

Kremena Makasheva

List of Publications by Year in descending order

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89
papers

869
citations

516215

16
h-index

580395

25
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89
all docs

89
docs citations

89
times ranked

685
citing authors

#	ARTICLE	IF	CITATIONS
1	Modeling of microwave-sustained plasmas at atmospheric pressure with application to discharge contraction. <i>Physical Review E</i> , 2004, 70, 066405.	0.8	72
2	Guided-Wave-Produced Plasmas. <i>Contributions To Plasma Physics</i> , 2004, 44, 552-557.	0.5	46
3	Modelling of a dipolar microwave plasma sustained by electron cyclotron resonance. <i>Journal Physics D: Applied Physics</i> , 2009, 42, 194019.	1.3	41
4	Surface-wave-produced plasmas in a diffusion-controlled regime. <i>Physics of Plasmas</i> , 2001, 8, 836-845.	0.7	39
5	Efficient barrier for charge injection in polyethylene by silver nanoparticles/plasma polymer stack. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	32
6	Silver nanoparticles as a key feature of a plasma polymer composite layer in mitigation of charge injection into polyethylene under dc stress. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 015304.	1.3	29
7	Assessing bio-available silver released from silver nanoparticles embedded in silica layers using the green algae <i>Chlamydomonas reinhardtii</i> as bio-sensors. <i>Science of the Total Environment</i> , 2016, 565, 863-871.	3.9	28
8	Self-organization of surface wave sustained discharges in the pressure range from 10 to 200 Torr. <i>Journal of Applied Physics</i> , 1999, 86, 738-745.	1.1	26
9	Dielectric Engineering of Nanostructured Layers to Control the Transport of Injected Charges in Thin Dielectrics. <i>IEEE Nanotechnology Magazine</i> , 2016, 15, 839-848.	1.1	26
10	Charge injection in thin dielectric layers by atomic force microscopy: influence of geometry and material work function of the AFM tip on the injection process. <i>Nanotechnology</i> , 2016, 27, 245702.	1.3	26
11	Modulation instability in pulsed surface-wave sustained discharges. <i>IEEE Transactions on Plasma Science</i> , 1997, 25, 415-422.	0.6	24
12	Dielectric layers for RF-MEMS switches: Design and study of appropriate structures preventing electrostatic charging. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2012, 19, 1195-1202.	1.8	24
13	Kelvin force microscopy characterization of charging effect in thin a-SiO _x Ny:H layers deposited in pulsed plasma enhanced chemical vapor deposition process by tuning the Silicon-environment. <i>Journal of Applied Physics</i> , 2013, 113, 204102.	1.1	24
14	A better understanding of microcathode sustained discharges. <i>Plasma Physics and Controlled Fusion</i> , 2007, 49, B233-B238.	0.9	20
15	Cyclic evolution of the electron temperature and density in dusty low-pressure radio frequency plasmas with pulsed injection of hexamethyldisiloxane. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	18
16	Wave-sustained discharges in helium-argon gas mixtures. <i>Journal of Applied Physics</i> , 2002, 92, 6461-6470.	1.1	16
17	Reduction of perfluorinated compound emissions using atmospheric pressure microwave plasmas: Mechanisms and energy efficiency. <i>Pure and Applied Chemistry</i> , 2006, 78, 1173-1185.	0.9	16
18	Cyclic powder formation during pulsed injection of hexamethyldisiloxane in an axially asymmetric radiofrequency argon discharge. <i>Journal of Applied Physics</i> , 2012, 112, .	1.1	16

