member of Technical Committee, Invited Lecture and Session Chair)
146. S. P. Nunes, Membranes with Nanostructured Porosity, Nanomemwater, October 8-10, 2013, Izmir, Turkey (Plenary Lecture)
147. S. P. Nunes, Pore formation in block copolymer membranes
Polymer Conference: From Synthesis to Properties to Applications, KAUST, November 9-13, 2013 (Invited Lecture)
148. S. P. Nunes, Invited Lecture in Trondheim, Norway, May 2014 (MEMFO 2014)
149. S. P. Nunes, Lecture at ICOM 2014, China, July 2014
150. S. P. Nunes, Invited Lecture at MACRO 2014, Thailand, July 2014
151. S. P. Nunes, Keynote Lecture at MRS (Materials Science Conference) Fall Meeting 2014, USA, November 2014
152. S. P. Nunes, Invited Lecture at North American Electrochemical Society, Symposium Co-organizer, October 2014
153. S. P. Nunes, Invited lecture ECI Conference Advanced Membrane Technology VI: Water, Energy and Nrw Frontiers, "Taking advantage of N-Heterocyclic polymers for membrane application", Feb 2015, Syracuse, Italy
154. S. P. Nunes, Invited lecture and co-chair ("Membranes functionalization and biomimic membranes" session) Engineering with Membranes 2015, May 2015, Beijing

155. S. P. Nunes, Invited lecture and Co-Chair of the Session “Membranes for Clean Water, Clean Energy and Life Science” of the ICMAT 2015, June/July 2015, Singapore.
156. S. P. Nunes, Invited lecture AIChE 2015, “Self-Assembly for Membrane Formation: Influence of Solvent Quality, Hydrogen Bonds and Coulombic Interactions”, Nov. 2015, Salt Lake City, USA
157. S. P. Nunes, Invited lecture AIChE 2015, “Polymeric Membranes Manufactured from Solutions in Ionic Liquid”, Nov. 2015, Salt Lake City, USA
158. S. P. Nunes, Invited lecture PACIFICHEM 2015, “Membrane manufacture with ionic liquids as greener solvents and morphology inducer”, Dec 2015, Honolulu, USA.
159. Gerald Matar, G Gonzalez-Gil, H Maab, Suzana Pereira Nunes, JS Vrouwenvelder, Pascal Saikaly, Evolution and accumulation of organic foulants on hydrophobic and hydrophilic membrane surfaces in a submerged membrane bioreactor, International Water Association (IWA), 2015.
160. Meixia Shi, Galina Printsypar, Oleg Iliev, Victor M. Calo, Gary L. Amy, Suzana P. Nunes. Water flow prediction for membranes using 3D simulations with detailed morphologies. ICMAT2015, Singapore.
161. P. Madhavan, S. P. Nunes, Frontiers In Polymer science 2015, Riva Del Garda, Italy (poster).
162. S. Livazovic and S. P. Nunes, Cellulose composite membranes with ionic liquid as a green solvent 25th Annual meeting North American Membrane Society (NAMS), Boston, MA, May 30 - June 3, 2015 (poster)
163. Y. Xie, S. Nunes. Functionalized polysulfone and polysulfone-based triblock copolymers for high-performance water separation membranes. Jun. 14, 2015. Poster presentation. Gordon Research Seminar and Conference, Boston.
