

# Maria Luisa Grilli

## List of Publications by Year in descending order

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78  
papers

1,999  
citations

218592

26  
h-index

265120

42  
g-index

78  
all docs

78  
docs citations

78  
times ranked

1701  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Systematic Review of Metal Oxide Applications for Energy and Environmental Sustainability. <i>Metals</i> , 2020, 10, 1604.	1.0	120
2	The NO <sub>2</sub> response of solid electrolyte sensors made using nano-sized LaFeO <sub>3</sub> electrodes. <i>Sensors and Actuators B: Chemical</i> , 2001, 76, 483-488.	4.0	119
3	The Critical Raw Materials in Cutting Tools for Machining Applications: A Review. <i>Materials</i> , 2020, 13, 1377.	1.3	89
4	Electrochemical NO <sub>x</sub> Sensors Based on Interfacing Nanosized LaFeO <sub>3</sub> Perovskite-Type Oxide and Ionic Conductors. <i>Journal of the Electrochemical Society</i> , 2001, 148, H98.	1.3	86
5	Planar electrochemical sensors based on tape-cast YSZ layers and oxide electrodes. <i>Solid State Ionics</i> , 2004, 171, 173-181.	1.3	86
6	Sensing Mechanism of Potentiometric Gas Sensors Based on Stabilized Zirconia with Oxide Electrodes. <i>Journal of the Electrochemical Society</i> , 2004, 151, H133.	1.3	77
7	Powder Bed Fusion Additive Manufacturing Using Critical Raw Materials: A Review. <i>Materials</i> , 2021, 14, 909.	1.3	69
8	Study of YSZ-Based Electrochemical Sensors with WO <sub>3</sub> Electrodes in NO <sub>2</sub> and CO Environments. <i>Journal of the Electrochemical Society</i> , 2003, 150, H33.	1.3	65
9	Nano-structured perovskite oxide electrodes for planar electrochemical sensors using tape casted YSZ layers. <i>Journal of the European Ceramic Society</i> , 2004, 24, 1187-1190.	2.8	63
10	Room temperature deposition of XRD-amorphous TiO <sub>2</sub> thin films: Investigation of device performance as a function of temperature. <i>Ceramics International</i> , 2018, 44, 11582-11590.	2.3	55
11	Non-Nernstian planar sensors based on YSZ with a Nb <sub>2</sub> O <sub>5</sub> electrode. <i>Sensors and Actuators B: Chemical</i> , 2008, 129, 591-598.	4.0	53
12	Optical parameters of oxide films typically used in optical coating production. <i>Applied Optics</i> , 2011, 50, C75.	2.1	52
13	Solutions for Critical Raw Materials under Extreme Conditions: A Review. <i>Materials</i> , 2017, 10, 285.	1.3	52
14	A facile growth of spray based ZnO films and device performance investigation for Schottky diodes: Determination of interface state density distribution. <i>Journal of Alloys and Compounds</i> , 2017, 708, 55-66.	2.8	43
15	Green Synthesis of Silver Oxide Nanoparticles for Photocatalytic Environmental Remediation and Biomedical Applications. <i>Metals</i> , 2022, 12, 769.	1.0	40
16	Transparent and conductive Al-doped ZnO films for solar cells applications. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 748-754.	0.8	35
17	Structural, optical and electrical peculiarities of r.f. plasma sputtered indium tin oxide films. <i>Thin Solid Films</i> , 2007, 515, 8469-8473.	0.8	34
18	YSZ-based electrochemical sensors: From materials preparation to testing in the exhausts of an engine bench test. <i>Journal of the European Ceramic Society</i> , 2005, 25, 2959-2964.	2.8	33

