


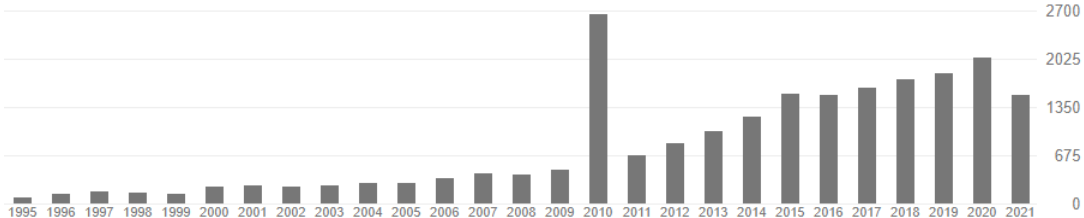
## Siglinda PERATHONER



Siglinda PERATHONER gained her PhD in Chemical Science in 1988 working on the photophysics and photochemistry of supramolecular systems with V. Balzani and Nobel Laureate J.M. Lehn. From 2001 she joined the University of Messina and is full professor of Industrial Chemistry presently. She has coordinated many EU projects and is currently coordinator of the EU project OCEAN on new industrial electrocatalytic paths of CO<sub>2</sub> conversion. She has been active for over 30 years in the field of catalysis and author of about 400 publications, including several in the top 1%, and several communications to international congresses, as well as co-editor of books or special issues of international journals of catalysis. In addition, she is co-author of several highly cited works in international journals and has been chair of various international conferences, workshops and symposia on catalysis. She is the editor of the Wiley VCH book "Sustainable Industrial Chemistry", of the Wiley & Soon book "Green Carbon Dioxide: Advances in CO<sub>2</sub> Utilization" and of the Elsevier book "Horizons in Sustainable Industrial Chemistry and Catalysis". He has contributed to various encyclopedias, including "Reduction of greenhouse gas emissions by catalytic processes" in the Handbook of Climate Change Mitigation and "Artificial Leaves" in the Kirk-Othmer Encyclopedia of Chemical Technology. She was co-chair of Europacat 2017, an important event in the catalysis community and was chair of several other conferences. The current h-index is 72 (50 from 2016), about 23,000 citations (Google Scholar), and i<sub>10</sub>-index of 271. Prizes and awards include the recent G.M. Levi Medal from the Italian Chemical Society (for innovation leading to industrial realization), the Special Award in 2008 from "Altran Foundation for Innovation", for the project on the development of artificial leaves for CO<sub>2</sub> conversion, the finalist position in 2010 for the European Sustainable Chemistry Award (EuCheMS), the participation in 2011 the film "NanoInLife" produced by the European Commission to show the results of nanotechnology to the public. Her research interests include nanostructured oxides and nanocarbon materials for heterogeneous, photo- and electro-catalytic applications.

Web page: <http://ww2new.unime.it/catalysis/recent.html>

## CV prof. Siglinda Perathoner

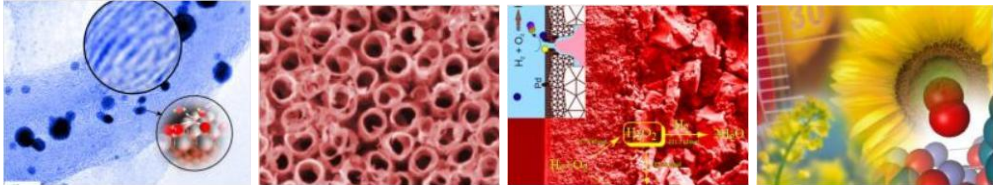
<b>Date of birth</b>	12 May 1958
<b>Nationality</b>	Italian
	<p>1984: "Laurea" degree in Chemistry, Univ. of Bologna, Italy (prof. V. Balzani)</p> <p>1985-1988 PhD in Chemical Science, Univ. of Bologna, Italy (prof. V. Balzani)</p> <p>1989-1996 Post-doc contract and research grants, Univ. of Bologna, Italy</p> <p>1999-2001 Post-doc contract and research grants, Univ. of Messina, Italy</p> <p>2001-2003 Researcher (Industrial Chemistry), Univ. Messina</p> <p>2003-2018 Associate prof. (Industrial Chemistry), Univ. Messina</p> <p>2018-today Full prof. (Industrial Chemistry), Univ. Messina</p> <p>2016-today: Coordinator of the Laboratory of Catalysis and Sustainable Production and Energy (CASPE), INSTM Reference Center</p> <p>2019-today Delegate UniME for INSTM Consortium</p> <p>2021-today Member of Commission for National Scientific Qualification 03/C2</p>