164. Y. Xie, S. Nunes, Functionalized Polysulfone and Polysulfone-based Triblock Copolymers for High-performance Water Separation Membranes. May 22, 2015. Poster presentation. Frontiers in Polymer Science Symposium, Riva del Garda.
165. T. Jalal, S. Nunes, NAMS 2015, Boston, Feb 2015.
166. S. Nunes, New block copolymers and blends for membranes, MACRO 2016, Istanbul, Turkey, July 17-21, 2016. (invited lecture)
167. S. Nunes, New block copolymers and blends for membrane fabrication, ACS Meeting, Philadelphia, USA, August 21, 2016. (invited lecture)
168. S. Nunes, Membrane preparation from solutions in ionic liquids, IMSTEC 2016, Adelaide, Australia, December 5-8, 2016. (invited lecture)
169. V. Musteata, B. Sutisna, G. Polymeropoulos, K. Peinemann, N. Hadjichristidis, S. Nunes, Small angle X-ray scattering as characterization for block copolymer membranes, IMSTEC 2016, Adelaide, Australia, December 5-8, 2016
170. B. Sutisna and S. Nunes, Design of block copolymer membranes using a master curve for various copolymer architectures, IMSTEC 2016, Adelaide, Australia, December 5-8, 2016.
171. S. Nunes, Modeling, visualization and membrane development, Royal Society Symposium Unifying scientific disciplines to understand and solve emerging membrane filtration challenges, Chicheley, UK, January 9-11, 2017. (invited lecture).
172. D. Kim and S. Nunes, Ionic Liquids Gordon Research Conference, August 14-19, 2016, Sunday River Newry, USA, poster presentation.
173. D. Kim and S. Nunes, Membranes: Materials and Processes Gordon Research Conference, July 30-31, 2016, New London, USA, poster presentation.
174. S. Bettahalli and S. Nunes, Membranes: Materials and Processes Gordon Research Conference, July 30-31, 2016, New London, USA, poster presentation.
175. B. Pulido and S. Nunes, Porous polyisatinbiphenyl membranes for harsh environments, MACRO 2016, Istanbul, July 17-21, 2016, oral presentation.
176. N. L. Le, S. Nunes, T. Chung, M. Ulbricht, M. Quilitzsch, P. Hong, H. Cheng, Hollow fiber lumen modification via environmentally friendly poly(zwitterion) grafting, AIChE Meeting 2016, San Francisco, USA, November 2016, oral presentation.
177. P. H. H. Duong, S. Chisca, P. Hong, H. Cheng and S. Nunes, High fouling resistance thin-film composite membranes with copolyazole substrates for osmotically driven processes, NAMS 2016, Bellevue, USA, May 21-25.
178. S. Chisca, G. Falca, V. Musteata, C. Boi, S. Nunes, Crosslinked polytriazole membranes for organophilic filtration, NAMS 2016, Bellevue, USA, May 21-25.
179. C. Boi, M. Avanzato, S. Chisca, S. Nunes, Novel polytriazole ion exchange membranes for bioseparations, AIChE 2016, San Francisco, USA, November 2016, oral presentation.