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19	Behavior of optical thin-film materials and coatings under proton and gamma irradiation. <i>Applied Optics</i> , 2014, 53, A314.	0.9	33
20	Preparation of Sol-Gel Nano-Composites Containing Copper Oxide and Their Gas Sensing Properties. <i>Journal of Sol-Gel Science and Technology</i> , 2003, 26, 1085-1089.	1.1	32
21	High temperature detection of CO/HCs gases by non-Nernstian planar sensors using Nb <sub>2</sub> O <sub>5</sub> electrode. <i>Sensors and Actuators B: Chemical</i> , 2008, 130, 514-519.	4.0	31
22	A study on non-stoichiometric p-NiOx/n-Si heterojunction diode fabricated by RF sputtering: Determination of diode parameters. <i>Superlattices and Microstructures</i> , 2016, 100, 924-933.	1.4	31
23	Promising Methods for Corrosion Protection of Magnesium Alloys in the Case of Mg-Al, Mg-Mn-Ce and Mg-Zn-Zr: A Recent Progress Review. <i>Metals</i> , 2021, 11, 1133.	1.0	31
24	Zirconia-Based Electrochemical NO <sub>x</sub> Sensors with Semiconducting Oxide Electrodes. <i>Journal of the American Ceramic Society</i> , 2004, 87, 1883-1889.	1.9	30
25	A Forefront Framework for Sustainable Aquaponics Modeling and Design. <i>Sustainability</i> , 2021, 13, 9313.	1.6	30
26	Diatom frustules decorated with zinc oxide nanoparticles for enhanced optical properties. <i>Nanotechnology</i> , 2017, 28, 375704.	1.3	29
27	Critical Raw Materials Saving by Protective Coatings under Extreme Conditions: A Review of Last Trends in Alloys and Coatings for Aerospace Engine Applications. <i>Materials</i> , 2021, 14, 1656.	1.3	27
28	Al <sub>2</sub> O <sub>3</sub> /SiO <sub>2</sub> and HfO <sub>2</sub> /SiO <sub>2</sub> dichroic mirrors for UV solid-state lasers. <i>Thin Solid Films</i> , 2009, 517, 1731-1735.	0.8	26
29	Radio frequency sputtered Al:ZnO-Ag transparent conductor: A plasmonic nanostructure with enhanced optical and electrical properties. <i>Journal of Applied Physics</i> , 2013, 114, 094509.	1.1	26
30	Planar non-nernstian electrochemical sensors: field test in the exhaust of a spark ignition engine. <i>Sensors and Actuators B: Chemical</i> , 2005, 108, 319-325.	4.0	25
31	Analysis of the influence of the gas pressure during the deposition of electrochromic WO <sub>3</sub> films by reactive r.f. sputtering of W and WO <sub>3</sub> target. <i>Solar Energy Materials and Solar Cells</i> , 1999, 56, 259-269.	3.0	23
32	Inverse photoemission studies of C <sub>60</sub> on Au(110). <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1995, 76, 405-409.	0.8	21
33	Planar electrochemical sensors based on YSZ with WO <sub>3</sub> electrode prepared by different chemical routes. <i>Sensors and Actuators B: Chemical</i> , 2005, 111-112, 91-95.	4.0	21
34	Application of NiOx thin films as p-type emitter layer in heterojunction solar cells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2016, 13, 1006-1010.	0.8	21
35	Experimental near infrared absorption enhancement of graphene layers in an optical resonant cavity. <i>Nanotechnology</i> , 2019, 30, 445201.	1.3	21
36	The Critical Raw Materials Issue between Scarcity, Supply Risk, and Unique Properties. <i>Materials</i> , 2021, 14, 1826.	1.3	21

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37	Titania nanotubes self-assembled by electrochemical anodization: Semiconducting and electrochemical properties. <i>Thin Solid Films</i> , 2016, 601, 28-34.	0.8	20
38	Reconsidering the accuracy of X-ray fluorescence and ion beam based methods when used to measure the thickness of ancient gildings. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2017, 135, 42-47.	1.5	20
39	Facile electrochemical-assisted synthesis of TiO <sub>2</sub> nanotubes and their role in Schottky barrier diode applications. <i>Superlattices and Microstructures</i> , 2018, 113, 310-318.	1.4	19
40	Metal Oxides. <i>Metals</i> , 2020, 10, 820.	1.0	17
41	Electrochemical NO <sub>2</sub> Sensors with WO <sub>3</sub> Electrodes for High Temperature Applications.. <i>Journal of the Ceramic Society of Japan</i> , 2002, 110, 159-162.	1.3	16
42	Optical, electrical, structural and microstructural characteristics of rf sputtered ITO films developed for art protection coatings. <i>Applied Physics A: Materials Science and Processing</i> , 2007, 89, 63-72.	1.1	16
43	Design, Fabrication, and Characterization of New Materials Based on Zirconia Doped with Mixed Rare Earth Oxides: Review and First Experimental Results. <i>Metals</i> , 2020, 10, 746.	1.0	16
44	Si quantum dots for solar cell fabrication. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2009, 159-160, 66-69.	1.7	15
45	Ultrathin and stable Nickel films as transparent conductive electrodes. <i>Thin Solid Films</i> , 2015, 594, 261-265.	0.8	15
46	Machine Learning Methods and Sustainable Development: Metal Oxides and Multilayer Metal Oxides. <i>Metals</i> , 2022, 12, 836.	1.0	15
47	The modification of the characteristics of nanocrystalline ZnO thin films by variation of Ta doping content. <i>Philosophical Magazine</i> , 2016, 96, 2125-2142.	0.7	13
48	Metal Oxide Nanoparticle-Based Coating as a Catalyzer for A-TIG Welding: Critical Raw Material Perspective. <i>Metals</i> , 2019, 9, 567.	1.0	12
49	Effect of NiO <sub>x</sub> film thickness on the electrical properties of Ni/p <sup>+</sup> NiO <sub>x</sub> /n-Si structures. <i>Journal of Sandwich Structures and Materials</i> , 2021, 23, 1383-1402.	2.0	12
50	Experimental Mid-Infrared Absorption (84%) of Single-Layer Graphene in a Reflective Asymmetric Fabry-Pérot Filter: Implications for Photodetectors. <i>ACS Applied Nano Materials</i> , 2021, 4, 1495-1502.	2.4	11
51	Experimental demonstration of mid-IR absorption enhancement in single layer CVD graphene. <i>Optics Letters</i> , 2020, 45, 3861.	1.7	11
52	Study of amorphous germanium-nitrogen alloys through x-ray photoelectron and Auger electron spectroscopies. <i>Applied Physics Letters</i> , 1995, 66, 1258-1260.	1.5	10
53	Multi-technique characterization of gold electroplating on silver substrates for cultural heritage applications. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2017, 406, 318-323.	0.6	9
54	Density Functional Theory Calculations of Pinus brutia Derivatives and Its Response to Light in a Au/n-Si Device. <i>Energies</i> , 2021, 14, 7983.	1.6	9

