

# Serge Zhuiykov

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

84  
papers

2,680  
citations

27  
h-index

50  
g-index

92  
ext. papers

3,085  
ext. citations

6.4  
avg, IF

5.45  
L-index

#	Paper	IF	Citations
84	Plasma-enhanced elemental enrichment of liquid metal interfaces: Towards realization of GaS nanodomains in two-dimensional Ga <sub>2</sub> O <sub>3</sub> . <i>Applied Materials Today</i> , <b>2022</b> , 27, 101461	6.6	1
83	Bioinspired Patterned Photonic Junctions for Plasmon-Enhanced Metal Photoluminescence and Fluorescence: Design of Optical Cavities for Near-Infrared Electronics. <i>Materials Today Energy</i> , <b>2022</b> , 101003	7	0
82	Metal Embedded Porous Carbon for Efficient CO <sub>2</sub> Cycloaddition under Mild Conditions. <i>Catalysts</i> , <b>2022</b> , 12, 427	4	0
81	Tunability of near infrared opto-synaptic properties of thin MoO <sub>3</sub> films fabricated by atomic layer deposition. <i>Applied Surface Science</i> , <b>2022</b> , 593, 153399	6.7	1
80	Atomic layer deposition †state-of-the-art approach to nanoscale hetero-interfacial engineering of chemical sensors electrodes: A review. <i>Sensors and Actuators B: Chemical</i> , <b>2021</b> , 331, 129403	8.5	6
79	2D Semiconductor Nanomaterials and Heterostructures: Controlled Synthesis and Functional Applications. <i>Nanoscale Research Letters</i> , <b>2021</b> , 16, 94	5	1
78	Electrospinning Encapsulation of Pd Nanoparticles into †Fe <sub>2</sub> O <sub>3</sub> Nanofibers Windows Enhanced Acetone Sensing. <i>IEEE Sensors Journal</i> , <b>2021</b> , 21, 15944-15951	4	0
77	Ring-opening copolymerization of †caprolactone and †valerolactone by a titanium-based metal†organic framework. <i>New Journal of Chemistry</i> , <b>2021</b> , 45, 11313-11316	3.6	1
76	Heterostructured plasmonic memristors with tunable opto-synaptic functionalities. <i>Journal of Materials Chemistry C</i> , <b>2021</b> , 9, 2539-2549	7.1	9
75	State-of-the-art surface oxide semiconductors of liquid metals: an emerging platform for development of multifunctional two-dimensional materials. <i>Journal of Materials Chemistry A</i> , <b>2021</b> , 9, 34-73	13	12
74	Self-Assembled Co <sub>3</sub> O <sub>4</sub> /GO Composites for Excellent Electrochemical Detection of Heavy-Metal Ions. <i>Journal of the Electrochemical Society</i> , <b>2021</b> , 168, 083503	3.9	2
73	Plasma-induced sub-10 nm Au-SnO <sub>2</sub> -In <sub>2</sub> O <sub>3</sub> heterostructures fabricated by atomic layer deposition for highly sensitive ethanol detection on ppm level. <i>Applied Surface Science</i> , <b>2021</b> , 563, 150400	6.7	3
72	Dynamic Self-Rectifying Liquid Metal-Semiconductor Heterointerfaces: A Platform for Development of Bioinspired Afferent Systems. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> ,	9.5	2
71	Nanoscale Au-ZnO Heterostructure Developed by Atomic Layer Deposition Towards Amperometric HO Detection. <i>Nanoscale Research Letters</i> , <b>2020</b> , 15, 41	5	7
70	Nanoscale All-Oxide-Heterostructured Bio-inspired Optoresponsive Nociceptor. <i>Nano-Micro Letters</i> , <b>2020</b> , 12, 83	19.5	16
69	Artificial Synaptic Devices Based on Two-Dimensional Semiconductors <b>2020</b> , 229-274		1
68	Sensorimotor Devices Based on Two-Dimensional Semiconductor Materials <b>2020</b> , 275-307		

