Oleksandr Polonskyi

List of Publications by Year
in descending order

85 papers	2,868 citations	126907 33 h-index	189892 50 g-index
90 all docs	90 docs citations	90 times ranked	3124 citing authors

#	Article	IF	Citations
1	Enhanced ethanol vapour sensing performances of copper oxide nanocrystals with mixed phases. Sensors and Actuators B: Chemical, 2016, 224, 434-448.	7.8	140
2	Versatile Growth of Freestanding Orthorhombic Î±-Molybdenum Trioxide Nano- and Microstructures by Rapid Thermal Processing for Gas Nanosensors. Journal of Physical Chemistry C, 2014, 118, 15068-15078.	3.1	114
3	PdO/PdO₂ functionalized ZnOâ€‰:â€‰Pd films for lower operating temperature H₂ gas sensing. Nanoscale, 2018, 10, 14107-14127.	5.6	114
4	Real-Time Monitoring of Morphology and Optical Properties during Sputter Deposition for Tailoring Metalâ€“Polymer Interfaces. ACS Applied Materials & Interfaces, 2015, 7, 13547-13556.	8.0	113
5	Localized Synthesis of Iron Oxide Nanowires and Fabrication of High Performance Nanosensors Based on a Single Fe₂O₃ Nanowire. Small, 2017, 13, 1602868.	10.0	111
6	Superâ€Hydrophobic Coatings Prepared by RF Magnetron Sputtering of PTFE. Plasma Processes and Polymers, 2010, 7, 544-551.	3.0	86
7	Photodeposition of Au Nanoclusters for Enhanced Photocatalytic Dye Degradation over TiO₂ Thin Film. ACS Applied Materials & Interfaces, 2020, 12, 14983-14992.	8.0	75
8	Multifunctional device based on ZnO:Fe nanostructured films with enhanced UV and ultra-fast ethanol vapour sensing. Materials Science in Semiconductor Processing, 2016, 49, 20-33.	4.0	73
9	Non-planar nanoscale pâ€“p heterojunctions formation in Zn Cu1O nanocrystals by mixed phases for enhanced sensors. Sensors and Actuators B: Chemical, 2016, 230, 832-843.	7.8	70
10	Role of Sputter Deposition Rate in Tailoring Nanogranular Gold Structures on Polymer Surfaces. ACS Applied Materials & Interfaces, 2017, 9, 5629-5637.	8.0	64
11	A comparative study of photocatalysis on highly active columnar TiO2 nanostructures in-air and in-solution. Solar Energy Materials and Solar Cells, 2018, 178, 170-178.	6.2	59
12	Pathways to Tailor Photocatalytic Performance of TiO2 Thin Films Deposited by Reactive Magnetron Sputtering. Materials, 2019, 12, 2840.	2.9	59
13	Nanocomposite metal/plasma polymer films prepared by means of gas aggregation cluster source. Thin Solid Films, 2012, 520, 4155-4162.	1.8	57
14	Poly(ethylene oxide)â€like Plasma Polymers Produced by Plasmaâ€Assisted Vacuum Evaporation. Plasma Processes and Polymers, 2010, 7, 445-458.	3.0	56
15	Vacuum Thermal Degradation of Poly(ethylene oxide). Journal of Physical Chemistry B, 2009, 113, 2984-2989.	2.6	53
16	Antibacterial nanocomposite coatings produced by means of gas aggregation source of silver nanoparticles. Surface and Coatings Technology, 2016, 294, 225-230.	4.8	52
17	Single target sputter deposition of alloy nanoparticles with adjustable composition via a gas aggregation cluster source. Nanotechnology, 2017, 28, 175703.	2.6	52
18	Low-Temperature Solution Synthesis of Au-Modified ZnO Nanowires for Highly Efficient Hydrogen Nanosensors. ACS Applied Materials & Interfaces, 2019, 11, 32115-32126.	8.0	49