180. S. Nunes, D. Kim, S. Livazovic, P. Madhavan, S. Chisca, Membrane preparation from ionic liquids, IMSTEC 2016, Adelaide, Australia, December 2016. (invited lecture)
181. V. Musteata, B. Sutisna, G. Polymeropoulos, K.V. Peinemann, N. Hadjichristidis, S. Nunes, SAXS as Characterization for Block Copolymer Membranes, IMSTEC 2016, Adelaide, Australia, December 2016.
182. S. Nunes, Modeling, visualization and membrane development, Royal Society of Chemistry, Chicheley Hall, January 2017. (invited lecture)
183. S. P. Nunes, Membranes for biomolecules separation, KAUST Research, Conference on Polymers-Designing Macromolecules for Applications, February 2017. (invited lecture)
184. S. P. Nunes, Nanostructured membranes based on polysulfone homopolymers and copolymers, APS Meeting, March 2017, New Orleans, USA. (invited lecture)
185. L. N. Le, M. Ulbricht, S. P. Nunes, Poly(ethylene glycol) and poly(zwitterion) grafting for anti-fouling ultrafiltration membranes, MRS Spring Meeting 2017, Phoenix, USA. (Oral)
186. P. H. Duong, S. P. Nunes, Mixed-Polyamide thin-film composite membranes with enhanced antifouling properties, MRS Spring Meeting 2017, Phoenix, USA. (Oral)
187. D. Kim, S. P. Nunes, Fabrication of greener membranes from ionic liquid solutions, MRS Spring Meeting 2017, Phoenix, USA. (Oral)
188. V. Musteata, B. Sutisna, G. Polymeropoulos, K. V. Peinemann, N. Hadjichristidis, S. P. Nunes, GISAXS time-resolved investigation of isoporous block copolymer membrane formation, ICOM 2017, San Francisco, August 2017. (Oral)
189. S. Chisca, P. H. Duong, L. F. Villalobos, G. Falca, K. V. Peinemann, C. Boi, S. P. Nunes, ICOM 2017, San Francisco, August 2017. (Oral)
190. B. Pulido, S. Nunes, Pushing the limits of polymeric membrane stability, ICOM 2017, San Francisco, August 2017. (Poster)
191. B. Sutisna, V. Musteata, K. V. Peinemann, S. P. Nunes, Artificial membranes with preferential nanochannels from block copolymer self-assembly, ICOM 2017, San Francisco, August 2017. (Oral)
192. S. P. Nunes, Membranes with stimuli response and selective transport, Imagine Membrane, Horta, Azores, Portugal, September 2017 (Invited).
193. S. P. Nunes, Artificial Channels and Bioinspired porous structures based on block copolymers, 1st International Conference on Bioinspired Materials and Membranes, January 2018, Melbourne, Australia (Invited).
194. S. P. Nunes, P. Duong, N. L. Le, Shape control and surface chemistry of membranes for water purification, MRS Spring Meeting, Phoenix, USA, March/April 2018 (Invited)
195. S. P. Nunes, V. Musteata, S. Chisca, F. Meneau, D. Smilgies, S. Nunes, Carboxyl-functionalized nanochannels based on block copolymers, Faraday Discussions on Artificial Water Channels, Glasgow, June 2018 (Invited)
196. S. P. Nunes, Polymeric membranes with exceptional temperature and solvent stability: can polymers compete with ceramics?, Aseanian Membrane Society Meeting, AMS11, July 2018, Brisbane, Australia (Oral)
197. S. P. Nunes, D. Kim, S. Chisca, G. Falca, Green membrane manufacture, Euromembrane, Valencia, Spain, July 2018 (Keynote)
198. S. P. Nunes, S. Chisca, N. L. Le, Shaping membrane architecture from meso- to macroscale, Euromembrane, Valencia, Spain, July 2018 (Oral)
199. S. P. Nunes, Meso- and macroscale ordered porous materials from block copolymer solution, Karman Conference (Additive Fabrication of Interactive Material Systems), July 2018, Bergisch Gladbach (Invited)
200. S. P. Nunes, P. Duong, N. L. Le, Membrane materials for separations in water and organic solvents, AIChE Meeting, Pittsburgh, USA, October/November 2018.(Invited)
201. S. P. Nunes, Porphyrin, dendrimeric and zwitterionic modification fo thin-film composite membranes, International Conference on Water, Kottayam, India, December 2018 (Invited)
202. G. Falca, S. Chisca, V. Musteata, S. P. Nunes, Development of cellulose hollow fibers by using ionic liquids for solvent resistan application, XXIX Interamerican Congress of Chemical Engineering/68th Canadian Chemical Engineering Conference, October/November 2018, Toronto, Canada (oral).