	<p>The PhD was in collaboration with Nobel Laureate J.M. Lehn (various publications in common).</p> <p>She was coordinator of EU projects CAT-MED (ICA3-2002-10096), ELCAT (FP6-2003-NEST-A / 2400)], INCAS (NMP2-LA-2010-245988), OCEAN (SPIRE 10-2017) and scientific responsible (PI) of several European projects for Udr Univ. Messina, among which the EU Coordinated Action CONCORDE (nanostructured oxides) and the EU project NATAMA (FP6-2004-NMP-32583, Nano engineered thin films for advanced materials applications).</p> <p>The ELCAT project is one of the 10 selected projects from the EU Commissions in the first call of the NEST area (between the over 200 presented in all the fields of science) as "new research frontiers which may produce a significant breakthrough for the science".</p>
<b>Education &amp; Career</b>	<p>The PhD was in collaboration with Nobel Laureate J.M. Lehn (various publications in common).</p> <p>She was coordinator of EU projects CAT-MED (ICA3-2002-10096), ELCAT (FP6-2003-NEST-A / 2400)], INCAS (NMP2-LA-2010-245988), OCEAN (SPIRE 10-2017) and scientific responsible (PI) of several European projects for Udr Univ. Messina, among which the EU Coordinated Action CONCORDE (nanostructured oxides) and the EU project NATAMA (FP6-2004-NMP-32583, Nano engineered thin films for advanced materials applications).</p> <p>The ELCAT project is one of the 10 selected projects from the EU Commissions in the first call of the NEST area (between the over 200 presented in all the fields of science) as "new research frontiers which may produce a significant breakthrough for the science".</p>
<b>Academic Papers and qualification</b>	<p>She was author of over 400 publications (according to IRIS official University database 301 peer reviewed paper, 95 peer reviewed chapters in books and 15 monographs), about half of which in the last decade, and over 400 communications at International Congresses, guest Editor of 9 special issues of international journals, co-editor of various books among which the Wiley VCH book "Sustainable Industrial Chemistry", the Wiley &amp; Soon book "Green Carbon Dioxide: Advances in CO<sub>2</sub> Utilization" and the Elsevier book "Horizons in Sustainable Industrial Chemistry and Catalysis". Current bibliometric threshold values are over four-five times larger than those of the scientific sector.</p> <p>Author of various contributions to encyclopaedias on topics of catalysis (Encyclopedia of Catalysis, Enciclopedia Treccani), co-author of several reviews on International Journals. She also served as chairperson in various sessions of international meetings.</p>
<b>Bibliometric data</b>	<p><i>From Google Scholar (September 2021)</i>  <a href="https://scholar.google.com/citations?user=XLhzfAoAAAAJ&amp;hl=en">https://scholar.google.com/citations?user=XLhzfAoAAAAJ&amp;hl=en</a></p> <ul style="list-style-type: none"> <li>- Citations: 22812 (10333 from 2016)</li> <li>- <b>h-index: 72</b> (50 from 2016)</li> <li>- <i>i10-index</i>: 271 (173 from 2016)</li> </ul> 

	<p><i>IRIS (Cineca) Official UNIME Database (Sept. 2021)</i></p> <p>14.a.1 Peer reviewed articles 306 (71% within Q1, Scopus)</p> <p>14.b.1 Contributions in books with ISBN 95</p> <p>14.c.1 Monographs 14</p> <p>14.d.1 Abstracts in Proceedings 180</p> <p>Average IF (WoS) 4,885 Max. IF (WoS) 45,661</p> <p><i>ASN Simulation 2016-2021 (IRIN UniME)</i></p> <p>Articles last 10 years 148 commissioner threshold value 39</p> <p>Nr citations last 15 years 11743 commissioner threshold value 1153</p> <p>h-index last 15 years 52 commissioner threshold value 20</p>