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19	Characterization of nanoparticle flow produced by gas aggregation source. Vacuum, 2013, 96, 32-38.	3.5	48
20	Hydrophobic and super-hydrophobic coatings based on nanoparticles overcoated by fluorocarbon plasma polymer. Vacuum, 2014, 100, 57-60.	3.5	48
21	(CuO-Cu2O)/ZnO:Al heterojunctions for volatile organic compound detection. Sensors and Actuators B: Chemical, 2018, 255, 1362-1375.	7.8	47
22	Magnetron-sputtered copper nanoparticles: lost in gas aggregation and found by <i>in situ</i> X-ray scattering. Nanoscale, 2018, 10, 18275-18281.	5.6	46
23	Influence of reactive gas admixture on transition metal cluster nucleation in a gas aggregation cluster source. Journal of Applied Physics, 2012, 112, .	2.5	44
24	Structure and Composition of Titanium Nanocluster Films Prepared by a Gas Aggregation Cluster Source. Journal of Physical Chemistry C, 2011, 115, 20937-20944.	3.1	43
25	Morphology of Titanium Nanocluster Films Prepared by Gas Aggregation Cluster Source. Plasma Processes and Polymers, 2011, 8, 640-650.	3.0	41
26	Fabrication of Cu nanoclusters and their use for production of Cu/plasma polymer nanocomposite thin films. Thin Solid Films, 2014, 550, 46-52.	1.8	41
27	Deposition of Pt nanoclusters by means of gas aggregation cluster source. Materials Letters, 2012, 79, 229-231.	2.6	40
28	Deposition of nanostructured fluorocarbon plasma polymer films by RF magnetron sputtering of polytetrafluoroethylene. Thin Solid Films, 2011, 519, 6426-6431.	1.8	38
29	Correlating Nanostructure, Optical and Electronic Properties of Nanogranular Silver Layers during Polymer-Template-Assisted Sputter Deposition. ACS Applied Materials & Interfaces, 2019, 11, 29416-29426.	8.0	37
30	Tuning doping and surface functionalization of columnar oxide films for volatile organic compound sensing: experiments and theory. Journal of Materials Chemistry A, 2018, 6, 23669-23682.	10.3	36
31	Huge increase in gas phase nanoparticle generation by pulsed direct current sputtering in a reactive gas admixture. Applied Physics Letters, 2013, 103, .	3.3	35
32	Role of UV Plasmonics in the Photocatalytic Performance of TiO₂ Decorated with Aluminum Nanoparticles. ACS Applied Nano Materials, 2018, 1, 3760-3764.	5.0	35
33	Antibacterial, highly hydrophobic and semi transparent Ag/plasma polymer nanocomposite coating on cotton fabric obtained by plasma based co-deposition. Cellulose, 2019, 26, 8877-8894.	4.9	34
34	Nanostructured thin films prepared from cluster beams. Surface and Coatings Technology, 2011, 205, S42-S47.	4.8	33
35	Control of Wettability of Plasma Polymers by Application of Ti Nanoâ€Clusters. Plasma Processes and Polymers, 2012, 9, 180-187.	3.0	33
36	Nylon-sputtered nanoparticles: fabrication and basic properties. Journal Physics D: Applied Physics, 2012, 45, 495301.	2.8	32