203. V. Musteata, B. Sutisna, S. Chisca, D. Smilgies, F. Meneau, S. P. Nunes, SAXS investigation for the development of hierarchical porous block copolymer structures, SAS2018-XVII International Small Angle Scattering Conference, Michigan, October 2018 (oral).
204. S. Chisca, V. Musteata, S. P. Nunes, 3D hierarchical isotropic porous materials with hydrophilic channels from direct self-assembly of block copolymer, NAMS meeting, Lexington, USA, May 2018 (oral).
205. S. Chisca, V. Musteata, S. P. Nunes, Bioinspired isotropic porous 3D hierarchical architecture, Bioinspired materials Gordon Conference, Les Diablerets, Switzerland, June 2018 (poster).
206. D. Mahalingam, S. Wang, S. P. Nunes, Graphene oxide liquid crystals from protic ionic liquid, Gordon Conference on Membranes: Materials and Processes, New London, USA, August 2018 (poster).
207. B. Pulido, S. Chisca, S. P. Nunes, Facile method to obtain solvent and thermal resistant porous membranes from alkyne-containing high-performance polymers, Euromembrane 2018, Valencia, Spain, July 2018 (oral).
208. S. Nunes, Invitation for the International Membrane Winter Summit (iMWS) for a discussion among 30 other membrane scientists on their vision of the future of membrane science, organized by RWTH Aachen, Germany, February 2019.
209. S. Nunes, Highly stable polymeric membranes for a more sustainable chemical industry, invited oral presentation, Engineering with Membranes, Bastad, Sweden, April 2019.
210. S. Chisca and S. Nunes, Organic solvent resistant membranes obtained by using non-toxic solvents, oral presentation, 28th NAMS 2019, USA, May 2019.
211. S. Nunes, Membranes with artificial channels based on poly(styrene-*b*-benzyl-L-glutamate) invited oral presentation in the ACS National Meeting, 2019, San Diego, USA, August 2019.
212. S. Nunes, Sustainable membrane manufacture based on ionic liquids, oral presentation at the 4th International Conference on Ionic Liquids in Separation and Purification Technology (ILSEPT2019), Sitges, Spain, September 2019.
213. S. Nunes, Sustainable membrane manufacture: non-conventional solvents, natural and recyclable polymers, keynote, Imagine Membranes, Horta, Azores, Portugal, September 2019.
214. S. Nunes, Solvent and thermally stable polymeric membranes and supports based on polyazoles, polyindoles, polyketones, and poly (ethylene terephthalate), keynote, Organic Solvent Nanofiltration 2019, Twente University, NL, October 2019.
215. B. Pulido and S. Nunes, Poly(oxindole) derivatives as novel materials for the design of solvent and thermal resistant membranes, oral Organic Solvent Nanofiltration 2019, Twente University, NL, October 2019.
216. S. Chisca and S. Nunes, Organic solvent and thermal resistant polytriazole membranes with enhanced mechanical properties cast from solutions in non-toxic solvents, Organic Solvent Nanofiltration 2019, Twente University, NL, October 2019.
217. S. Aristizabal, S. P. Nunes, PEEK membrane preparation under mild conditions by polymer conversion/regeneration, Organic Solvent Nanofiltration 2019, Twente University, NL, October 2019.
218. S. Wang and S. Nunes, Anti-tradeoff graphene oxide membrane for organic solvent nanofiltration, oral presentation, AIChE Annual Meeting, Orlando, USA, November 2019.
219. S. Wang and S. Nunes, Tunable interlayer channels in graphene oxide membranes for molecular separations, oral presentation, AIChE Annual Meeting, Orlando, USA, November 2019.
220. S. Nunes, High performance polymers for a sustainable membrane technology, keynote in IMSTEC2020, Sydney, Australia, February 2020.
221. S. Nunes, Nanostructured polymeric membranes for a sustainable industry and environment, PANNANO2020, keynote, Aguas de Lindoia, Brazil, March 2020.
222. S. Nunes, The search for isoporosity in membranes: self-assembly, building blocks, and nanofabrication, keynote, ICOM2020, UK, December 2020 (virtual).
223. S. L. Aristizabal, L. Upadhyaya, G. Falca, M. O. Aijaz, M. R. Karim, S. P. Nunes, Sustainable, room temperature, acid-free processability of polyaryletherketones for solvent-resistant membrane applications, Euromembrane 2021, November 28-December 02, Copenhagen, Denmark.
224. S. Chisca, G. Falca, V. E. Musteata, S. P. Nunes. Polytriazole a new polymeric platform for a wide range of membrane applications. Progress in organic and macromolecular compounds 28th edition-MACROIASI2021
225. S. Chisca, G. Falca, V. E. Musteata, S. P. Nunes, Polytriazole polymers as an alternative platform for organic solvent applications, Euromembrane 2021- Copenhagen, Denmark.