Selected recent plenary/invited lectures	<p><i>Selected recent plenary/invited lectures (full list at <a href="http://ww2.unime.it/catalysis/invited-lecture.html">http://ww2.unime.it/catalysis/invited-lecture.html</a>)</i></p> <p>2020</p> <ul style="list-style-type: none"> <li>• SINCHEM Winter School 2020, Feb 4-6, 2020 Bologna, Italy; plenary lecture</li> </ul> <p>2019</p> <ul style="list-style-type: none"> <li>• First International Bunsen-Discussion-Meeting on Fundamentals and Applications of (Photo) Electrolysis for Efficient Energy Storage, April 1 – 5, 2019 in Taormina, Italy; invited lecture</li> <li>• Summer School "Making Business with new technologies within green chemistry &amp; sustainable energy", plenary</li> </ul> <p>2018</p> <ul style="list-style-type: none"> <li>• SGI-SIMP Conference (Geosciences for the environment, natural hazard and cultural heritage), Catania (Italy), 12-14 Sept. 2018, invited</li> <li>• CARBOCAT VIII - 8th International Symposium on Carbon for Catalysis, Porto (Portugal), 26th-29th June 2018, keynote</li> <li>• 2018 BIST (Barcelona Institute of Science and Technology) Conference, June 27th, 2018, Barcellona (Spain), invited (dialogue: The energy re-evolution: To be clean or not to be)</li> <li>• Science Academy - Bologna Institute, 50th Years of Heterogeneous Catalysis, 22 June 2018, Bologna (Italy), invited</li> </ul> <p>2017</p> <ul style="list-style-type: none"> <li>• Ernst Haage Symposium, November 22-24 2017, Mülheim - Germany, plenary</li> <li>• Workshop on CO<sub>2</sub>, Univ. Malaya (Kuala Lumpur, Malesia), 20 July 2017, plenary</li> <li>• CIS-7 (7th Czech-Italian-Spanish Symposium on Catalysis), June 13-17th 2017, Trest (Czech Rep.), plenary</li> <li>• Workshop on Science &amp; Techn Innov for Brasil, UNESP Araraquara (Brasil), March, 9-10th, 2017, plenary</li> <li>• Univ. of Malaya, Nanocat Lecturship, 19th Jan 2017, Kuala Lumpur (Malesia), plenary</li> </ul> <p>2016</p> <ul style="list-style-type: none"> <li>• Workshop on "Next Generation Energy Storage Technologies: Challenges and Opportunities", 2-3rd December 2015, Taormina, Italy, New approaches to recycle CO<sub>2</sub> and reduce emissions, invited</li> <li>• NANOTECHITALY 2015 (Sect.: Bio-Inspired and Bio-Based Technologies), Bologna, Nov. 25 – 27th, 2015, Artificial photosynthetic leaves: their role for sustainable future, invited</li> <li>• Third International Conference on Catalysis for renewable sources: fuel, energy, chemicals (CRS-3), Catania, , September 6 - 11, 2015, Integrating bio - and solar refineries: an effective new option, plenary</li> </ul>
Awards and Recognition	<p>2006: EU project ELCAT (coord. S. Perathoner): selected between EU successful stories, one of the 8th projects selected in all the area of energy</p> <p>2008: "Altran Foundation for Innovation", special Award for the project on the development of artificial trees for the conversion of CO<sub>2</sub></p> <p>2010: finalist of the 2010 European Sustainable Chemistry Award (EuCheMS)</p> <p>2011: "NanoInLife", movie produced from the European Commission to show to the public the results of nanotechnology; interview to S. Perathoner and presentation of the results on CO<sub>2</sub> (one of the 10 examples selected in EU of all nanotechnology area)</p> <p>2021: G.M. Levi Medal from the Italian Chemical Society (for innovation leading to industrial realization)</p> <p>2021: CAS (Chinese Academy of Sciences) President's International Fellowship Initiative, PIFI (Visiting Scientists)</p>
Academia	<p>2009-11: Member of the Directive of Italian Association of Zeolites</p> <p>2012-14: Member of the Directive of Interdivisional Group of Catalysis of Italian Chemical Society</p>

Visiting professor	2015-17: Academic Icon (Univ. Malaya, Kuala Lumpur, Malaysia)
