

Pietro Siciliano

List of Publications by Year in descending order

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126
papers

3,370
citations

126708

33
h-index

155451

55
g-index

130
all docs

130
docs citations

130
times ranked

4402
citing authors

#	ARTICLE	IF	CITATIONS
1	The Role of Surface Oxygen Vacancies in the NO ₂ Sensing Properties of SnO ₂ Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2008, 112, 19540-19546.	1.5	181
2	On the study of feature extraction methods for an electronic nose. <i>Sensors and Actuators B: Chemical</i> , 2002, 87, 274-288.	4.0	160
3	Nanostructured In ₂ O ₃ â€“SnO ₂ solâ€“gel thin film as material for NO ₂ detection. <i>Sensors and Actuators B: Chemical</i> , 2006, 114, 646-655.	4.0	126
4	Synthesis, electrical characterization, and gas sensing properties of molybdenum oxide nanorods. <i>Applied Physics Letters</i> , 2006, 88, 152111.	1.5	120
5	Polycrystalline Well-Shaped Blocks of Indium Oxide Obtained by the Solâ€“Gel Method and Their Gas-Sensing Properties. <i>Chemistry of Materials</i> , 2003, 15, 4377-4383.	3.2	116
6	Support vector machines for olfactory signals recognition. <i>Sensors and Actuators B: Chemical</i> , 2003, 88, 30-39.	4.0	115
7	Preparation, characterisation and applications of thin films for gas sensors prepared by cheap chemical method. <i>Sensors and Actuators B: Chemical</i> , 2000, 70, 153-164.	4.0	111
8	Ambient Pressure Synthesis of Corundum-Type In ₂ O ₃ . <i>Journal of the American Chemical Society</i> , 2004, 126, 4078-4079.	6.6	108
9	Drift counteraction with multiple self-organising maps for an electronic nose. <i>Sensors and Actuators B: Chemical</i> , 2004, 98, 305-317.	4.0	101
10	A Radar-Based Smart Sensor for Unobtrusive Elderly Monitoring in Ambient Assisted Living Applications. <i>Biosensors</i> , 2017, 7, 55.	2.3	92
11	Solvothermal, Chloroalkoxide-based Synthesis of Monoclinic WO ₃ Quantum Dots and Gas-Sensing Enhancement by Surface Oxygen Vacancies. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 16808-16816.	4.0	78
12	Aroma analysis by GC/MS and electronic nose dedicated to Negroamaro and Primitivo typical Italian Apulian wines. <i>Sensors and Actuators B: Chemical</i> , 2013, 179, 259-269.	4.0	70
13	Synthesis and Gas-Sensing Properties of Pd-Doped SnO ₂ Nanocrystals. A Case Study of a General Methodology for Doping Metal Oxide Nanocrystals. <i>Crystal Growth and Design</i> , 2008, 8, 1774-1778.	1.4	69
14	Detecting falls with 3D range camera in ambient assisted living applications: A preliminary study. <i>Medical Engineering and Physics</i> , 2011, 33, 770-781.	0.8	69
15	Preparation and characterization of cobalt porphyrin modified tin dioxide films for sensor applications. <i>Sensors and Actuators B: Chemical</i> , 2004, 103, 339-343.	4.0	67
16	Synthesis of SnO ₂ and ZnO Colloidal Nanocrystals from the Decomposition of Tin(II) 2-Ethylhexanoate and Zinc(II) 2-Ethylhexanoate. <i>Chemistry of Materials</i> , 2005, 17, 6468-6472.	3.2	65
17	Analytical characterisation of Negroamaro red wines by â€œAroma Wheelsâ€: <i>Food Chemistry</i> , 2013, 141, 2906-2915.	4.2	65
18	TiO ₂ thin films from titanium butoxide: Synthesis, Pt addition, structural stability, microelectronic processing and gas-sensing properties. <i>Sensors and Actuators B: Chemical</i> , 2008, 130, 599-608.	4.0	61