226. A. Sabirova, S. P. Nunes, Advanced nanotechnology methods to fabricate isoporous polymeric membranes for biological and environmental applications, Euromembrane 2021- Copenhagen, Denmark.
227. G. Falca, S. Chisca, V. Musteata, C. Ong, S. P. Nunes, Naturally extracted hydrophobic solvent and self-assembly in interfacial polymerization, Euromembrane 2021, Copenhagen, Denmark.
228. F. Alduraiei, G. Szekely, S. P. Nunes, Nanofiltration in Non-polar Solvents using Fluorinated Thin Film Composite Membranes, Euromembrane 2021, Copenhagen, Denmark
229. A. Y. Gebreyohannes, L. Upadhyaya, and S. P. Nunes, Air dehydration with NEXAR block copolymer coated composite hollow fiber membrane, African Membrane Society 3rd International Congress, Senegal, November 2-5, 2021.
230. L. Upadhyaya, A. Y. Gebreyohannes, L. P. Silva, G. Falca, P. J. Carvalho, S. P. Nunes, Hollow Fibers with Encapsulated Green Amino Acid-based Ionic Liquids for Air dehydration, ACS Spring 2021, April 5-16, 2021 (virtual).
231. L. Upadhyaya, A. Y. Gebreyohannes, O. Abdelaziz, W. Worek, S. P. Nunes, Nexar Block Copolymer Coated Composite Hollow Fiber Membrane for Liquid Desiccant Membrane Air Dehydration, AIChE 2021, November 7-11 2021, Boston,
232. L. Upadhyaya, A. Y. Gebreyohannes, L. P. Silva, G. Falca, P. J. Carvalho, S. P. Nunes, Hollow fiber-based membrane dehumidification using ionic liquid-Sustainable materials to process, KAUST Research Open week, November 28- Dec 2, 2021, KAUST.
233. S. P. Nunes, Polymeric Membranes for Sustainable Separations, Sustainability Week, November 28-Dec 2, 2021, KAUST.
234. S. P. Nunes, Polymeric membranes development and characterization, 37th European Membrane Society Summer School, May 29-June 3, 2022, Alentejo, Portugal.
235. N. Rangnekar, S. Li, R. Dong, V. Musteata, J. Kim, B. Marshall, S. Chisca, J. Xu, S. Hoy, B. MCCool, S. P. Nunes, Z. Jiang, A. Livingston, Interfacial polymerization with hydrophobic amines provides ultrathin polyamide nanofilms for hydrocarbon separation, 31th NAMS 2022, May 14-18, 2022, Tempe, USA.
236. S. P. Nunes, Functionalized thin-film nanofiltration membranes, Nanofiltration 2022, June 26-30, 2022, Achalm, Germany.
237. S. Aristizabal, L. Upadhyaya, S. Nunes, Solvent-resistant polymeric membranes for greener liquid separations, Green Chemistry Gordon Conference, July 2022, Castelldefels, Spain.
238. S. Aristizabal, S. Nunes, Synthesis of aromatic polyimides at room temperature, Macro 2022, July 2022, Winnipeg, Canada.
239. L. Upadhyaya, S. Nunes, Ionic Liquid Coated Polyetherimide Hollow Fiber for Energy-Efficient Membrane Dehumidification, Macro 2022, July 2022, Winnipeg, Canada.
240. S. P. Nunes, Morphology and selectivity control of sustainable membranes for liquid separation, Gordon Conference Membranes: Materials and Processes, August 2022, New London.
241. R. Gorecki, L. Upadhyaya, C. Polo, F. Meneau, S. Nunes, 3D Imaging of the porous polymeric membranes in nano-scale resolution by X-ray ptychography coherent diffractive imaging, International Small Angle X-Ray Scattering Conference SAS2022, September 2022, Campinas, Brazil.
242. S. P. Nunes, Challenges to tackle with membrane science for a more sustainable future, Honorary Session, 2022 AIChE Annual Meeting, November 13-18, 2022, Phoenix, USA.
243. S. P. Nunes, Challenges and proposed solutions for nanofiltration, keynote lecture, Euromembrane 2022, December 20-24, 2022, Sorrento, Italy.
244. R. Gorecki, S. Aristizabal, S. Bhaumik, K. Ntetsikas, N. Hadjichristidis, S. Nunes, Crosslinked block copolymer membranes, 2022 AIChE Annual Meeting, November 13-18, 2022, Phoenix, USA.
245. E. Qasem, Development of high-performance polymeric membrane for natural gas dehydration, 2022 AIChE Annual Meeting, November 13-18, 2022, Phoenix, USA.
246. S. Chisca and S. Nunes, From simple casting polytriazole membrane to fractionation of crude oil, Euromembrane 2022, November 20-24, 2022, Sorrento, Italy.
247. F. Alduraiei, M. Abdulhamid, A. Gebreyohannes, S. Nunes, G. Szekely, Fluorinated thin-film composite membranes with twisted monomers for high flux nonpolar solvent nanofiltration, Euromembrane 2022, November 20-24, 2022, Sorrento, Italy.
248. R. Mazzei, A. Y. Gebreyohannes, T. Poerio, S. P. Nunes, L. Giorno, Artificial compartmentalization of enzymes in different places of the same membrane by using switchable pH-responsive membranes, Euromembrane 2022, November 20-24, 2022, Sorrento, Italy.

