

Janusz M Smulko

List of Publications by Year in descending order

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Version: 2024-02-01

113
papers

1,548
citations

257450

24
h-index

361022

35
g-index

115
all docs

115
docs citations

115
times ranked

1535
citing authors

#	ARTICLE	IF	CITATIONS
1	New approaches for improving selectivity and sensitivity of resistive gas sensors: a review. <i>Sensor Review</i> , 2015, 35, 340-347.	1.8	75
2	Methods of trend removal in electrochemical noise data – Overview. <i>Measurement: Journal of the International Measurement Confederation</i> , 2019, 131, 569-581.	5.0	60
3	Formaldehyde detection with chemical gas sensors based on WO ₃ nanowires decorated with metal nanoparticles under dark conditions and UV light irradiation. <i>Sensors and Actuators B: Chemical</i> , 2020, 320, 128331.	7.8	59
4	Comparison of classical and fluctuation-enhanced gas sensing with PdxWO ₃ nanoparticle films. <i>Sensors and Actuators B: Chemical</i> , 2006, 113, 310-315.	7.8	53
5	Determination Of Gas Mixture Components Using Fluctuation Enhanced Sensing And The LS-SVM Regression Algorithm. <i>Metrology and Measurement Systems</i> , 2015, 22, 341-350.	1.4	51
6	Fluctuation enhanced gas sensing with WO ₃ -based nanoparticle gas sensors modulated by UV light at selected wavelengths. <i>Sensors and Actuators B: Chemical</i> , 2016, 234, 453-461.	7.8	51
7	Comparability of Raman Spectroscopic Configurations: A Large Scale Cross-Laboratory Study. <i>Analytical Chemistry</i> , 2020, 92, 15745-15756.	6.5	46
8	Ammonia Gas Sensors: Comparison of Solid-State and Optical Methods. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 5111.	2.5	46
9	Exhaled breath gas sensing using pristine and functionalized WO ₃ nanowire sensors enhanced by UV-light irradiation. <i>Sensors and Actuators B: Chemical</i> , 2018, 273, 1719-1729.	7.8	45
10	Investigation of Noise-Induced Instabilities in Quantitative Biological Spectroscopy and Its Implications for Noninvasive Glucose Monitoring. <i>Analytical Chemistry</i> , 2012, 84, 8149-8156.	6.5	44
11	Advanced Agent Identification With Fluctuation-Enhanced Sensing. <i>IEEE Sensors Journal</i> , 2008, 8, 706-713.	4.7	42
12	Electrochromic foil-based devices: Optical transmittance and modulation range, effect of ultraviolet irradiation, and quality assessment by 1/f current noise. <i>Thin Solid Films</i> , 2008, 516, 5921-5926.	1.8	40
13	ON THE STATISTICAL ANALYSIS OF NOISE IN CHEMICAL SENSORS AND ITS APPLICATION FOR SENSING. <i>Fluctuation and Noise Letters</i> , 2001, 01, L147-L153.	1.5	39
14	Pitting corrosion in steel and electrochemical noise intensity. <i>Electrochemistry Communications</i> , 2002, 4, 388-391.	4.7	39
15	Algorithms of Chemicals Detection Using Raman Spectra. <i>Metrology and Measurement Systems</i> , 2010, 17, 549-559.	1.4	39
16	Detecting harmful gases using fluctuation-enhanced sensing with Taguchi sensors. <i>IEEE Sensors Journal</i> , 2005, 5, 671-676.	4.7	35
17	HAZARDOUS GASES DETECTION BY FLUCTUATION-ENHANCED GAS SENSING. <i>Fluctuation and Noise Letters</i> , 2010, 09, 359-371.	1.5	34
18	Gas sensing by thermoelectric voltage fluctuations in SnO nanoparticle films. <i>Sensors and Actuators B: Chemical</i> , 2005, 106, 708-712.	7.8	33

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19	Pitting corrosion characterization by electrochemical noise measurements on asymmetric electrodes. <i>Journal of Solid State Electrochemistry</i> , 2009, 13, 1681-1686.	2.5	29
20	Detection of Gaseous Compounds with Different Techniques. <i>Metrology and Measurement Systems</i> , 2016, 23, 205-224.	1.4	29
21	On the selectivity of nanostructured semiconductor gas sensors. <i>Physica Status Solidi (B): Basic Research</i> , 2007, 244, 4331-4335.	1.5	28
22	Detection of random transients caused by pitting corrosion. <i>Electrochimica Acta</i> , 2002, 47, 1297-1303.	5.2	27
23	METHODS OF ELECTROCHEMICAL NOISE ANALYSIS FOR INVESTIGATION OF CORROSION PROCESSES. <i>Fluctuation and Noise Letters</i> , 2006, 06, R1-R9.	1.5	26
24	Anatomy of noise in quantitative biological Raman spectroscopy. <i>Bioanalysis</i> , 2014, 6, 411-421.	1.5	26
25	Nonlinearity of electrochemical noise caused by pitting corrosion. <i>Journal of Electroanalytical Chemistry</i> , 2003, 545, 59-63.	3.8	24
26	Combined chemoresistive and in situ FTIR spectroscopy study of nanoporous NiO films for light-activated nitrogen dioxide and acetone gas sensing. <i>Sensors and Actuators B: Chemical</i> , 2022, 353, 131125.	7.8	24
27	Portable Raman spectrometer - design rules and applications. <i>Bulletin of the Polish Academy of Sciences: Technical Sciences</i> , 2011, 59, 325-329.	0.8	23
28	Low Current Transformer Utilizing Co-Based Amorphous Alloys. <i>IEEE Transactions on Magnetics</i> , 2012, 48, 1493-1496.	2.1	23
29	Analysis of an Attenuator Artifact in an Experimental Attack by Gunnâ€“Allisonâ€“Abbott Against the Kirchhoff-Lawâ€“Johnson-Noise (KLJN) Secure Key Exchange System. <i>Fluctuation and Noise Letters</i> , 2015, 14, 1550011.	1.5	23
30	Resistance noise in TiO ₂ -based thin film gas sensors under ultraviolet irradiation. <i>Journal of Physics: Conference Series</i> , 2007, 76, 012056.	0.4	19
31	Performance Analysis of the "Intelligent" Kirchhoff-Lawâ€“Johnson-Noise Secure Key Exchange. <i>Fluctuation and Noise Letters</i> , 2014, 13, 1450024.	1.5	19
32	Detection of Denatonium Benzoate (Bitrex) Remnants in Noncommercial Alcoholic Beverages by Raman Spectroscopy. <i>Journal of Forensic Sciences</i> , 2014, 59, 1358-1363.	1.6	19
33	Effects of UV light irradiation on fluctuation enhanced gas sensing by carbon nanotube networks. <i>Sensors and Actuators B: Chemical</i> , 2022, 352, 131069.	7.8	19
34	On Electrochemical Noise Analysis for Monitoring of Uniform Corrosion Rate. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2007, 56, 2018-2023.	4.7	17
35	Analytical fluctuation enhanced sensing by resistive gas sensors. <i>Sensors and Actuators B: Chemical</i> , 2015, 213, 390-396.	7.8	17
36	Gas selectivity enhancement by sampling-and-hold method in resistive gas sensors. <i>Sensors and Actuators B: Chemical</i> , 2015, 219, 17-21.	7.8	16

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37	UV-Light-Induced Fluctuation Enhanced Sensing by WO ₃ -Based Gas Sensors. IEEE Sensors Journal, 2016, 16, 5152-5159.	4.7	16
38	Room temperature depinning of the charge-density waves in quasi-two-dimensional 1T-TaS ₂ devices. Applied Physics Letters, 2021, 118, .	3.3	15
39	Fluctuation-enhanced scent sensing using a single gas sensor. Sensors and Actuators B: Chemical, 2011, 157, 85-91.	7.8	14
40	Fluctuation-enhanced sensing with organically functionalized gold nanoparticle gas sensors targeting biomedical applications. Talanta, 2016, 160, 9-14.	5.5	14
41	Acoustic emission for detecting deterioration of capacitors under aging. Microelectronics Reliability, 2011, 51, 621-627.	1.7	13
42	Fluctuation-Enhanced Sensing for Biological Agent Detection and Identification. IEEE Nanotechnology Magazine, 2011, 10, 1238-1242.	2.0	12
43	Application of 1/f current noise for quality and age monitoring of electrochromic devices. Solar Energy Materials and Solar Cells, 2008, 92, 914-918.	6.2	11
44	Utilizing pulse dynamics for non-invasive Raman spectroscopy of blood analytes. Biosensors and Bioelectronics, 2021, 180, 113115.	10.1	11
45	Analysis of Vibration and Acoustic Signals for Noncontact Measurement of Engine Rotation Speed. Sensors, 2020, 20, 683.	3.8	10
46	Analysis of exhaled breath for dengue disease detection by low-cost electronic nose system. Measurement: Journal of the International Measurement Confederation, 2022, 190, 110733.	5.0	10
47	HIGHER-ORDER SPECTRA IN NANOPARTICLE GAS SENSORS. Fluctuation and Noise Letters, 2004, 04, L597-L603.	1.5	9
48	Fluctuation-enhanced and conductometric gas sensing with nanocrystalline NiO thin films: A comparison. Sensors and Actuators B: Chemical, 2017, 242, 132-139.	7.8	9
49	Fluctuation-Enhanced Sensing (FES): A Promising Sensing Technique. Applied Sciences (Switzerland), 2020, 10, 5818.	2.5	9
50	Evaluation of reinforcement corrosion rate in concrete structures by electrochemical noise measurements. Russian Journal of Electrochemistry, 2006, 42, 546-550.	0.9	8
51	Quality assessment of ZnO-based varistors by 1/f noise. Microelectronics Reliability, 2014, 54, 192-199.	1.7	8
52	Generation-recombination and 1/f noise in carbon nanotube networks. Applied Physics Letters, 2021, 118, .	3.3	8
53	Embedded gas sensing setup for air samples analysis. Review of Scientific Instruments, 2021, 92, 074102.	1.3	8
54	Quality testing methods of foil-based capacitors. Microelectronics Reliability, 2012, 52, 603-609.	1.7	7

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55	Noise in biological Raman spectroscopy. , 2015, , .		7
56	Methods of Assessing Degradation of Supercapacitors by Using Various Measurement Techniques. Applied Sciences (Switzerland), 2019, 9, 2311.	2.5	7
57	Quality assessments of electrochromic devices: the possible use of 1/f current noise. Ionics, 2007, 13, 179-182.	2.4	6
58	Fluctuation-enhanced gas sensing in practice. , 2011, , .		6
59	Assessment of Electronic Sensing Techniques for the Rapid Identification of Alveolar Echinococcosis through Exhaled Breath Analysis. Sensors, 2020, 20, 2666.	3.8	6
60	Measurements of flicker noise in supercapacitor cells. , 2017, , .		6
61	The Measurement Setup for Gas Detection by Resistance Fluctuations of Gas Sensors. , 2006, , .		5
62	Oxide-based electrochromics for energy efficient buildings: materials, technologies, testing, and perspectives. Journal of Physics: Conference Series, 2007, 93, 012021.	0.4	5
63	Quality assessment of varistor ZnO structures by resonant ultrasound spectroscopy. Insight: Non-Destructive Testing and Condition Monitoring, 2009, 51, 262-265.	0.6	5
64	Critical remarks on Landauer's principle of erasure-dissipation: Including notes on Maxwell demons and Szilard engines. , 2015, , .		5
65	Low-frequency current noise in electrochromic devices. Smart Materials and Structures, 2008, 17, 025005.	3.5	4
66	Classification of high-voltage varistors into groups of differentiated quality. Microelectronics Reliability, 2009, 49, 1483-1490.	1.7	4
67	Risk Analysis by a Probabilistic Model of the Measurement Process. Sensors, 2021, 21, 2053.	3.8	4
68	Novel Interpolation Method of Multi-DFT-Bins for Frequency Estimation of Signal With Parameter Step Change. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-14.	4.7	4
69	Assessment of Fuel Cells's State of Health by Low-Frequency Noise Measurements. Energies, 2021, 14, 8340.	3.1	4
70	Application of nonlinearity measures to chemical sensor signals. , 2003, , .		3
71	Scent Emitting Multimodal Computer Interface for Learning Enhancement. , 2010, , .		3
72	Problems of Varistor Quality Assessment During Exploitation. Metrology and Measurement Systems, 2012, 19, 395-404.	1.4	3

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73	Fluctuation enhanced gas sensing using UV irradiated Au-nanoparticle-decorated WO ₃ -nanowire films. International Journal on Smart Sensing and Intelligent Systems, 2014, 7, 1-5.	0.7	3
74	Fluctuation-enhanced chemical sensing. , 2003, 5115, 377.		2
75	Electrochemical noise analysis methods for the investigation of corrosion processes. , 2003, 5115, 86.		2
76	Noise sources in Raman spectroscopy of biological objects. , 2017, , .		2
77	Corrosion process monitoring by AFM higher harmonic imaging. Measurement Science and Technology, 2017, 28, 114001.	2.6	2
78	Non-Gaussian Resistance Fluctuations in Gold-Nanoparticle-Based Gas Sensors: An Appraisal of Different Evaluation Techniques. Sensors, 2017, 17, 757.	3.8	2
79	UV Light-Modulated Fluctuation-Enhanced Gas Sensing by Layers of Graphene Flakes/TiO ₂ Nanoparticles. Journal of Sensors, 2020, 2020, 1-9.	1.1	2
80	The stationarity characteristics of electrochemical current noise. Anti-Corrosion Methods and Materials, 2002, 49, 27-32.	1.5	1
81	Fluctuation-enhanced sensing. , 2007, , .		1
82	Resonant ultrasonic spectroscopy in high-voltage varistor diagnostics. , 2008, , .		1
83	Low-frequency noise in ZnO varistor structures. , 2011, , .		1
84	Comparison of effectiveness of gas sensing by low frequency fluctuations in resistance and microbalance quartz gas sensors. , 2011, , .		1
85	Improving AFM Images with Harmonic Interference by Spectral Analysis. Microscopy and Microanalysis, 2012, 18, 186-195.	0.4	1
86	Efficiency of gas detection algorithms using fluctuation enhanced sensing. , 2015, , .		1
87	Feasibility study of a Raman spectroscopic route to drug detection. , 2017, , .		1
88	Design of Intelligent Low-Voltage Load Switch for Remote Control System in Smart Grid. Iranian Journal of Science and Technology - Transactions of Electrical Engineering, 2021, 45, 585-595.	2.3	1
89	Gas sensing by resistance fluctuations in Pd x WO ₃ nanoparticle films. , 2004, 5472, 191.		0
90	Uniform corrosion monitoring of carbon steel in concrete. , 2004, 5472, 333.		0

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91	Resistance noise higher-order spectrums in nanoparticle gas sensors. , 2004, , .		0
92	Correlation between destruction of the metal surface caused by pitting corrosion and intensity of the observed electrochemical noise (Invited Paper). , 2005, , .		0
93	Higher-order spectra for harmonics detection in nonlinear systems at presence of Gaussian noise. , 2005, 5846, 70.		0
94	Novel Method of Local Corrosion Events Characterization by Electrochemical Noise Analysis. , 2006, , .		0
95	Novel Applications of Noise in Sensing and Communications. AIP Conference Proceedings, 2007, , .	0.4	0
96	Fluctuation Enhanced Gas Sensing at Modulated Temperature of Gas Sensor. International Journal on Measurement Technologies and Instrumentation Engineering, 2012, 2, 41-52.	0.3	0
97	Performance analysis of the "intelligent" Kirchhoff-Law-Johnson-Noise secure key exchange. International Journal of Modern Physics Conference Series, 2014, 33, 1460368.	0.7	0
98	Waves in a short cable at low frequencies, or just hand-waving? What does physics say?. , 2015, , .		0
99	Nickel oxide thin film sensor for fluctuation-enhanced gas sensing of formaldehyde. , 2015, , .		0
100	Computational complexity and length of recorded data for fluctuation enhanced sensing method in resistive gas sensors. IOP Conference Series: Materials Science and Engineering, 2016, 104, 012032.	0.6	0
101	Portable measurement system for breath analysis by real-time fluctuation enhanced sensing method. , 2017, , .		0
102	Facts and myths about zero-point thermal noise, and information entropy versus thermal entropy. , 2017, , .		0
103	Advanced operating methods. , 2020, , 189-208.		0
104	Fluctuation-Enhanced Sensing. Journal of Sensors, 2020, 2020, 1-2.	1.1	0
105	Temperature distribution of supercapacitors prepared by various technologies. Materials Today: Proceedings, 2020, 33, 2440-2444.	1.8	0
106	An Instantaneous Engine Speed Estimation Method Using Multiple Matching Synchrosqueezing Transform. Journal of Sensors, 2021, 2021, 1-11.	1.1	0
107	The Measurement Setup for Gas Detection by Resistance Fluctuations of Gas Sensors. Conference Record - IEEE Instrumentation and Measurement Technology Conference, 2006, , .	0.0	0
108	Novel Method of Local Corrosion Events Characterization by Electrochemical Noise Analysis. Conference Record - IEEE Instrumentation and Measurement Technology Conference, 2006, , .	0.0	0

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109	Detection of illicit chemicals by portable Raman spectrometer. Bulletin of the Polish Academy of Sciences: Technical Sciences, 2011, 59, 449-452.	0.8	0
110	Enhancing capabilities of Atomic Force Microscopy by tip motion harmonics analysis. Bulletin of the Polish Academy of Sciences: Technical Sciences, 2013, 61, 535-539.	0.8	0
111	Sensing of anesthetic drugs in blood with Raman spectroscopy. , 2015, , .		0
112	System of breath collection and analysis for diseases detection. Przegląd Elektrotechniczny, 2016, 1, 49-52.	0.2	0
113	New approaches for improving selectivity and sensitivity of resistive gas sensors: A review. International Journal on Smart Sensing and Intelligent Systems, 2014, 7, 1-6.	0.7	0