Pietro Siciliano

List of Publications by Year
in descending order

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126	3,370	126907	155660
papers	citations	33	55
		h-index	g-index

130	130	130	4402
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Role of Surface Oxygen Vacancies in the NO₂ Sensing Properties of SnO₂ Nanocrystals. Journal of Physical Chemistry C, 2008, 112, 19540-19546.	3.1	181
2	On the study of feature extraction methods for an electronic nose. Sensors and Actuators B: Chemical, 2002, 87, 274-288.	7.8	160
3	Nanostructured In2O3â€“SnO2 solâ€“gel thin film as material for NO2 detection. Sensors and Actuators B: Chemical, 2006, 114, 646-655.	7.8	126
4	Synthesis, electrical characterization, and gas sensing properties of molybdenum oxide nanorods. Applied Physics Letters, 2006, 88, 152111.	3.3	120
5	Polycrystalline Well-Shaped Blocks of Indium Oxide Obtained by the Solâˆ’Gel Method and Their Gas-Sensing Properties. Chemistry of Materials, 2003, 15, 4377-4383.	6.7	116
6	Support vector machines for olfactory signals recognition. Sensors and Actuators B: Chemical, 2003, 88, 30-39.	7.8	115
7	Preparation, characterisation and applications of thin films for gas sensors prepared by cheap chemical method. Sensors and Actuators B: Chemical, 2000, 70, 153-164.	7.8	111
8	Ambient Pressure Synthesis of Corundum-Type In2O3. Journal of the American Chemical Society, 2004, 126, 4078-4079.	13.7	108
9	Drift counteraction with multiple self-organising maps for an electronic nose. Sensors and Actuators B: Chemical, 2004, 98, 305-317.	7.8	101
10	A Radar-Based Smart Sensor for Unobtrusive Elderly Monitoring in Ambient Assisted Living Applications. Biosensors, 2017, 7, 55.	4.7	92
11	Solvothermal, Chloroalkoxide-based Synthesis of Monoclinic WO₃ Quantum Dots and Gas-Sensing Enhancement by Surface Oxygen Vacancies. ACS Applied Materials & Interfaces, 2014, 6, 16808-16816.	8.0	78
12	Aroma analysis by GC/MS and electronic nose dedicated to Negroamaro and Primitivo typical Italian Apulian wines. Sensors and Actuators B: Chemical, 2013, 179, 259-269.	7.8	70
13	Synthesis and Gas-Sensing Properties of Pd-Doped SnO₂ Nanocrystals. A Case Study of a General Methodology for Doping Metal Oxide Nanocrystals. Crystal Growth and Design, 2008, 8, 1774-1778.	3.0	69
14	Detecting falls with 3D range camera in ambient assisted living applications: A preliminary study. Medical Engineering and Physics, 2011, 33, 770-781.	1.7	69
15	Preparation and characterization of cobalt porphyrin modified tin dioxide films for sensor applications. Sensors and Actuators B: Chemical, 2004, 103, 339-343.	7.8	67
16	Synthesis of SnO2 and ZnO Colloidal Nanocrystals from the Decomposition of Tin(II) 2-Ethylhexanoate and Zinc(II) 2-Ethylhexanoate. Chemistry of Materials, 2005, 17, 6468-6472.	6.7	65
17	Analytical characterisation of Negroamaro red wines by â€œAroma Wheelsâ€• Food Chemistry, 2013, 141, 2906-2915.	8.2	65
18	TiO2 thin films from titanium butoxide: Synthesis, Pt addition, structural stability, microelectronic processing and gas-sensing properties. Sensors and Actuators B: Chemical, 2008, 130, 599-608.	7.8	61

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19	People occupancy detection and profiling with 3D depth sensors for building energy management. Energy and Buildings, 2015, 92, 246-266.	6.7	61
20	Supervised machine learning scheme for electromyography-based pre-fall detection system. Expert Systems With Applications, 2018, 100, 95-105.	7.6	58
21	Solâ€“Gel Processing and Characterization of Pure and Metalâ€Doped SnO₂ Thin Films. Journal of the American Ceramic Society, 2001, 84, 48-54.	3.8	57
22	Synthesis and Characterization of MoO3 Thin Films and Powders from a Molybdenum Chloromethoxide. Chemistry of Materials, 2004, 16, 5495-5501.	6.7	50
23	IEEE1451.4: A way to standardize gas sensor. Sensors and Actuators B: Chemical, 2006, 114, 141-151.	7.8	45
24	Supervised Expert System for Wearable MEMS Accelerometer-Based Fall Detector. Journal of Sensors, 2013, 2013, 1-11.	1.1	44
25	PDMS/Kapton Interface Plasma Treatment Effects on the Polymeric Package for a Wearable Thermoelectric Generator. ACS Applied Materials & Interfaces, 2013, 5, 6586-6590.	8.0	43
26	Solution Synthesis of Thin Films in the SnO2â^'In2O3System: A Case Study of the Mixing of Solâ^'Gel and Metal-Organic Solution Processes. Chemistry of Materials, 2006, 18, 840-846.	6.7	40
27	SnO2 solâ€“gel derived thin films for integrated gas sensors. Sensors and Actuators B: Chemical, 2001, 77, 496-502.	7.8	39
28	Structural distinctions of Fe2O3â€“In2O3 composites obtained by various solâ€“gel procedures, and their gas-sensing features. Sensors and Actuators B: Chemical, 2007, 124, 133-142.	7.8	39
29	Chloro-Alkoxide Route to Transition Metal Oxides. Synthesis of WO₃ Thin Films and Powders from a Tungsten Chloro-Methoxide. Chemistry of Materials, 2009, 21, 5215-5221.	6.7	39
30	Capacitive RF MEMS Switches With Tantalum-Based Materials. Journal of Microelectromechanical Systems, 2011, 20, 365-370.	2.5	39
31	Nanocrystals as Very Active Interfaces:â€‰Ultrasensitive Room-Temperature Ozone Sensors with In₂O₃ Nanocrystals Prepared by a Low-Temperature Solâ^'Gel Process in a Coordinating Environment. Journal of Physical Chemistry C, 2007, 111, 13967-13971.	3.1	38
32	Chromatographic analysis of VOC patterns in exhaled breath from smokers and nonsmokers. Biomedical Chromatography, 2018, 32, e4132.	1.7	36
33	Comparison and integration of arrays of quartz resonators and metal-oxide semiconductor chemoresistors in the quality evaluation of olive oils. Sensors and Actuators B: Chemical, 2001, 78, 303-309.	7.8	34
34	Metal oxide gas sensor array for the detection of diesel fuel in engine oil. Sensors and Actuators B: Chemical, 2008, 131, 125-133.	7.8	34
35	Chemical synthesis of In2O3 nanocrystals and their application in highly performing ozone-sensing devices. Sensors and Actuators B: Chemical, 2008, 130, 483-487.	7.8	34
36	Colloidal Counterpart of the TiO₂-Supported V₂O₅ System: A Case Study of Oxide-on-Oxide Deposition by Wet Chemical Techniques. Synthesis, Vanadium Speciation, and Gas-Sensing Enhancement. Journal of Physical Chemistry C, 2013, 117, 20697-20705.	3.1	34