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250. M. Ramírez-Martínez, S. L. Aristizábal, G. Szekely, S. P. Nunes. Polyolefin membranes fabricated with bio-based solvents: From plastic waste to value-added materials, Euromembrane 2022, November 20-24, 2022, Sorrento, Italy.
251. A. Y. Gebreyohannes, L. Upadhyaya, S. P. Nunes, Operation and Scale-Up Conditions Optimization of Ultra-Permeable Block Copolymer-Coated Hollow Fibers for Air Dehydration, Euromembrane 2022, November 20-24, 2022, Sorrento, Italy.
252. S. P. Nunes, Thin film nanofiltration membranes for the chemical industry: integrated asymmetric and interfacial polymerization approaches, keynote (virtual), IMSTEC 2022, December 2022, Melbourne, Australia.
253. S. Aristizabal, M. Ramirez-Martinez, L. Upadhyaya, X. Li, S. P. Nunes, Closed-loop processing of solvent-resistant membranes from commercially available polymers, IMSTEC 2022, December 2022, Melbourne, Australia.
254. S. Nunes, Polymeric materials and membranes for nanofiltration, International Conference on Membrane Separation, plenary lecture, February 27, 2023, Lahore, Pakistan.
254. S. Nunes. Thin selective layers for nanofiltration: innovation vs feasibility for application, Imagine Membrane, March 2023, Furnas, Azores, Portugal.
255. S. Nunes. Membranes for sustainable separations in the water sector, High Polymer Research Group. Polymers in Water 2023. Invited lecture. Shrigley Hall Hotel, Pott Shrigley, UK.
256. S. Nunes. Membranes for Sustainable Separations, French Academy of Sciences, Honorary session Unesco L'Oreal for Women in Science, June 2023.
257. S. Nunes. Elevating polymeric membranes to challenges in the chemical industry Invited lecture. 13th International Congress on Membranes and Membrane Processes ICOM 2023, Chiba, Japan, July 9-14.
258. S. Nunes. Membrane Strategies for Precise Molecular Separations. Invited lecture. 13th International Congress on Membranes and Membrane Processes ICOM 2023, Chiba, Japan, July 9-14.
259. Lakshmeesha Upadhyaya, Abaynesh Yihdego Gebreyohannes, Sandra Aristizabal, Radoslaw Gorecki, Muhammad Wakil Shahzad, Suzana Nunes. Hollow fiber-based membranes for water vapor recovery-materials to module and prototype. 2023 AIChE Annual Meeting, November 5-10, 2023, Orlando, USA.
260. Siyao Li, Ruijiao Dong, Valentina Musteata, Jihoon Kim, Neel Rangnekar, JR Johnson, Bennett Marshall, Stefan Chisca, Benjamin A McCool, Suzana Nunes, Zhiwei Jiang, Andrew Livingston, Ultrathin hydrophobic polyamide nanofilms for crude oil fractionation. 2023 AIChE Annual Meeting, November 5-10, 2023, Orlando, USA.
261. S. P. Nunes. High-performance polymers and membranes for sustainable separations, Designing Macromolecules for a Sustainable Future, November 6, 2023, KAUST.
262. S. P. Nunes. Membrane design for separations in the water and beyond, Membrane Desalination, MEMDES2023, Nov. 19-22, Sitges, Spain, Plenary Lecture.
263. S. P. Nunes. Polymer membranes: driving the shift to a sustainable economy. MSA-ISPT (2023 Conference of the Membrane Society of Australasia), December 2023, Perth, Australia, Plenary Lecture.
264. S. P. Nunes. 2D Materials in Water. Dresden, April 2024. Invited Lecture.
265. S. P. Nunes. Selective membranes for ion recovery and fractionation of pharmaceutical components. ECI, Nanotechnology Convergence for Sustainable Energy, Environment, Climate Change and Health, Casablanca, Morocco, July 2024. Plenary Lecture.
266. S. P. Nunes. Supramolecular assembly in interfacial polymerization for precise separations, ACS Fall Meeting, Denver, August 2024. Invited Lecture.
267. S. P. Nunes. Selective and scalable membrane materials for precise separations. Euromembrane, Prague, September 2024.
268. S. P. Nunes. Polymer membranes for sustainable separations. African Membrane Society International Conference (AMSIC-4), Addis Ababa, November 2024. Plenary Lecture.

Publications in Scientific Journals

Master/Doctor of Science

(1981-1985, University of Campinas, Brazil)[1-7]

Postdoctoral Research

(1985-1986, Postdoctoral research, Johannes Gutenberg University, Germany)[8-10]

Assistant/Associate Professor

(1987-1997, University of Campinas, Brazil)[11-37]

Researcher

(1997-2009, Helmholtz Center, Germany)[38-116]

Associate/Full Professor

(2010-2024, King Abdullah University of Science and Technology, Saudi Arabia)[117-308]

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- [2] S.P. Nunes, A.T.N. Pires, F. Galembeck, Concentration of dextran and gamma-globulin by osmocentrifugation *Chemica Scripta* 23(5) (1984) 233-239.
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