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19	People occupancy detection and profiling with 3D depth sensors for building energy management. <i>Energy and Buildings</i> , 2015, 92, 246-266.	3.1	61
20	Supervised machine learning scheme for electromyography-based pre-fall detection system. <i>Expert Systems With Applications</i> , 2018, 100, 95-105.	4.4	58
21	Sol-gel Processing and Characterization of Pure and Metal-Doped SnO ₂ Thin Films. <i>Journal of the American Ceramic Society</i> , 2001, 84, 48-54.	1.9	57
22	Synthesis and Characterization of MoO ₃ Thin Films and Powders from a Molybdenum Chloromethoxide. <i>Chemistry of Materials</i> , 2004, 16, 5495-5501.	3.2	50
23	IEEE1451.4: A way to standardize gas sensor. <i>Sensors and Actuators B: Chemical</i> , 2006, 114, 141-151.	4.0	45
24	Supervised Expert System for Wearable MEMS Accelerometer-Based Fall Detector. <i>Journal of Sensors</i> , 2013, 2013, 1-11.	0.6	44
25	PDMS/Kapton Interface Plasma Treatment Effects on the Polymeric Package for a Wearable Thermoelectric Generator. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 6586-6590.	4.0	43
26	Solution Synthesis of Thin Films in the SnO ₂ -In ₂ O ₃ System: A Case Study of the Mixing of Sol-gel and Metal-Organic Solution Processes. <i>Chemistry of Materials</i> , 2006, 18, 840-846.	3.2	40
27	SnO ₂ sol-gel derived thin films for integrated gas sensors. <i>Sensors and Actuators B: Chemical</i> , 2001, 77, 496-502.	4.0	39
28	Structural distinctions of Fe ₂ O ₃ -In ₂ O ₃ composites obtained by various sol-gel procedures, and their gas-sensing features. <i>Sensors and Actuators B: Chemical</i> , 2007, 124, 133-142.	4.0	39
29	Chloro-Alkoxide Route to Transition Metal Oxides. Synthesis of WO ₃ Thin Films and Powders from a Tungsten Chloro-Methoxide. <i>Chemistry of Materials</i> , 2009, 21, 5215-5221.	3.2	39
30	Capacitive RF MEMS Switches With Tantalum-Based Materials. <i>Journal of Microelectromechanical Systems</i> , 2011, 20, 365-370.	1.7	39
31	Nanocrystals as Very Active Interfaces: Ultra-sensitive Room-Temperature Ozone Sensors with In ₂ O ₃ Nanocrystals Prepared by a Low-Temperature Sol-gel Process in a Coordinating Environment. <i>Journal of Physical Chemistry C</i> , 2007, 111, 13967-13971.	1.5	38
32	Chromatographic analysis of VOC patterns in exhaled breath from smokers and nonsmokers. <i>Biomedical Chromatography</i> , 2018, 32, e4132.	0.8	36
33	Comparison and integration of arrays of quartz resonators and metal-oxide semiconductor chemoresistors in the quality evaluation of olive oils. <i>Sensors and Actuators B: Chemical</i> , 2001, 78, 303-309.	4.0	34
34	Metal oxide gas sensor array for the detection of diesel fuel in engine oil. <i>Sensors and Actuators B: Chemical</i> , 2008, 131, 125-133.	4.0	34
35	Chemical synthesis of In ₂ O ₃ nanocrystals and their application in highly performing ozone-sensing devices. <i>Sensors and Actuators B: Chemical</i> , 2008, 130, 483-487.	4.0	34
36	Colloidal Counterpart of the TiO ₂ -Supported V ₂ O ₅ System: A Case Study of Oxide-on-Oxide Deposition by Wet Chemical Techniques. Synthesis, Vanadium Speciation, and Gas-Sensing Enhancement. <i>Journal of Physical Chemistry C</i> , 2013, 117, 20697-20705.	1.5	34