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37	Structured Ti/Hydrocarbon Plasma Polymer Nanocomposites Produced By Magnetron Sputtering with Glancing Angle Deposition. Plasma Processes and Polymers, 2010, 7, 25-32.	3.0	30
38	Ultra-thin TiO2 films by atomic layer deposition and surface functionalization with Au nanodots for sensing applications. Materials Science in Semiconductor Processing, 2018, 87, 44-53.	4.0	30
39	Wet-Chemical Assembly of 2D Nanomaterials into Lightweight, Microtube-Shaped, and Macroscopic 3D Networks. ACS Applied Materials & Interfaces, 2019, 11, 44652-44663.	8.0	30
40	Nucleation and Growth of Magnetronâ€Sputtered Ag Nanoparticles as Witnessed by Timeâ€Resolved Small Angle Xâ€Ray Scattering. Particle and Particle Systems Characterization, 2020, 37, 1900436.	2.3	30
41	Plasma based formation and deposition of metal and metal oxide nanoparticles using a gas aggregation source. European Physical Journal D, 2018, 72, 1.	1.3	29
42	Deposition of Al nanoparticles and their nanocomposites using a gas aggregation cluster source. Journal of Materials Science, 2014, 49, 3352-3360.	3.7	28
43	Single-step generation of metal-plasma polymer multicore@shell nanoparticles from the gas phase. Scientific Reports, 2017, 7, 8514.	3.3	27
44	Nanocomposite coatings of Ti/C:H plasma polymer particles providing a surface with variable nanoroughness. Surface and Coatings Technology, 2012, 206, 4335-4342.	4.8	25
45	Nanocomposite and nanostructured films with plasma polymer matrix. Surface and Coatings Technology, 2012, 211, 127-137.	4.8	24
46	Stable production of TiO_xnanoparticles with narrow size distribution by reactive pulsed dc magnetron sputtering. Journal Physics D: Applied Physics, 2015, 48, 035501.	2.8	24
47	Cauliflower-like CeO₂â€“TiO₂hybrid nanostructures with extreme photocatalytic and self-cleaning properties. Nanoscale, 2019, 11, 9840-9844.	5.6	24
48	Real-time insight into nanostructure evolution during the rapid formation of ultra-thin gold layers on polymers. Nanoscale Horizons, 2021, 6, 132-138.	8.0	24
49	In Situ Diagnostics of RF Magnetron Sputtering of Nylon. Plasma Processes and Polymers, 2009, 6, S803.	3.0	22
50	Durability of resin bonding to zirconia ceramic after contamination and the use of various cleaning methods. Dental Materials, 2019, 35, 1388-1396.	3.5	22
51	PdO nanoparticles decorated TiO2 film with enhanced photocatalytic and self-cleaning properties. Materials Today Chemistry, 2020, 16, 100251.	3.5	22
52	Role of oxygen admixture in stabilizing TiO x nanoparticle deposition from a gas aggregation source. Journal of Nanoparticle Research, 2013, 15, 1.	1.9	21
53	Covalent Attachment and Bioactivity of Horseradish Peroxidase on Plasmaâ€Polymerized Hexane Coatings. Plasma Processes and Polymers, 2008, 5, 727-736.	3.0	20
54	The evolution of Ag nanoparticles inside a gas aggregation cluster source. Plasma Processes and Polymers, 2019, 16, 1900079.	3.0	20