67	MoO <sub>3</sub> induces p-type surface conductivity by surface transfer doping in diamond. <i>Applied Surface Science</i> , <b>2020</b> , 509, 144890	6.7	18
66	Nano-engineering and functionalization of hybrid Au-MeO-TiO (Me = W, Ga) hetero-interfaces for optoelectronic receptors and nociceptors. <i>Nanoscale</i> , <b>2020</b> , 12, 20177-20188	7.7	12
65	Wafer-Scale Fabrication of Sub-10 nm TiO-GaO n-p Heterojunctions with Efficient Photocatalytic Activity by Atomic Layer Deposition. <i>Nanoscale Research Letters</i> , <b>2019</b> , 14, 163	5	9
64	A bioinspired optoelectronically engineered artificial neurorobotics device with sensorimotor functionalities. <i>Nature Communications</i> , <b>2019</b> , 10, 3873	17.4	44
63	Sonochemical functionalization of the low-dimensional surface oxide of Galinstan for heterostructured optoelectronic applications. <i>Journal of Materials Chemistry C</i> , <b>2019</b> , 7, 5584-5595	7.1	18
62	Progress on Catalyst Development for Direct Synthesis of Dimethyl Carbonate from CO <sub>2</sub> and Methanol. <i>Chemistry Africa</i> , <b>2019</b> , 2, 533-549	2.2	6
61	Electrochromic Photodetectors: Toward Smarter Glasses and Nano Reflective Displays via an Electrolytic Mechanism. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 27997-28004	9.5	6
60	Challenges and recent advancements of functionalization of two-dimensional nanostructured molybdenum trioxide and dichalcogenides. <i>Nanoscale</i> , <b>2019</b> , 11, 15709-15738	7.7	15
59	Ultra-thin sub-10 nm Ga <sub>2</sub> O <sub>3</sub> -WO <sub>3</sub> heterostructures developed by atomic layer deposition for sensitive and selective C <sub>2</sub> H <sub>5</sub> OH detection on ppm level. <i>Sensors and Actuators B: Chemical</i> , <b>2019</b> , 287, 147-156	8.5	24
58	Fabrication of Ni(OH) <sub>2</sub> &NiOOH Film/Ni Electrode and the Effect of NaOH Concentration on Its Glucose Detection. <i>Journal of the Electrochemical Society</i> , <b>2019</b> , 166, B1732-B1741	3.9	4
57	Surface functionalization of wafer-scale two-dimensional WO <sub>3</sub> nanofilms by NM electrodeposition (NM = Ag, Pt, Pd) for electrochemical H <sub>2</sub> O <sub>2</sub> reduction improvement. <i>Electrochimica Acta</i> , <b>2019</b> , 297, 417-426	6.7	16
56	ALD-Developed Plasmonic Two-Dimensional Au-WO-TiO Heterojunction Architectonics for Design of Photovoltaic Devices. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 10304-10314	9.5	33
55	Ultra-thin MoO <sub>3</sub> film goes wafer-scaled nano-architectonics by atomic layer deposition. <i>Materials and Design</i> , <b>2018</b> , 149, 135-144	8.1	14
54	Electrochemical non-enzymatic glucose sensor based on hierarchical 3D Co <sub>3</sub> O <sub>4</sub> /Ni heterostructure electrode for pushing sensitivity boundary to a new limit. <i>Sensors and Actuators B: Chemical</i> , <b>2018</b> , 267, 93-103	8.5	71
53	Atomic layer deposition-developed two-dimensional MoO <sub>3</sub> windows excellent hydrogen peroxide electrochemical sensing capabilities. <i>Sensors and Actuators B: Chemical</i> , <b>2018</b> , 262, 334-344	8.5	38
52	Pr <sub>6</sub> O <sub>11</sub> -Functionalized SnO <sub>2</sub> Flower-Like Architectures for Highly Efficient, Stable, and Selective Acetone Detection. <i>IEEE Sensors Journal</i> , <b>2018</b> , 18, 933-940	4	6
51	Functionalizing New Intercalation Chemistry for Sub-Nanometer-Scaled Interlayer Engineering of 2D Transition Metal Oxides and Chalcogenides. <i>Advanced Materials Interfaces</i> , <b>2018</b> , 5, 1701385	4.6	14
50	Synthesis and electrochemical properties of rGO-MoS <sub>2</sub> heterostructures for highly sensitive nitrite detection. <i>Ionics</i> , <b>2018</b> , 24, 577-587	2.7	28