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37	Human posture recognition with a time-of-flight 3D sensor for in-home applications. <i>Expert Systems With Applications</i> , 2013, 40, 744-751.	4.4	32
38	Acetone sensors based on TiO ₂ nanocrystals modified with tungsten oxide species. <i>Journal of Alloys and Compounds</i> , 2016, 665, 345-351.	2.8	32
39	Recovery of drifting sensor responses by means of DWT analysis. <i>Sensors and Actuators B: Chemical</i> , 2007, 120, 411-416.	4.0	30
40	On the electrostatic actuation of capacitive RF MEMS switches on GaAs substrate. <i>Sensors and Actuators A: Physical</i> , 2015, 232, 202-207.	2.0	29
41	Improving holographic reconstruction by automatic Butterworth filtering for microelectromechanical systems characterization. <i>Applied Optics</i> , 2015, 54, 3428.	2.1	29
42	Blood, urine and semen Volatile Organic Compound (VOC) pattern analysis for assessing health environmental impact in highly polluted areas in Italy. <i>Environmental Pollution</i> , 2021, 286, 117410.	3.7	28
43	Odor discrimination using adaptive resonance theory. <i>Sensors and Actuators B: Chemical</i> , 2000, 69, 248-252.	4.0	27
44	Oxide nanopowders from the low-temperature processing of metal oxide sols and their application as gas-sensing materials. <i>Sensors and Actuators B: Chemical</i> , 2006, 118, 105-109.	4.0	26
45	Pt doping triggers growth of TiO ₂ nanorods: nanocomposite synthesis and gas-sensing properties. <i>CrystEngComm</i> , 2012, 14, 3882.	1.3	26
46	CH ₃ SH-sensing characteristics of LaFeO ₃ thick-film prepared by co-precipitation method. <i>Sensors and Actuators B: Chemical</i> , 2003, 94, 197-200.	4.0	25
47	Titanium dioxide thin films prepared by seeded supersonic beams for gas sensing applications. <i>Sensors and Actuators B: Chemical</i> , 2004, 100, 177-184.	4.0	24
48	Influence of design and fabrication on RF performance of capacitive RF MEMS switches. <i>Microsystem Technologies</i> , 2016, 22, 1741-1746.	1.2	24
49	Comparison Between Deep Learning Models and Traditional Machine Learning Approaches for Facial Expression Recognition in Ageing Adults. <i>Journal of Computer Science and Technology</i> , 2020, 35, 1127-1146.	0.9	23
50	Reliability Enhancement by Suitable Actuation Waveforms for Capacitive RF MEMS Switches in III-V Technology. <i>Journal of Microelectromechanical Systems</i> , 2012, 21, 414-419.	1.7	21
51	Surface Modification of TiO ₂ Nanocrystals by WO ₃ Coating or Wrapping: Solvothermal Synthesis and Enhanced Surface Chemistry. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 6898-6908.	4.0	21
52	Evidence of catalytic activation of anatase nanocrystals by vanadium oxide surface layer: Acetone and ethanol sensing properties. <i>Sensors and Actuators B: Chemical</i> , 2015, 217, 193-197.	4.0	21
53	HS-SPME-GC-MS metabolomics approach for sperm quality evaluation by semen volatile organic compounds (VOCs) analysis. <i>Biomedical Physics and Engineering Express</i> , 2018, 5, 015006.	0.6	21
54	Influence of electrodes ageing on the properties of the gas sensors based on SnO ₂ . <i>Sensors and Actuators B: Chemical</i> , 2006, 115, 396-402.	4.0	20

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55	SnO ₂ thin films from metalorganic precursors: Synthesis, characterization, microelectronic processing and gas-sensing properties. <i>Sensors and Actuators B: Chemical</i> , 2007, 124, 217-226.	4.0	19
56	TiO ₂ colloidal nanocrystals surface modification by V ₂ O ₅ species: Investigation by ^{47,49} Ti MAS-NMR and H ₂ , CO and NO ₂ sensing properties. <i>Applied Surface Science</i> , 2015, 351, 1169-1173.	3.1	18
57	Inorganic Photocatalytic Enhancement: Activated RhB Photodegradation by Surface Modification of SnO ₂ Nanocrystals with V ₂ O ₅ -like species. <i>Scientific Reports</i> , 2017, 7, 44763.	1.6	17
58	In-home hierarchical posture classification with a time-of-flight 3D sensor. <i>Gait and Posture</i> , 2014, 39, 182-187.	0.6	16
59	Ta ₂ O ₅ Thin Films for Capacitive RF MEMS Switches. <i>Journal of Sensors</i> , 2010, 2010, 1-5.	0.6	15
60	Comparative Analysis of Supervised Classifiers for the Evaluation of Sarcopenia Using a sEMG-Based Platform. <i>Sensors</i> , 2022, 22, 2721.	2.1	15
61	Experimental assessment of thermoelectric generator package properties: Simulated results validation and real gradient capabilities. <i>Energy</i> , 2015, 86, 300-310.	4.5	14
62	From doping to phase transformation: Ammonia sensing performances of chloroalkoxide-derived WO ₃ powders modified with chromium. <i>Sensors and Actuators B: Chemical</i> , 2010, 148, 200-206.	4.0	13
63	Use of a toasted durum whole meal in the production of a traditional Italian pasta: chemical, mechanical, sensory and image analyses. <i>International Journal of Food Science and Technology</i> , 2008, 43, 1610-1618.	1.3	12
64	The Chloroalkoxide Route to Transition Metal Oxides. Synthesis of V ₂ O ₅ Thin Films and Powders from a Vanadium Chloromethoxide. <i>Chemistry of Materials</i> , 2009, 21, 1618-1626.	3.2	12
65	Geodesic-based human posture analysis by using a single 3D TOF camera. , 2011, , .		11
66	Surface chemical functionalization of single walled carbon nanotubes with a bacteriorhodopsin mutant. <i>Nanoscale</i> , 2012, 4, 6434.	2.8	11
67	Chemoresistive sensing of light alkanes with SnO ₂ nanocrystals: a DFT-based insight. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 3634.	1.3	10
68	Soft chemistry routes to transparent metal oxide thin films. The case of sol-gel synthesis and structural characterization of Ta ₂ O ₅ thin films from tantalum chloromethoxide. <i>Thin Solid Films</i> , 2014, 555, 39-41.	0.8	10
69	Smart EMG-based Socks for Leg Muscles Contraction Assessment. , 2019, , .		10
70	The hydrolytic route to Co-porphyrin-doped SnO ₂ gas-sensing materials. <i>Inorganica Chimica Acta</i> , 2008, 361, 79-85.	1.2	9
71	Two step, hydrolytic-solvothermal synthesis of redispersible titania nanocrystals and their gas-sensing properties. <i>Journal of Sol-Gel Science and Technology</i> , 2011, 60, 254-259.	1.1	9
72	Out-of-plane deformation and pull-in voltage of cantilevers with residual stress gradient: experiment and modelling. <i>Microsystem Technologies</i> , 2019, 25, 3581-3588.	1.2	9

