Kremena Makasheva

List of Publications by Year
in descending order

89 papers	869 citations	516710 16 h-index	580821 25 g-index
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. Physical Review E, 2004, 70, 066405.	2.1	72
2	Guided-Wave-Produced Plasmas. Contributions To Plasma Physics, 2004, 44, 552-557.	1.1	46
3	Modelling of a dipolar microwave plasma sustained by electron cyclotron resonance. Journal Physics D: Applied Physics, 2009, 42, 194019.	2.8	41
4	Surface-wave-produced plasmas in a diffusion-controlled regime. Physics of Plasmas, 2001, 8, 836-845.	1.9	39
5	Efficient barrier for charge injection in polyethylene by silver nanoparticles/plasma polymer stack. Applied Physics Letters, 2014, 105, .	3.3	32
6	Silver nanoparticles as a key feature of a plasma polymer composite layer in mitigation of charge injection into polyethylene under dc stress. Journal Physics D: Applied Physics, 2016, 49, 015304.	2.8	29
7	Assessing bio-available silver released from silver nanoparticles embedded in silica layers using the green algae Chlamydomonas reinhardtii as bio-sensors. Science of the Total Environment, 2016, 565, 863-871.	8.0	28
8	Self-organization of surface wave sustained discharges in the pressure range from 10 to 200 Torr. Journal of Applied Physics, 1999, 86, 738-745.	2.5	26
9	Dielectric Engineering of Nanostructured Layers to Control the Transport of Injected Charges in Thin Dielectrics. IEEE Nanotechnology Magazine, 2016, 15, 839-848.	2.0	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. Nanotechnology, 2016, 27, 245702.	2.6	26
11	Modulation instability in pulsed surface-wave sustained discharges. IEEE Transactions on Plasma Science, 1997, 25, 415-422.	1.3	24
12	Dielectric layers for RF-MEMS switches: Design and study of appropriate structures preventing electrostatic charging. IEEE Transactions on Dielectrics and Electrical Insulation, 2012, 19, 1195-1202.	2.9	24
13	Kelvin force microscopy characterization of charging effect in thin a-SiOxNy:H layers deposited in pulsed plasma enhanced chemical vapor deposition process by tuning the Silicon-environment. