Mateusz Ficek

List of Publications by Year in descending order

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65	1,067	331670	454955
papers	citations	21 h-index	30 g-index

66	66	66	1000
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Boron-Enhanced Growth of Micron-Scale Carbon-Based Nanowalls: A Route toward High Rates of Electrochemical Biosensing. ACS Applied Materials & Interfaces, 2017, 9, 12982-12992.	8.0	75
2	Electrochemical determination of nitroaromatic explosives at boron-doped diamond/graphene nanowall electrodes: 2,4,6-trinitrotoluene and 2,4,6-trinitroanisole in liquid effluents. Journal of Hazardous Materials, 2020, 387, 121672.	12.4	59
3	Self-organized multi-layered grapheneâ€“boron-doped diamond hybrid nanowalls for high-performance electron emission devices. Nanoscale, 2018, 10, 1345-1355.	5.6	57
4	Comparison of the paracetamol electrochemical determination using boron-doped diamond electrode and boron-doped carbon nanowalls. Biosensors and Bioelectronics, 2019, 126, 308-314.	10.1	56
5	Diamond Phase (sp³-C) Rich Boron-Doped Carbon Nanowalls (sp²-C): Physicochemical and Electrochemical Properties. Journal of Physical Chemistry C, 2017, 121, 20821-20833.	3.1	53
6	Influence of the boron doping level on the electrochemical oxidation of raw landfill leachates: Advanced pre-treatment prior to the biological nitrogen removal. Chemical Engineering Journal, 2018, 334, 1074-1084.	12.7	49
7	Optical and electrical properties of boron doped diamond thin conductive films deposited on fused silica glass substrates. Applied Surface Science, 2016, 387, 846-856.	6.1	43
8	Improved surface coverage of an optical fibre with nanocrystalline diamond by the application of dip-coating seeding. Diamond and Related Materials, 2015, 55, 52-63.	3.9	37
9	Heterogeneous oxidation of highly boron-doped diamond electrodes and its influence on the surface distribution of electrochemical activity. Electrochimica Acta, 2019, 297, 1018-1027.	5.2	37
10	3D Hierarchical Boron-Doped Diamond-Multilayered Graphene Nanowalls as an Efficient Supercapacitor Electrode. Journal of Physical Chemistry C, 2019, 123, 15458-15466.	3.1	35
11	Ellipsometric investigation of nitrogen doped diamond thin films grown in microwave CH4/H2/N2 plasma enhanced chemical vapor deposition. Applied Physics Letters, 2016, 108, .	3.3	32
12	Carbon nanowalls: a new versatile graphene based interface for the laser desorption/ionization-mass spectrometry detection of small compounds in real samples. Nanoscale, 2017, 9, 9701-9715.	5.6	32
13	Haemocompatibility of Modified Nanodiamonds. Materials, 2017, 10, 352.	2.9	30
14	Tuning the Laserâ€Induced Processing of 3D Porous Graphenic Nanostructures by Boronâ€Doped Diamond Particles for Flexible Microsupercapacitors. Advanced Functional Materials, 2022, 32, .	14.9	25
15	Self-assembly of vertically orientated graphene nanostructures: Multivariate characterisation by Minkowski functionals and fractal geometry. Acta Materialia, 2021, 214, 116989.	7.9	24
16	Electrochemical performance of thin free-standing boron-doped diamond nanosheet electrodes. Journal of Electroanalytical Chemistry, 2020, 862, 114016.	3.8	23
17	Single-step grown boron doped nanocrystalline diamond-carbon nanograss hybrid as an efficient supercapacitor electrode. Nanoscale, 2020, 12, 10117-10126.	5.6	23
18	Performance of electrochemical immunoassays for clinical diagnostics of SARS-CoV-2 based on selective nucleocapsid N protein detection: Boron-doped diamond, gold and glassy carbon evaluation. Biosensors and Bioelectronics, 2022, 209, 114222.	10.1	23

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19	Triboenvironment Dependent Chemical Modification of Sliding Interfaces in Ultrananocrystalline Diamond Nanowall Film: Correlation with Friction and Wear. Journal of Physical Chemistry C, 2018, 122, 945-956.	3.1	22
20	Growth and Isolation of Large Area Boronâ€Doped Nanocrystalline Diamond Sheets: A Route toward Diamondâ€onâ€Graphene Heterojunction. Advanced Functional Materials, 2019, 29, 1805242.	14.9	22
21	Nucleation and growth of <scp>CVD</scp> diamond on fused silica optical fibres with titanium dioxide interlayer. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 1991-1997.	1.8	21
22	Optical Magnetometry Based on Nanodiamonds with Nitrogen-Vacancy Color Centers. Materials, 2019, 12, 2951.	2.9	20
23	Fabrication and characterization of boron-doped nanocrystalline diamond-coated MEMS probes. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	18
24	Doped Nanocrystalline Diamond Films as Reflective Layers for Fiber-Optic Sensors of Refractive Index of Liquids. Materials, 2019, 12, 2124.	2.9	16
25	Tailoring Electro/Optical Properties of Transparent Boron-Doped Carbon Nanowalls Grown on Quartz. Materials, 2019, 12, 547.	2.9	15
26	Highly selective impedimetric determination of Haemophilus influenzae protein D using maze-like boron-doped carbon nanowall electrodes. Talanta, 2021, 221, 121623.	5.5	15
27	High-Temperature Oxidation of Heavy Boron-Doped Diamond Electrodes: Microstructural and Electrochemical Performance Modification. Materials, 2020, 13, 964.	2.9	14
28	Boron-Doped Nanocrystalline Diamondâ€“Carbon Nanospike Hybrid Electron Emission Source. ACS Applied Materials & Interfaces, 2019, 11, 48612-48623.	8.0	13
29	Low-strain sensor based on the flexible boron-doped diamond-polymer structures. Carbon, 2021, 173, 832-841.	10.3	13
30	Nanocrystalline CVD Diamond Coatings on Fused Silica Optical Fibres: Optical Properties Study. Acta Physica Polonica A, 2015, 127, 868-873.	0.5	12
31	Enhanced Charge Storage Mechanism and Long-Term Cycling Stability in Diamondized Titania Nanocomposite Supercapacitors Operating in Aqueous Electrolytes. Journal of Physical Chemistry C, 2020, 124, 15698-15712.	3.1	11
32	Opto-Electrochemical Sensing Device Based on Long-Period Grating Coated with Boron-Doped Diamond Thin Film. Journal of the Optical Society of Korea, 2015, 19, 705-710.	0.6	11
33	Volumetric incorporation of NV diamond emitters in nanostructured F2 glass magneto-optical fiber probes. Carbon, 2022, 196, 10-19.	10.3	11
34	Nanocrystalline diamond sheets as protective coatings for fiber-optic measurement head. Carbon, 2020, 156, 104-109.	10.3	9
35	Stable Field Electron Emission and Plasma Illumination from Boron and Nitrogen Coâ€Doped Edgeâ€Rich Diamondâ€Enhanced Carbon Nanowalls. Advanced Materials Interfaces, 2021, 8, 2100464.	3.7	9
36	Nitrogen-Incorporated Boron-Doped Nanocrystalline Diamond Nanowires for Microplasma Illumination. ACS Applied Materials & Interfaces, 2021, 13, 55687-55699.	8.0	9