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37	Human posture recognition with a time-of-flight 3D sensor for in-home applications. Expert Systems With Applications, 2013, 40, 744-751.	7.6	32
38	Acetone sensors based on TiO2 nanocrystals modified with tungsten oxide species. Journal of Alloys and Compounds, 2016, 665, 345-351.	5.5	32
39	Recovery of drifting sensor responses by means of DWT analysis. Sensors and Actuators B: Chemical, 2007, 120, 411-416.	7.8	30
40	On the electrostatic actuation of capacitive RF MEMS switches on GaAs substrate. Sensors and Actuators A: Physical, 2015, 232, 202-207.	4.1	29
41	Improving holographic reconstruction by automatic Butterworth filtering for microelectromechanical systems characterization. Applied Optics, 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. Environmental Pollution, 2021, 286, 117410.	7.5	28
43	Odor discrimination using adaptive resonance theory. Sensors and Actuators B: Chemical, 2000, 69, 248-252.	7.8	27
44	Oxide nanopowders from the low-temperature processing of metal oxide sols and their application as gas-sensing materials. Sensors and Actuators B: Chemical, 2006, 118, 105-109.	7.8	26
45	Pt doping triggers growth of TiO2 nanorods: nanocomposite synthesis and gas-sensing properties. CrystEngComm, 2012, 14, 3882.	2.6	26
46	CH3SH-sensing characteristics of LaFeO3 thick-film prepared by co-precipitation method. Sensors and Actuators B: Chemical, 2003, 94, 197-200.	7.8	25
47	Titanium dioxide thin films prepared by seeded supersonic beams for gas sensing applications. Sensors and Actuators B: Chemical, 2004, 100, 177-184.	7.8	24
48	Influence of design and fabrication on RF performance of capacitive RF MEMS switches. Microsystem Technologies, 2016, 22, 1741-1746.	2.0	24
49	Comparison Between Deep Learning Models and Traditional Machine Learning Approaches for Facial Expression Recognition in Ageing Adults. Journal of Computer Science and Technology, 2020, 35, 1127-1146.	1.5	23
50	Reliability Enhancement by Suitable Actuation Waveforms for Capacitive RF MEMS Switches in IIIâ€“V Technology. Journal of Microelectromechanical Systems, 2012, 21, 414-419.	2.5	21
51	Surface Modification of TiO₂ Nanocrystals by WO_x Coating or Wrapping: Solvothermal Synthesis and Enhanced Surface Chemistry. ACS Applied Materials & Interfaces, 2015, 7, 6898-6908.	8.0	21
52	Evidence of catalytic activation of anatase nanocrystals by vanadium oxide surface layer: Acetone and ethanol sensing properties. Sensors and Actuators B: Chemical, 2015, 217, 193-197.	7.8	21
53	HS-SPME-GC-MS metabolomics approach for sperm quality evaluation by semen volatile organic compounds (VOCs) analysis. Biomedical Physics and Engineering Express, 2018, 5, 015006.	1.2	21
54	Influence of electrodes ageing on the properties of the gas sensors based on SnO2. Sensors and Actuators B: Chemical, 2006, 115, 396-402.	7.8	20

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55	SnO2 thin films from metalorganic precursors: Synthesis, characterization, microelectronic processing and gas-sensing properties. Sensors and Actuators B: Chemical, 2007, 124, 217-226.	7.8	19
56	TiO2 colloidal nanocrystals surface modification by V2O5 species: Investigation by 47,49Ti MAS-NMR and H2, CO and NO2 sensing properties. Applied Surface Science, 2015, 351, 1169-1173.	6.1	18
57	Inorganic Photocatalytic Enhancement: Activated RhB Photodegradation by Surface Modification of SnO2 Nanocrystals with V2O5-like species. Scientific Reports, 2017, 7, 44763.	3.3	17
58	In-home hierarchical posture classification with a time-of-flight 3D sensor. Gait and Posture, 2014, 39, 182-187.	1.4	16
59	Ta₂O₅Thin Films for Capacitive RF MEMS Switches. Journal of Sensors, 2010, 2010, 1-5.	1.1	15
60	Comparative Analysis of Supervised Classifiers for the Evaluation of Sarcopenia Using a sEMG-Based Platform. Sensors, 2022, 22, 2721.	3.8	15
61	Experimental assessment of thermoelectric generator package properties: Simulated results validation and real gradient capabilities. Energy, 2015, 86, 300-310.	8.8	14
62	From doping to phase transformation: Ammonia sensing performances of chloroalkoxide-derived WO3 powders modified with chromium. Sensors and Actuators B: Chemical, 2010, 148, 200-206.	7.8	13
63	Use of a toasted durum whole meal in the production of a traditional Italian pasta: chemical, mechanical, sensory and image analyses. International Journal of Food Science and Technology, 2008, 43, 1610-1618.	2.7	12
64	The Chloroalkoxide Route to Transition Metal Oxides. Synthesis of V₂O₅ Thin Films and Powders from a Vanadium Chloromethoxide. Chemistry of Materials, 2009, 21, 1618-1626.	6.7	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. Nanoscale, 2012, 4, 6434.	5.6	11
67	Chemoresistive sensing of light alkanes with SnO2 nanocrystals: a DFT-based insight. Physical Chemistry Chemical Physics, 2009, 11, 3634.	2.8	10
68	Soft chemistry routes to transparent metal oxide thin films. The case of solâ€“gel synthesis and structural characterization of Ta2O5 thin films from tantalum chloromethoxide. Thin Solid Films, 2014, 555, 39-41.	1.8	10
69	Smart EMG-based Socks for Leg Muscles Contraction Assessment. , 2019, , .		10
70	The hydrolytic route to Co-porphyrin-doped SnO2 gas-sensing materials. Inorganica Chimica Acta, 2008, 361, 79-85.	2.4	9
71	Two step, hydrolytic-solvothermal synthesis of redispersible titania nanocrystals and their gas-sensing properties. Journal of Sol-Gel Science and Technology, 2011, 60, 254-259.	2.4	9
72	Out-of-plane deformation and pull-in voltage of cantilevers with residual stress gradient: experiment and modelling. Microsystem Technologies, 2019, 25, 3581-3588.	2.0	9