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55	Deposition of Fluorocarbon Nanoclusters by Gas Aggregation Cluster Source. Plasma Processes and Polymers, 2012, 9, 390-397.	3.0	19
56	Deposition and characterization of Pt nanocluster films by means of gas aggregation cluster source. Thin Solid Films, 2014, 571, 13-17.	1.8	19
57	Superhydrophobic 3D Porous PTFE/TiO₂ Hybrid Structures. Advanced Materials Interfaces, 2019, 6, 1801967.	3.7	19
58	Effect of noble metal functionalization and film thickness on sensing properties of sprayed TiO2 ultra-thin films. Sensors and Actuators A: Physical, 2019, 293, 242-258.	4.1	19
59	Efficacy of Plasma Treatment for Decontaminating Zirconia. Journal of Adhesive Dentistry, 2018, 20, 289-297.	0.5	17
60	Effect of sterilization procedures on properties of plasma polymers relevant to biomedical applications. Thin Solid Films, 2012, 520, 7115-7124.	1.8	16
61	Ag Nanoparticles Decorated TiO 2 Thin Films with Enhanced Photocatalytic Activity. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800898.	1.8	15
62	Selective Silver Nanocluster Metallization on Conjugated Diblock Copolymer Templates for Sensing and Photovoltaic Applications. ACS Applied Nano Materials, 2021, 4, 4245-4255.	5.0	14
63	Aging of nanocluster Ti/TiOx films prepared by means of gas aggregation cluster source. Surface and Coatings Technology, 2011, 205, S48-S52.	4.8	13
64	Nylon-sputtered plasma polymer particles produced by a semi-hollow cathode gas aggregation source. Vacuum, 2015, 111, 124-130.	3.5	13
65	Extreme tuning of wetting on 1D nanostructures: from a superhydrophilic to a perfect hydrophobic surface. Nanoscale, 2017, 9, 14814-14819.	5.6	12
66	Enhancing composition control of alloy nanoparticles from gas aggregation source by in operando optical emission spectroscopy. Plasma Processes and Polymers, 2021, 18, 2000208.	3.0	12
67	Light-induced Conductance Switching in Photomechanically Active Carbon Nanotube-Polymer Composites. Scientific Reports, 2017, 7, 9648.	3.3	11
68	Revealing the growth of copper on polystyrene-block-poly(ethylene oxide) diblock copolymer thin films with in situ GISAXS. Nanoscale, 2021, 13, 10555-10565.	5.6	11
69	Gas barrier properties of hydrogenated amorphous carbon films coated on polyethylene terephthalate by plasma polymerization in argon/n-hexane gas mixture. Thin Solid Films, 2013, 540, 65-68.	1.8	10
70	Following in Situ the Deposition of Gold Electrodes on Low Band Gap Polymer Films. ACS Applied Materials & Interfaces, 2020, 12, 1132-1141.	8.0	10
71	Correlating Optical Reflectance with the Topology of Aluminum Nanocluster Layers Growing on Partially Conjugated Diblock Copolymer Templates. ACS Applied Materials & Interfaces, 2021, 13, 56663-56673.	8.0	9
72	Polymethylmethacrylate wettability change spatially correlates with self-organized streamer microdischarge patterns in dielectric barrier discharge plasmas. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	8

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73	PEO-Like Coatings Prepared by Plasma-Based Techniques. Plasma Processes and Polymers, 2009, 6, S21-S24.	3.0	7
74	Deposition of amino-rich coatings by RF magnetron sputtering of Nylon: Investigation of their properties related to biomedical applications. Surface and Coatings Technology, 2011, 205, S529-S533.	4.8	7
75	Precise localization of DBD plasma streamers using topographically patterned insulators for maskless structural and chemical modification of surfaces. Applied Physics Letters, 2021, 119, 211601.	3.3	7
76	In Situ Monitoring of Scale Effects on Phase Selection and Plasmonic Shifts during the Growth of AgCu Alloy Nanostructures for Anticounterfeiting Applications. ACS Applied Nano Materials, 2022, 5, 3832-3842.	5.0	7
77	Deposition of amino-rich coatings by RF magnetron sputtering of Nylon: In-situ characterization of the deposition process. Surface and Coatings Technology, 2011, 205, S558-S561.	4.8	6
78	Impact of argon flow and pressure on the trapping behavior of nanoparticles inside a gas aggregation source. Plasma Processes and Polymers, 2022, 19, e2100125.	3.0	6
79	NMR Study of Polyethyleneâ€Like Plasma Polymer Films. Plasma Processes and Polymers, 2009, 6, S362.	3.0	5
80	Nanocomposite gold/poly(ethylene oxide)-like plasma polymers prepared by plasma-assisted vacuum evaporation and magnetron sputtering. Surface and Coatings Technology, 2011, 205, 2830-2837.	4.8	5
81	Hierarchical colloid-based lithography for wettability tuning of semiconductor surfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	5
82	Photovoltage method for the research of CdS and ZnO nanoparticles and hybrid MEH-PPV/nanoparticle structures. Journal of Nanoparticle Research, 2014, 16, 1.	1.9	3
83	Modification of a metal nanoparticle beam by a hollow electrode discharge. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, 021301.	2.1	2
84	Analysis of aerodynamics and charging of nanoparticles in the gas aggregation source based on a planar magnetron. , 2012, , .		0
85	Superhydrophobic Surfaces: Superhydrophobic 3D Porous PTFE/TiO2 Hybrid Structures (Adv. Mater.) Tj ETQq1 1 0.784314 rgBT /Overlo	3.7	0