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19	Controlled elaboration of large-area plasmonic substrates by plasma process. <i>Materials Research Express</i> , 2015, 2, 065005.	0.8	16
20	Methodology for extraction of space charge density profiles at nanoscale from Kelvin probe force microscopy measurements. <i>Nanotechnology</i> , 2017, 28, 505701.	1.3	16
21	Adsorption properties of BSA and DsRed proteins deposited on thin SiO ₂ layers: optically non-absorbing versus absorbing proteins. <i>Nanotechnology</i> , 2018, 29, 115101.	1.3	15
22	Multi-scale investigation in the frequency domain of Ar/HMDSO dusty plasma with pulsed injection of HMDSO. <i>Plasma Sources Science and Technology</i> , 2019, 28, 055019.	1.3	15
23	Controlled fabrication of Si nanocrystals embedded in thin SiON layers by PPECVD followed by oxidizing annealing. <i>Nanotechnology</i> , 2010, 21, 285605.	1.3	14
24	Dielectric charging by AFM in tip-to-sample space mode: overview and challenges in revealing the appropriate mechanisms. <i>Nanotechnology</i> , 2015, 26, 295704.	1.3	14
25	Towards 3D charge localization by a method derived from atomic force microscopy: the electrostatic force distance curve. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 455302.	1.3	13
26	Diffusion-controlled regime of surface-wave-produced plasmas in helium gas. <i>Plasma Sources Science and Technology</i> , 2002, 11, 208-217.	1.3	12
27	Charge injection phenomena at the metal/dielectric interface investigated by Kelvin probe force microscopy. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 175302.	1.3	12
28	Interface tailoring for charge injection control in polyethylene. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2017, 24, 1319-1330.	1.8	12
29	Using radio astronomical receivers for molecular spectroscopic characterization in astrochemical laboratory simulations: A proof of concept. <i>Astronomy and Astrophysics</i> , 2018, 609, A15.	2.1	12
30	Ignition of Microcathode Sustained Discharge. <i>IEEE Transactions on Plasma Science</i> , 2008, 36, 1236-1237.	0.6	11
31	Influence of the temporal variations of plasma composition on the cyclic formation of dust in hexamethyldisiloxane-argon radiofrequency discharges: Analysis by time-resolved mass spectrometry. <i>AIP Advances</i> , 2016, 6, .	0.6	11
32	Atomic force microscopy developments for probing space charge at sub-micrometer scale in thin dielectric films. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2016, 23, 713-720.	1.8	11
33	Plasma parameters of diffusion-controlled microwave discharges in surface-wave fields. <i>IEEE Transactions on Plasma Science</i> , 2002, 30, 384-390.	0.6	10
34	On line-ratio analysis for helium-argon microwave discharges. <i>Journal of Applied Physics</i> , 2005, 97, 043302.	1.1	10
35	Silver nanoparticles embedded in dielectric matrix: Charge transport analysis with application to control of space charge formation. , 2013, , .		10
36	Structural analysis of the interface of silicon nanocrystals embedded in a Si ₃ N ₄ matrix. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 255302.	1.3	9

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37	Time-resolved analysis of the precursor fragmentation kinetics in an hybrid PVD/PECVD dusty plasma with pulsed injection of HMDSO. <i>Plasma Processes and Polymers</i> , 2019, 16, 1900044.	1.6	9
38	Silicon nanocrystals: Novel synthesis routes for photovoltaic applications. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 649-657.	0.8	8
39	Challenges in probing space charge at sub-micrometer scale. , 2012, , .		7
40	Silicon nanocrystals on amorphous silicon carbide alloy thin films: Control of film properties and nanocrystals growth. <i>Thin Solid Films</i> , 2012, 522, 136-144.	0.8	7
41	Influence of dielectric layer thickness on charge injection, accumulation and transport phenomena in thin silicon oxynitride layers: a nanoscale study. <i>Nanotechnology</i> , 2021, 32, 065706.	1.3	7
42	Diagnostics of microwave discharges sustained by propagating surface waves. <i>Vacuum</i> , 2000, 58, 280-286.	1.6	5
43	Evidence of local power deposition and electron heating by a standing electromagnetic wave in electron-cyclotron-resonance plasma. <i>Physical Review E</i> , 2014, 90, 033106.	0.8	5
44	Waveguide Stationary and Nonstationary Discharges: Modelling and Experiments. , 1999, , 245-270.		5
45	Travelling-wave-sustained discharges. <i>Vacuum</i> , 2004, 76, 369-376.	1.6	4
46	Physico-Chemical Characterization of the Interaction of Red Fluorescent Protein "DsRed With Thin Silica Layers. <i>IEEE Transactions on Nanobioscience</i> , 2016, 15, 412-417.	2.2	4
47	Atypical secondary electron emission yield curves of very thin SiO ₂ layers: Experiments and modeling. <i>Journal of Applied Physics</i> , 2021, 130, .	1.1	4
48	Analysis of the charging kinetics in silver nanoparticles-silica nanocomposite dielectrics at different temperatures. <i>Nano Express</i> , 2021, 2, 044001.	1.2	4
49	A discussion on the likely mechanisms for dielectric charging in AFM. , 2010, , .		3
50	Effects of a modified interface by silver nanoparticles/SiOC:H barrier layer against space charge injection under HVDC. , 2014, , .		3
51	Predictive modelling of the dielectric response of plasmonic substrates: application to the interpretation of ellipsometric spectra. <i>Materials Research Express</i> , 2018, 5, 035027.	0.8	3
52	Detection of the conformational changes of Discosoma red fluorescent proteins adhered on silver nanoparticles-based nanocomposites via surface-enhanced Raman scattering. <i>Nanotechnology</i> , 2019, 30, 165101.	1.3	3
53	Spectroscopic characterization of phase transformation in Ge-rich Al ₂ O ₃ films grown by magnetron co-sputtering. <i>Materials Letters</i> , 2020, 277, 128306.	1.3	3
54	Combined effect of proteins and AgNPs on the adhesion of yeast <i>Candida albicans</i> on solid silica surfaces. , 2020, , .		3