49	MoONPs/ZIF-8 composite material prepared via RCVD for photodegradation of dyes. <i>Data in Brief</i> , <b>2018</b> , 19, 2253-2259	1.2	0
48	Post-synthetically modified MOF for the A3-coupling reaction of aldehyde, amine, and alkyne. <i>Catalysis Science and Technology</i> , <b>2018</b> , 8, 4129-4140	5.5	20
47	Facile-synthesized NiCo <sub>2</sub> O <sub>4</sub> @MnMoO <sub>4</sub> with novel and functional structure for superior performance supercapacitors. <i>Applied Surface Science</i> , <b>2018</b> , 452, 413-422	6.7	37
46	Ultrasensitive, Sustainable, and Selective Electrochemical Hydrazine Detection by ALD-Developed Two-Dimensional WO <sub>3</sub> . <i>ChemElectroChem</i> , <b>2018</b> , 5, 266-272	4.3	13
45	Nanostructure-induced performance degradation of WO <sub>3</sub> /HO for energy conversion and storage devices. <i>Beilstein Journal of Nanotechnology</i> , <b>2018</b> , 9, 2845-2854	3	1
44	Effect of Zinc Acetate Concentration on Optimization of Photocatalytic Activity of p-CoO/n-ZnO Heterostructures. <i>Nanoscale Research Letters</i> , <b>2018</b> , 13, 195	5	13
43	Spray drying of zeolitic imidazolate frameworks: investigation of crystal formation and properties. <i>CrystEngComm</i> , <b>2018</b> , 20, 3601-3608	3.3	18
42	Photodetector with superior functional capabilities based on monolayer WO <sub>3</sub> developed by atomic layer deposition. <i>Sensors and Actuators B: Chemical</i> , <b>2017</b> , 245, 954-962	8.5	27
41	Atomic layer deposition-enabled single layer of tungsten trioxide across a large area. <i>Applied Materials Today</i> , <b>2017</b> , 6, 44-53	6.6	47
40	Wafer-scaled monolayer WO <sub>3</sub> windows ultra-sensitive, extremely-fast and stable UV-A photodetection. <i>Applied Surface Science</i> , <b>2017</b> , 405, 169-177	6.7	41
39	Wafer-scale fabrication of conformal atomic-layered TiO <sub>2</sub> by atomic layer deposition using tetrakis (dimethylamino) titanium and H <sub>2</sub> O precursors. <i>Materials and Design</i> , <b>2017</b> , 120, 99-108	8.1	37
38	Carbon-doped MoS <sub>2</sub> nanosheet photocatalysts for efficient degradation of methyl orange. <i>Ionics</i> , <b>2017</b> , 23, 1921-1925	2.7	17
37	Nano-thickness dependence of supercapacitor performance of the ALD-fabricated two-dimensional WO <sub>3</sub> . <i>Electrochimica Acta</i> , <b>2017</b> , 246, 625-633	6.7	42
36	Data set for fabrication of conformal two-dimensional TiO by atomic layer deposition using tetrakis (dimethylamino) titanium (TDMAT) and HO precursors. <i>Data in Brief</i> , <b>2017</b> , 13, 401-407	1.2	8
35	Enhancement of the acetone sensing capabilities to ppb detection level by Fe-doped three-dimensional SnO <sub>2</sub> hierarchical microstructures fabricated via a hydrothermal method. <i>Journal of Materials Science</i> , <b>2017</b> , 52, 11554-11568	4.3	10
34	Atomically-thin WO <sub>3</sub> /TiO <sub>2</sub> heterojunction for supercapacitor electrodes developed by atomic layer deposition. <i>Composites Communications</i> , <b>2017</b> , 5, 31-35	6.7	26
33	Wafer-scale two-dimensional Au-TiO <sub>2</sub> bilayer films for photocatalytic degradation of Palmitic acid under UV and visible light illumination. <i>Materials Research Bulletin</i> , <b>2017</b> , 95, 380-391	5.1	16
32	Highly Sensitive, Fast-Responding, and Stable Photodetector Based on ALD-Developed Monolayer TiO <sub>2</sub> . <i>IEEE Nanotechnology Magazine</i> , <b>2017</b> , 16, 880-887	2.6	12