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37	Linear antenna microwave chemical vapour deposition of diamond films on long-period fiber gratings for bio-sensing applications. Optical Materials Express, 2017, 7, 3952.	3.0	8
38	Multi-pathway mechanism of polydopamine film formation at vertically aligned diamondised boron-doped carbon nanowalls. Electrochimica Acta, 2022, 409, 140000.	5.2	8
39	The effect of boron concentration on the electrical, morphological and optical properties of boron-doped nanocrystalline diamond sheets: Tuning the diamond-on-graphene vertical junction. Diamond and Related Materials, 2022, 128, 109225.	3.9	7
40	Electrochemical Detection of 4,4â€™,5,5â€™-Tetranitro-1H,1â€™H-2,2â€™-Biimidazole on Boron-Doped Diamond/Graphene Nanowall Electrodes. IEEE Sensors Journal, 2020, 20, 9637-9643.	4.7	6
41	Gas Composition Influence on the Properties of Boron-Doped Diamond Films Deposited on the Fused Silica. Materials Science-Poland, 2018, 36, 288-296.	1.0	6
42	Conductive printable electrodes tuned by boron-doped nanodiamond foil additives for nitroexplosive detection. Mikrochimica Acta, 2022, 189, .	5.0	6
43	Enhanced boron doping of thin diamond films grown in deuterium-rich microwave plasma. Diamond and Related Materials, 2019, 96, 198-206.	3.9	5
44	Nanodiamond phantoms mimicking human liver: perspective to calibration of T1 relaxation time in magnetic resonance imaging. Scientific Reports, 2020, 10, 6446.	3.3	5
45	Quantitative fluorescent determination of DNA â€“ Ochratoxin a interactions supported by nitrogen-vacancy rich nanodiamonds. Journal of Molecular Liquids, 2021, 342, 117338.	4.9	5
46	Integration of Fluorescent, NV-Rich Nanodiamond Particles with AFM Cantilevers by Focused Ion Beam for Hybrid Optical and Micromechanical Devices. Coatings, 2021, 11, 1332.	2.6	5
47	Influence of B/N co-doping on electrical and photoluminescence properties of CVD grown homoepitaxial diamond films. Nanotechnology, 2022, 33, 125603.	2.6	5
48	Preparation and characterization of TiO2/carbon nanowall composite on a transparent substrate. Photonics Letters of Poland, 2018, 10, 54.	0.4	4
49	Focused ion beam-based microfabrication of boron-doped diamond single-crystal tip cantilevers for electrical and mechanical scanning probe microscopy. Measurement: Journal of the International Measurement Confederation, 2022, 188, 110373.	5.0	4
50	Low temperature growth of diamond films on optical fibers using Linear Antenna CVD system. IOP Conference Series: Materials Science and Engineering, 2016, 104, 012025.	0.6	3
51	Diamond Nanofilm Normalizes Proliferation and Metabolism in Liver Cancer Cells. Nanotechnology, Science and Applications, 2021, Volume 14, 115-137.	4.6	3
52	Computed aided system for separation and classification of the abnormal erythrocytes in human blood. , 2017, , .		3
53	Optimization of Polycrystalline CVD Diamond Seeding with the Use of sp³/sp²Raman Band Ratio. Acta Physica Polonica A, 2015, 128, 136-140.	0.5	3
54	Fluorescence of nanodiamond cocktails: pH-induced effects through interactions with comestible liquids. Food Chemistry, 2022, 381, 132206.	8.2	3

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55	Physicochemical and Mechanical Performance of Freestanding Boron-Doped Diamond Nanosheets Coated with C:H:N:O Plasma Polymer. Materials, 2020, 13, 1861.	2.9	2
56	Nanocrystalline diamond microelectrode on fused silica optical fibers for electrochemical and optical sensing. Proceedings of SPIE, 2015, , .	0.8	1
57	Diamond-based protective layer for optical biosensors. , 2016, , .		1
58	Optoelectronic investigation of nanodiamond interactions with human blood. Proceedings of SPIE, 2016, , .	0.8	0
59	Low-coherence sensors with nanolayers for biomedical sensing. , 2017, , .		0
60	Lowâ€€coherence Interferometer with Nanocrystalline Diamond Films with Potential Application to Measure Small Biological Samples. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800244.	1.8	0
61	Preparation of fluorescent nanodiamond suspensions using bead-assisted ultrasonic disintegration. , 2017, , .		0
62	Nitrogen-doped diamond thin films: potential application in Fabry-PÃ©rot interferometer. , 2018, , .		0
63	Studies of free-standing boron-doped diamond sheets using optical coherence tomography. , 2020, , .		0
64	Implementation of SiN thin film in fiber-optic sensor working in telecommunication range of wavelengths. Scientific Reports, 2021, 11, 22402.	3.3	0
65	Electrochemical Detection of Plant Pathogens Using Boron-Doped Carbon Nanowalls Immunosensor. IEEE Sensors Journal, 2022, 22, 7562-7571.	4.7	0