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73	Modeling, Fabrication and Integration of Wearable Smart Sensors in a Monitoring Platform for Diabetic Patients. <i>Sensors</i> , 2021, 21, 1847.	2.1	9
74	Compositional and optical characterization of rf sputter deposited TeOx thin films for optical disk application. <i>Vacuum</i> , 1992, 43, 305-308.	1.6	8
75	Performance of Machine Olfaction: Effect of Uniqueness of the Initial Data and Information Coding on the Discrimination Ability of Multisensor Arrays. <i>IEEE Sensors Journal</i> , 2011, 11, 649-656.	2.4	8
76	Support Vector Machine for tri-axial accelerometer-based fall detector. , 2013, , .		8
77	Oxide nanocrystals from a low-temperature, self-limiting sol-gel transition in a coordinating environment: Nanocrystal synthesis, processing of gas-sensing devices and application to organic compounds. <i>Sensors and Actuators B: Chemical</i> , 2007, 126, 163-167.	4.0	7
78	Suppression of the NO2 interference by chromium addition in WO3-based ammonia sensors. Investigation of the structural properties and of the related sensing pathways. <i>Sensors and Actuators B: Chemical</i> , 2013, 187, 308-312.	4.0	7
79	Aircraft Distributed Flow Turbulence Sensor Network with Embedded Flow Control Actuators. , 2014, , .		7
80	Rhodium as efficient additive for boosting acetone sensing by TiO2 nanocrystals. Beyond the classical view of noble metal additives. <i>Sensors and Actuators B: Chemical</i> , 2020, 319, 128338.	4.0	6
81	A CMOS 2D Micro-Fluxgate Earth Magnetic Field Sensor with Digital Output. , 2007, , .		5
82	Context-Aware AAL Services through a 3D Sensor-Based Platform. <i>Journal of Sensors</i> , 2013, 2013, 1-10.	0.6	5
83	A 5.8–13 GHz SDR RF front-end for wireless sensors network robust to out-of-band interferers in 65nm CMOS. , 2015, , .		5
84	Design of an Electronic Nose for Selective Phosphine Detection in Cereals. <i>Sensor Letters</i> , 2006, 4, 229-234.	0.4	5
85	Application of a gas sensors array to the detection of fuel as contamination defect in engine oil. , 2008, , .		4
86	Morphological and structural characterization of WO3 and Cr–WO3 thin films synthesized by sol-gel process. <i>Thin Solid Films</i> , 2010, 518, 4512-4514.	0.8	4
87	<title>Microhotplate-based silicon gas sensor arrays with linear temperature gradient for wine quality monitoring</title>. , 2005, , .		3
88	Topological and volumetric posture recognition with active vision sensor in AAL contexts. , 2011, , .		3
89	Structural, Morphological, and Chemical Properties of Cu/TiN Versus Cu Thin Layers for HEMT Backside Metallization. <i>IEEE Transactions on Device and Materials Reliability</i> , 2014, 14, 890-897.	1.5	3
90	Heterogeneous sensor platform for circadian rhythm analysis. , 2015, , .		3