31	TiO <sub>2</sub> nanoparticles-functionalized two-dimensional WO <sub>3</sub> for high-performance supercapacitors developed by facile two-step ALD process. <i>Materials Today Communications</i> , <b>2017</b> , 12, 55-62	2.5	19
30	Interfacial engineering of two-dimensional nano-structured materials by atomic layer deposition. <i>Applied Surface Science</i> , <b>2017</b> , 392, 231-243	6.7	22
29	Liquid Exfoliation of Layered Transition Metal Dichalcogenides for Biological Applications. <i>Current Protocols in Chemical Biology</i> , <b>2016</b> , 8, 97-108	1.8	13
28	Material characterisation and transistor function of quasi two dimensional sub-stoichiometric WO <sub>3-x</sub> nanoflakes. <i>Materials Letters</i> , <b>2016</b> , 165, 173-177	3.3	19
27	Development of quasi-two-dimensional Nb <sub>2</sub> O <sub>5</sub> nanoflakes with thickness-dependend electro-chemical properties. <i>Functional Materials Letters</i> , <b>2015</b> , 08, 1550007	1.2	5
26	Mechanically exfoliated ultra-thin WO <sub>3</sub> nanostructures: study of their enhanced electrical properties. <i>Ionics</i> , <b>2015</b> , 21, 775-784	2.7	7
25	Investigation of Two-Solvent Grinding-Assisted Liquid Phase Exfoliation of Layered MoS <sub>2</sub> . <i>Chemistry of Materials</i> , <b>2015</b> , 27, 53-59	9.6	160
24	Electronic Tuning of 2D MoS <sub>2</sub> through Surface Functionalization. <i>Advanced Materials</i> , <b>2015</b> , 27, 6225-9	24	158
23	Plasmon resonances of highly doped two-dimensional MoS <sub>2</sub> . <i>Nano Letters</i> , <b>2015</b> , 15, 883-90	11.5	145
22	Proton intercalated two-dimensional WO <sub>3</sub> nano-flakes with enhanced charge-carrier mobility at room temperature. <i>Nanoscale</i> , <b>2014</b> , 6, 15029-36	7.7	53
21	Enhanced electrical properties in sub-10-nm WO <sub>3</sub> nanoflakes prepared via a two-step sol-gel-exfoliation method. <i>Nanoscale Research Letters</i> , <b>2014</b> , 9, 401	5	21
20	Semiconductors: Two-Dimensional Molybdenum Trioxide and Dichalcogenides (Adv. Funct. Mater. 32/2013). <i>Advanced Functional Materials</i> , <b>2013</b> , 23, 3946-3946	15.6	4
19	Atomically thin two-dimensional materials for functional electrodes of electrochemical devices. <i>Ionics</i> , <b>2013</b> , 19, 825-865	2.7	30
18	Two-Dimensional Molybdenum Trioxide and Dichalcogenides. <i>Advanced Functional Materials</i> , <b>2013</b> , 23, 3952-3970	15.6	378
17	Engineering electrodeposited ZnO films and their memristive switching performance. <i>Physical Chemistry Chemical Physics</i> , <b>2013</b> , 15, 10376-84	3.6	45
16	Enhanced Charge Carrier Mobility in Two-Dimensional High Dielectric Molybdenum Oxide (Adv. Mater. 1/2013). <i>Advanced Materials</i> , <b>2013</b> , 25, 108-108	24	8
15	MnO <sub>2</sub> -Based Thermopower Wave Sources with Exceptionally Large Output Voltages. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 9137-9142	3.8	60
14	Atomic Force Microscopy Adhesion Mapping: Revealing Assembly Process in Inorganic Systems. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 19984-19990	3.8	8

13	Electrodeposited $\alpha$ - and $\beta$ -Phase $\text{MoO}_3$ Films and Investigation of Their Gasochromic Properties. <i>Crystal Growth and Design</i> , <b>2012</b> , 12, 1865-1870	3.5	173
12	Enhancing the current density of electrodeposited $\text{ZnO}/\text{RuO}_2$ solar cells by engineering their heterointerfaces. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 21767		65
11	In situ FTIR investigation of adsorption properties of sub-micron $\text{Cu}_2\text{O}$ -doped $\text{RuO}_2$ sensing electrode of planar potentiometric pH sensor. <i>Ionics</i> , <b>2012</b> , 18, 797-802	2.7	3
10	Atomically thin layers of $\text{MoS}_2$ via a two step thermal evaporation-exfoliation method. <i>Nanoscale</i> , <b>2012</b> , 4, 461-6	7.7	221
9	Investigation of Electrochemical Properties of $\text{La}_2\text{O}_3/\text{RuO}_2$ Thin-Film Sensing Electrodes Used in Sensors for the Analysis of Complex Solutions. <i>International Journal of Applied Ceramic Technology</i> , <b>2011</b> , 8, 1192-1200	2	13
8	Potentiometric sensor using sub-micron $\text{Cu}_2\text{O}$ -doped $\text{RuO}_2$ sensing electrode with improved antifouling resistance. <i>Talanta</i> , <b>2010</b> , 82, 502-7	6.2	33
7	Mixed-potential Behavior of Nanostructured $\text{RuO}_2$ Sensing Electrode of Water Quality Sensors in Strong Alkaline Solutions at a Temperature Range of $9\text{--}30^\circ\text{C}$ <b>2009</b> ,		3
6	In situ FTIR study of oxygen adsorption on nanostructured $\text{RuO}_2$ thin-film electrode. <i>Ionics</i> , <b>2009</b> , 15, 507-512	2.7	29
5	Potentiometric DO detection in water by ceramic sensor based on sub-micron $\text{RuO}_2$ sensing electrode. <i>Ionics</i> , <b>2009</b> , 15, 693-701	2.7	29
4	Morphology of Pt-doped nanofabricated $\text{RuO}_2$ sensing electrodes and their properties in water quality monitoring sensors. <i>Sensors and Actuators B: Chemical</i> , <b>2009</b> , 136, 248-256	8.5	56
3	Carbon monoxide detection at low temperatures by semiconductor sensor with nanostructured Au-doped $\text{CoOOH}$ films. <i>Sensors and Actuators B: Chemical</i> , <b>2008</b> , 129, 431-441	8.5	39
2	Morphology and sensing characteristics of nanostructured $\text{RuO}_2$ electrodes for integrated water quality monitoring sensors. <i>Electrochemistry Communications</i> , <b>2008</b> , 10, 839-843	5.1	33
1	Ultrathin Two-Dimensional Semiconductors for Novel Electronic Applications		3