Teaching activities	<ul style="list-style-type: none"> <li>- 2002-today: as professor of Industrial Chemistry, teaching in various courses of the scientific sector CHIM/04 (Industrial Chemistry);</li> <li>- average in the period 2004-2014: 21,3 CFU (5,5 courses)</li> <li>- 2001-today: member of the PhD Board on “Engineering and Chemistry of Materials” (University of Messina)</li> <li>- 2003-2004: professor at the 2nd level Master in “Risk Management”</li> <li>- 2007-2008: professor at the 2nd level Master in “Production of H<sub>2</sub> and mobility based on fuel cells”</li> <li>- 2007-2008: professor at Master of 1st level in “Management and Monitoring the Environmental Risk”</li> </ul>
Internationalization activities	<ul style="list-style-type: none"> <li>- responsible for UNIME of the European Doctorate SINCHEM (Sustainable Industrial Chemistry),</li> <li>- responsible for UNIME of various international collaboration, between which with Univ. Malaya (Univ. di Kuala Lumpur, Malesia) and University of Queensland (Australia)</li> <li>- collaboration (as proof by common publications in the last 5 years) with over 10 worldwide research centers and companies</li> <li>- visiting professor Univ. Malaya (Malesia) in years 2015-2017</li> <li>- Tutor of several PhD these with international co-tutele (5)</li> <li>- Member of the international panel of evaluation (Appointment Committee for Director, Max Planck Institute for Chemical Energy Conversion, Germany)</li> <li>- Member of the international panel of evaluation (Appointment Committee for Director, ICIQ, Terragona, Spain)</li> <li>- Member of the committee of selection of international research projects (EC, ANR - France)</li> </ul>
Chairperson	<ul style="list-style-type: none"> <li>- Chairperson in international conferences: 14 in years 1999-2017</li> <li>- Invited conferences, years 2010-2017: 17 plenary, 6 keynote, 12 invited</li> </ul>
Coordination and scientific responsibility	<p><b>NATIONAL PROJECTS</b></p> <p><b><i>National Coordinator</i></b></p> <ul style="list-style-type: none"> <li>- PRIN 2017: CO<sub>2</sub> as only source of carbons for monomers and polymers: a step forwards circular economy (CO<sub>2</sub> ONLY), national scientific coordinator</li> </ul> <p><b><i>Scientific Responsible (PI)</i></b></p> <ul style="list-style-type: none"> <li>- PRIN 2003: Materiali multifunzionali nanostrutturati con migliorata attività fotocatalitica. 24th months, Scientific responsible for UniME</li> <li>- PRIN 2007: Processi sostenibili di 2a generazione di produzione H<sub>2</sub> da sorgenti rinnovabili, 24th months, Scientific responsible for UniME</li> <li>- PRIN 2010: Meccanismi di attivazione della CO<sub>2</sub> per la progettazione di nuovi materiali per l'efficienza dell'energia e delle risorse, 36th months, Scientific responsible for UniME</li> <li>- PON01_01725: Nuove Tecnologie Fotovoltaiche per Sistemi Intelligenti Integrati in Edifici (Fotovoltaico), 36th months from 1st Oct 2011, Scientific responsible for UdR UniME</li> <li>- PON02_00355_3416798. ENERGETIC: Tecnologie per l'ENERGIA e l'Efficienza energETICa, 36th months from 1st Jan 2012, Scientific responsible for UdR UniME</li> <li>- INSTM/Regione Lombardia 2013: Ferriti di lantanio per nuove fonti di energia (Ferriti-NFE), 24th months, Scientific responsible for UdR ME of INSTM</li> </ul> <p><b>EU PROJECTS</b></p> <p><b><i>Scientific coordinator</i></b></p> <ul style="list-style-type: none"> <li>- FP6-2003-NEST-A: Electrocatalytic Gas-Phase Conversion of CO<sub>2</sub> in Confined Catalysts (ELCAT), 42th months, Coordinator of the project</li> <li>- FP5-ICA3-2002-10096 Novel Catalytic Technologies for the treatment of wastewater from</li> </ul>