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55	Study of YSZ-based electrochemical sensors with oxide electrodes for high temperature applications. Bulletin of Materials Science, 2002, 25, 451-453.	0.8	8
56	Non-Nernstian Planar Sensors Based on YSZ with Ta (10at.%) -Doped Nanosized Titania as a Sensing Electrode for High-Temperature Applications. International Journal of Applied Ceramic Technology, 2006, 3, 393-400.	1.1	8
57	Transparent nanostructured electrodes: Electrospun NiO nanofibers/NiO films. Thin Solid Films, 2016, 601, 54-58.	0.8	8
58	A Bibliometric Analysis of the Publications on In Doped ZnO to be a Guide for Future Studies. Metals, 2020, 10, 598.	1.0	8
59	WO <sub>3</sub> and Ionic Liquids: A Synergic Pair for Pollutant Gas Sensing and Desulfurization. Metals, 2020, 10, 475.	1.0	8
60	Possible alternatives to critical elements in coatings for extreme applications. IOP Conference Series: Materials Science and Engineering, 2018, 329, 012005.	0.3	7
61	CaO-CaZrO <sub>3</sub> Mixed Oxides Prepared by Auto-Combustion for High Temperature CO <sub>2</sub> Capture: The Effect of CaO Content on Cycle Stability. Metals, 2020, 10, 750.	1.0	7
62	Testing Planar Gas Sensors Based on Yttria-stabilized Zirconia with Oxide Electrodes in the Exhaust Gases of a Spark Ignition Engine. Sensor Letters, 2005, 3, 22-26.	0.4	7
63	Measuring ultrathin metal coatings using SPR spectroscopic ellipsometry with a prism-dielectric-metal-liquid configuration. Optics Express, 2019, 27, 7912.	1.7	7
64	Non-Nernstian Planar Sensors Based on YSZ with an Nb <sub>2</sub> O <sub>5</sub> Electrode: Discussion on Sensing Mechanism. ECS Transactions, 2006, 1, 163-171.	0.3	4
65	Optical transmission filters for observation of lightning phenomena in the Earth atmosphere. Applied Optics, 2011, 50, C100.	2.1	3
66	Towards Perfect Absorption of Single Layer CVD Graphene in an Optical Resonant Cavity: Challenges and Experimental Achievements. Materials, 2022, 15, 352.	1.3	3
67	Optical and Electrical Properties of TiO <sub>2</sub> Based Transparent Conductive Films and Multilayer Systems Fabricated by Radio Frequency Sputtering and E-Beam Evaporation. , 2016, , .		2
68	Characteristics of Ultrathin Ni Films. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800728.	0.8	2
69	A comparative study of the mechanical and tribological properties of thin Al <sub>2</sub> O <sub>3</sub> coatings fabricated by atomic layer deposition and radiofrequency sputtering. Physica Status Solidi (A) Applications and Materials Science, 0, , 2100398.	0.8	2
70	The formation of transient defects during high power laser-coating interaction revealed by the variation of electron beam evaporated coatings' optical constants with temperature. Optics Communications, 2022, 516, 127945.	1.0	2
71	Application of Mechanochemically Treated Waste Materials for Water Remediation. Physica Status Solidi (A) Applications and Materials Science, 0, , 2100515.	0.8	2
72	Electrochemical NO <sub>x</sub> Sensors for Emission Control of Automotive Exhaust Gas. , 0, , .		1

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73	NO <sub>x</sub> Sensors Based on Interfacing Yttria Stabilized Zirconia with p and n-Type Semiconducting Oxides. Key Engineering Materials, 2002, 206-213, 1243-1246.	0.4	1
74	Electrical Properties of Sol-Gel Processed Hybrid Films. Journal of Sol-Gel Science and Technology, 2003, 26, 1081-1084.	1.1	1
75	Screen-Printed Dense Yttria-Stabilized-Zirconia Electrolytes for Anode-Supported Solid Oxide Fuel Cells.. ECS Transactions, 2006, 1, 83-91.	0.3	1
76	AZO films prepared by r.f. magnetron sputtering: structural, electrical, and optical properties. Proceedings of SPIE, 2008, , .	0.8	1
77	Inverse photoemission and Kelvin probe studies of the Au/GaP(110) interface. Vacuum, 1995, 46, 509-512.	1.6	0
78	Optical and electrical characteristics of radio frequency sputtered ITO and In-free transparent conductors. , 2019, , .		0