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73	Modeling, Fabrication and Integration of Wearable Smart Sensors in a Monitoring Platform for Diabetic Patients. Sensors, 2021, 21, 1847.	3.8	9
74	Compositional and optical characterization of rf sputter deposited TeOx thin films for optical disk application. Vacuum, 1992, 43, 305-308.	3.5	8
75	Performance of Machine Olfaction: Effect of Uniqueness of the Initial Data and Information Coding on the Discrimination Ability of Multisensor Arrays. IEEE Sensors Journal, 2011, 11, 649-656.	4.7	8
76	Support Vector Machine for tri-axial accelerometer-based fall detector. , 2013, , .		8
77	Oxide nanocrystals from a low-temperature, self-limiting solâ€“gel transition in a coordinating environment: Nanocrystal synthesis, processing of gas-sensing devices and application to organic compounds. Sensors and Actuators B: Chemical, 2007, 126, 163-167.	7.8	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. Sensors and Actuators B: Chemical, 2013, 187, 308-312.	7.8	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. Sensors and Actuators B: Chemical, 2020, 319, 128338.	7.8	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. Journal of Sensors, 2013, 2013, 1-10.	1.1	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. Sensor Letters, 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 Crâ€“WO3 thin films synthesized by solâ€“gel process. Thin Solid Films, 2010, 518, 4512-4514.	1.8	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. IEEE Transactions on Device and Materials Reliability, 2014, 14, 890-897.	2.0	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.	0.4	3
93	Ambient and Wearable Sensor Technologies for Energy Expenditure Quantification of Ageing Adults. Sensors, 2022, 22, 4893.	3.8	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.	1.3	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 TiO₂â€“MoO_x Nanocrystals. ChemNanoMat, 2017, 3, 798-807.	2.8	2
101	Big Data Analytics in Smart Living Environments for Elderly Monitoring. Lecture Notes in Electrical Engineering, 2019, , 301-309.	0.4	2
102	Facial Expression Recognition in Ageing Adults: A Comparative Study. Lecture Notes in Electrical Engineering, 2019, , 349-359.	0.4	2
103	Multi-sensor Platform for Detection of Anomalies in Human Sleep Patterns. Lecture Notes in Electrical Engineering, 2018, , 276-285.	0.4	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<inf>2</inf> 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.	0.4	1
112	<title>Investigation of MoO<formula><inf><roman>3</roman></inf></formula>-WO<formula><inf><roman>3</roman></inf></formula> thin film microstructure for gas sensing applications</title>. , 2001, 4590, 243.		0
113	Ambient Pressure Synthesis of Corundum-Type In2O3.. ChemInform, 2004, 35, no.	0.0	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.	2.0	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.	0.4	0
123	Time-of-Flight Sensor-Based Platform for Posture Recognition in AAL Applications. Lecture Notes in Electrical Engineering, 2014, , 207-211.	0.4	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.	0.4	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