	<p>Agro-food and industrial productions in MED Countries, 36th months, Coordinator of the project</p> <ul style="list-style-type: none"> <li>- FP7-NMP2-LA-2010-245988 Integration of Nanoreactor and multisite CAtalysis for a Sustainable chemical production (INCAS), 48th months, Coordinator of the project</li> <li>- H2020-767798: Oxalic acid from CO<sub>2</sub> using Eletrochemistry At demonstration scale (OCEAN), on-going, 48th months, Coordinator of the project</li> </ul> <p><b>Scientific responsible (PI) for Udr UniME</b></p> <ul style="list-style-type: none"> <li>- FP6-2002-NMP-1: Coordination of Nanostructured Catalytic Oxides Research and Development in Europe (CONCORDE), 27th months, scientific responsible for Udr UniME</li> <li>- FP6-2004-NMP-32583 Nano engineered thin films for advanced materials applications (NATAMA), 36th months, Scientific responsible for Udr ME</li> <li>- FP7-2012- 309701: Eco-friendly biorefinery fine chemicals from CO<sub>2</sub> photo-catalytic reduction (ECO2CO<sub>2</sub>), 36th months, Scientific responsible for Udr ME</li> <li>- FP7-2014- 621210 (FCH JU). Integrated High-Temperature Electrolysis and Methanation for Effective Power to Gas Conversion (HELMETH), 36th months, Scientific responsible Udr ME</li> <li>- 532475-1-IT-2012-1-ERA MUNDUS-EMJD Erasmus Mundus Joint Doctorate Programmes "Sustainable INdustrial CHEMistry", 96th months, Scientific responsible for Udr ME</li> <li>- IAPP CONTRACT 324292-2013. BIOFUR: BIOpolymers and BIOfuels from FURan based building blocks. A Marie Curie Industry-Academia Partnerships and Pathways, 36th months, Scientific responsible for Udr ME</li> <li>- FETPROACT-2016, An Artificial Leaf: a photo-electro-catalytic cell from earth-abundant materials for sustainable solar production of CO<sub>2</sub>-based chemicals and fuels (A-LEAF)“Project ID: 732840, scientific responsible for Udr ME</li> <li>- H2020-NMBP-ST-IND-2018-2020, PowerPlatform: Establishment of platform infrastructure for highly selective electrochemical conversions (PERFORM), project 820723, Scientific responsible for Udr ME</li> </ul> <p><b>With companies</b></p> <ul style="list-style-type: none"> <li>- Project with ALTA, 1 years (2010)</li> <li>- Project with Toyota, 2 years (2011-2012)</li> </ul>
Chair of International Conference (selection)	<ul style="list-style-type: none"> <li>- 8th European Workshop on Selective Oxidation (Turku, Finland, 9-30 Aug. 2007). Chairpersons: F.Cavani, V.C. Corberan, G Centi, G. Mestl, S. PERATHONER, P. Ruiz</li> <li>- Catalysis for a Sustainable Chemistry: Walking to the Frontiers between Homogeneous and Heterogeneous Catalysis, Messina, May 4th, 2009. Chairperson: S. PERATHONER</li> <li>- CIS-3/AIZ-2009 3rd Czech-Italian-Spanish Trilateral Meeting on catalysis and Micro/Meso-Porous Materials and IX National Conference on Science and Technology of Zeolites, 21-25th June, 2009, Acireale (CT). Chairpersons: S. PERATHONER, S. Quartieri</li> <li>- 5th International Symposium on Carbon for Catalysis - Carbocat-V, June, 28th 30th, 2012 - Bressanone/Brixen. Chairpersons: C. Milone, L. Prati, S. PERATHONER</li> <li>- 6th IDECAT/ERIC-JCAT Conference on Catalysis, Design advanced multifunctional catalysts for sustainable processes, 3-6th March 2013, Bressanone/Brixen. Chairpersons: S. PERATHONER, A. Jentys, C. Claver.</li> <li>- XVII National Congress of Catalysis GIC 2013 and XI National Congress of Zeolites Science and Technology, 15 - 18 September 2013, Riccione, scientific committee</li> <li>- XVIII Scuola Nazionale di Scienza e Tecnologia dei Materiali - Ischia 16-20 Luglio 2014, scientific committee</li> <li>- 6th Czech-Italian-Spanish Conference on Molecular Sieves and Catalysis joint with GIC 2015 Congress (XVIII National Congress of Catalysis) and AIZ 2015 Congress (XII National Congress of Zeolites Science and Technology), 14th to 17th June, 2015, Amantea (CS), Italy. Chairpersons: G. Giordano, S. PERATHONER, L. Marchese.</li> </ul>