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91	An open NFC-based platform for vital signs monitoring. , 2015, , .		3
92	A Fall Detector Based on Ultra-Wideband Radar Sensing. Lecture Notes in Electrical Engineering, 2018, , 373-382.	0.3	3
93	Ambient and Wearable Sensor Technologies for Energy Expenditure Quantification of Ageing Adults. Sensors, 2022, 22, 4893.	2.1	3
94	A miniaturized gas-chromatographic system for the evaluation of fish freshness. , 2008, , .		2
95	Development of capacitive RF MEMS switches with TaN and Ta ₂ O ₅ thin films. Proceedings of SPIE, 2011, , .	0.8	2
96	Supervised machine learning scheme for tri-axial accelerometer-based fall detector. , 2013, , .		2
97	Supervised wearable wireless system for fall detection. , 2013, , .		2
98	A Virtual Trainer by Natural User Interface for Cognitive Rehabilitation in Dementia. Lecture Notes in Computer Science, 2014, , 300-309.	1.0	2
99	A flexible thermoelectric generator with a fully electrical, low startup voltage and high efficiency DC-DC converter. , 2015, , .		2
100	Solvothermal Synthesis, Gasâ€ Sensing Properties, and Solar Cellâ€Aided Investigation of TiO ₂ â€MoO _x Nanocrystals. ChemNanoMat, 2017, 3, 798-807.	1.5	2
101	Big Data Analytics in Smart Living Environments for Elderly Monitoring. Lecture Notes in Electrical Engineering, 2019, , 301-309.	0.3	2
102	Facial Expression Recognition in Ageing Adults: A Comparative Study. Lecture Notes in Electrical Engineering, 2019, , 349-359.	0.3	2
103	Multi-sensor Platform for Detection of Anomalies in Human Sleep Patterns. Lecture Notes in Electrical Engineering, 2018, , 276-285.	0.3	2
104	Spin-coated thin films of different metal phthalocyanines and porphyrin-phthalocyanine blend for optochemical sensors of volatile organic compounds. , 2004, , .		1
105	The role of oxygen vacancies in the sensing properties of SnO ₂ nanocrystals. , 2008, , .		1
106	Reproducibility and Uniqueness of Information Coding as Key Factors For Array Optimization. , 2009, , .		1
107	An automated active vision system for fall detection and posture analysis in Ambient Assisted Living applications. , 2010, , .		1
108	A multi-feature scheme for posture recognition with 3D TOF sensor. , 2012, , .		1

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109	Automatic digital filtering for the accuracy improving of a digital holographic measurement system. Proceedings of SPIE, 2014, , .	0.8	1
110	100 nm-Gap Fingers Dielectrophoresis Functionalized MOX Gas Sensor Array for Low Temperature VOCs Detection. Proceedings (mdpi), 2018, 2, .	0.2	1
111	Radar Sensing of Vital Signs in Assisted Living Applications. Lecture Notes in Electrical Engineering, 2019, , 3-22.	0.3	1
112	<title>Investigation of MoO ₃ -WO ₃ thin film microstructure for gas sensing applications</title>. , 2001, 4590, 243.		0
113	Ambient Pressure Synthesis of Corundum-Type In ₂ O ₃ .. ChemInform, 2004, 35, no.	0.1	0
114	<title>Cheap silicon technology integrated sol-gel combustion sensor</title>. , 2005, 5836, 255.		0
115	Gas-Sensor Interface Circuit Based on Calibration Free Novel Frequency Measurement Approach with 16-Bit Digital Output. , 2006, , .		0
116	A novel method based on gas microsensors to analyze diesel engine oil contaminated by diluent unburned diesel fuel. , 2006, , .		0
117	Silicon substrate microelectrodes voltammetry performances in white wine faults identification and quantification. , 2007, , .		0
118	Detection of unburned fuel as contaminant in engine oil by a gas microsensor array. , 2007, , .		0
119	TOF Sensor Network for AAL Monitoring Services. Procedia Computer Science, 2013, 19, 511-515.	1.2	0
120	Open and low power near field communication-based platform in healthcare applications. , 2014, , .		0
121	Surface modification, heterojunctions, and other structures: composing metal oxide nanocrystals for chemical sensors. Proceedings of SPIE, 2015, , .	0.8	0
122	Analysis of Skeletal Muscles Contractility Using Smart SEMG-Based Socks. Lecture Notes in Electrical Engineering, 2021, , 39-47.	0.3	0
123	Time-of-Flight Sensor-Based Platform for Posture Recognition in AAL Applications. Lecture Notes in Electrical Engineering, 2014, , 207-211.	0.3	0
124	Expert System for Wearable Fall Detector. , 2014, , 99-106.		0
125	Radar-Based Fall Detection Using Deep Machine Learning: System Configuration and Performance. Lecture Notes in Electrical Engineering, 2018, , 257-268.	0.3	0
126	Synthesis and Piezoelectric Characterization of UV-Curable Nanocellulose/ZnO/AlN Polymeric Flexible Films for Green Energy Generation Applications. Proceedings (mdpi), 2020, 56, .	0.2	0