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55	Thermally Stimulated Evolution of Optical and Structural Properties of Germanium-Doped Alumina Films. ECS Transactions, 2020, 97, 81-90.	0.3	3
56	Discharge maintenance in surface wave fields. Vacuum, 2000, 58, 215-221.	1.6	2
57	Applied signal-propagation properties in surface-wave-produced discharges. Vacuum, 2004, 76, 397-400.	1.6	2
58	Dielectric layers with gradual properties. , 2010, , .		2
59	Space charge probing in dielectrics at nanometer scale by techniques derived from atomic force microscopy. , 2013, , .		2
60	Spatially Modulated Emission of ECR Plasmas in Helium. IEEE Transactions on Plasma Science, 2014, 42, 2762-2763.	0.6	2
61	A contribution to breakdown voltage characteristics in air for inter-electrode distances $1\hat{\epsilon}10\hat{1}4\text{m}$ at various pressures. , 2016, , .		2
62	Characterization of the Electrical Behaviour of Thin Dielectric Films at Nanoscale using Methods Derived from Atomic Force Microscopy: Application to Plasma Deposited Agnps-Based Nanocomposites. , 2018, , .		2
63	Space Charge at Nanoscale: Probing Injection and Dynamic Phenomena Under Dark/Light Configurations by Using KPFM and C-AFM. Nanoscience and Technology, 2019, , 267-301.	1.5	2
64	The 3D Design of Multifunctional Silver Nanoparticle Assemblies Embedded in Dielectrics. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900619.	0.8	2
65	Impact of Metals on (Star)Dust Chemistry: A Laboratory Astrophysics Approach. Frontiers in Astronomy and Space Sciences, 2021, 8, .	1.1	2
66	Rational Engineering of the Dielectric Properties of Thin Silica Layers with a Single Plane of AgNPs. , 2020, , .		2
67	Dielectric layers for RF-MEMS switches: Design and study of appropriate structures preventing electrostatic charging. , 2011, , .		1
68	Optical properties of silicon nanocrystals embedded in Si3N4 matrix measured by spectroscopic ellipsometry and UV-Vis-NIR spectroscopy. Materials Research Express, 2014, 1, 025029.	0.8	1
69	Dielectric engineering of nanostructured layers preventing electrostatic charging in thin dielectrics. , 2015, , .		1
70	The use of biosensors for improving the development of nanotechnology under realistic-use scenarios: Applications for cheaper and more effective silver nanoparticles and nanostructured surfaces. , 2016, , .		1
71	Effect of charging on the secondary electron emission. , 2016, , .		1
72	Parametric study of the electron temperature and density in dusty low-pressure RF plasmas with pulsed injection of hexamethyldisiloxane. , 2016, , .		1

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73	Charges injection investigation at metal/dielectric interfaces by Kelvin Probe Force Microscopy. , 2016, , .		1
74	Methodology for Analysis of Electrical Breakdown In Micrometer gaps in Tip-To-Plane Configuration. , 2018, , .		1
75	Study of required conditions to limit the dielectric charging phenomenon when measuring the electron emission yield from thin dielectric layers. , 2018, , .		1
76	Using cold plasma to investigate the mechanisms involved in cosmic dust formation: Role of the C/O ratio and metals. Proceedings of the International Astronomical Union, 2019, 15, 297-300.	0.0	1
77	Plasmon induced enhancement of the electroluminescence signal of thin insulating polypropylene films. , 2020, , .		1
78	Physico-chemical characterization of the interaction of red fluorescent protein "DsRed with silica layers. , 2015, , .		0
79	On the application of surface enhanced Raman scattering to study the interaction of DsRed fluorescent proteins with silver nanoparticles embedded in thin silica layers. , 2016, , .		0
80	Charge injection mitigation in polyethylene induced by silver nanoparticles containing organosilicon barrier layer as demonstrated by conductivity measurements. , 2016, , .		0
81	Experimental study of nanoparticle formation dynamics in HMDSO-Ar asymmetric capacitively-coupled radiofrequency plasma with application to deposition of nanocomposite layers. , 2016, , .		0
82	Barrier effect to charge injection in polyethylene by silver nanoparticles containing plasma polymer composites investigated by conductivity measurements. , 2016, , .		0
83	Plasma based concept for engineering of multifunctional materials with application to synthesis of large-area plasmonic substrates and to control the charge injection in dielectrics. , 2016, , .		0
84	On the secondary electron emission phenomenon when originating from very thin layers. , 2017, , .		0
85	Handling Geometric Features in Nanoscale Characterization of Charge Injection and Transport in thin Dielectric Films. , 2018, , .		0
86	Handling Geometric Features in Nanoscale Characterization of Charge Injection and Transport in thin Dielectric Films. , 2018, , .		0
87	Reliable method for accurate measurements of the breakdown voltage in microgaps. , 2020, , .		0
88	On the importance of precise measurements of the optical properties of gold electrodes in LMM/(F)LMM. , 2021, , .		0
89	Protein interaction with SiO ₂ and AgNPs: from adsorption on solid surfaces to organization and conformational changes. , 2021, , .		0