	<ul style="list-style-type: none"> <li>- Europacat 2017, 13th European Congress on Catalysis, August 27 to 31, 2017 in Florence, Italy. Chairpersons: Gabriele CENTI, Rinaldo PSARO, Giorgio STRUKUL and Siglinda PERATHONER</li> <li>- XIII Italian Congress of Zeolites Science and Technology (AIZ2017), 1-2 September 2017, Florence, Italy. Chairpersons: Siglinda Perathoner, Girolamo Giordano</li> <li>- 4th Euro Asia Zeolite Congress (4th EAZC), 27th to 30th January 2019 in Taormina (ME), Italy . Chairpersons: Siglinda Perathoner, Girolamo Giordano, S.B. Hong</li> </ul>
<p>Research fields</p>	<p>Research interests are in the areas of applied heterogeneous catalysis, chemical reaction engineering, and reaction mechanisms. Present research interests embrace the development of industrial heterogeneous catalysts for applications in the field of innovative selective oxidation processes, environment protection and sustainable energy.</p> <p><i>Main field:</i> Heterogeneous catalysis and catalytic technologies, chemical processes with low environmental impact, development of nanomaterials for applications in the field of the treatment and control of gaseous and liquid emissions, catalysis for sustainable processes and energy, development of electrocatalysts for fuel cells and electrochemical devices, nanostructured photocatalysts for water splitting, membranes for H<sub>2</sub> separation</p> <p><i>Other fields:</i> Cleanup technologies (gas &amp; liquid emissions), environmental catalysis, industrial catalytic processes, solid catalysts (mixed oxides and zeolites, especially containing transition metals, mesoporous materials, nanostructured oxides and carbon), greenhouse gas reduction, use of solar energy, fuel cells and (photo)electrocatalytic devices</p>  <p><b>Systems based on nanotubes and nano-structures.</b> Based on metal nanoclusters deposited over carbon or metal-oxides organized 1D-type nanostructures, for applications ranging from electrodes in PEM and PEC devices, to photoactive thin films, sensors, advanced microreactors, and catalysts for novel energy and chemical processes.</p> <p><b>Materials for solar fuels &amp; renewable energy.</b> Synthesis, characterization and testing for applications ranging from advanced coating and photoactive materials, to novel catalysts and devices in sustainable chemical processes, and for energy (biomass conversion, renewable H<sub>2</sub>, solar fuels from CO<sub>2</sub>).</p> <p><b>Catalytic membranes.</b> Based on Pd-alloy supported thin films for applications from environment protection (reduction of nitrate in water) to chemical synthesis (H<sub>2</sub>O<sub>2</sub> direct synthesis) and energy. Recent focus is on the new energy-efficient membrane-based processes for the production of H<sub>2</sub> by CH<sub>4</sub> steam reforming and syngas by catalytic partial oxidation.</p> <ul style="list-style-type: none"> <li>- <b>Chemo-catalytic processes for ligno-cellulosic biorefineries.</b> Development of novel catalysts for the conversion of ligno-cellulosic biomass (in particular waste materials) to novel platform molecules (furfurals) and the catalytic upgrading of the latter to biofuels (gasoline and diesel) or chemicals</li> </ul>
<p>Web site</p>	<p><a href="http://ww2new.unime.it/catalysis/">http://ww2new.unime.it/catalysis/</a></p>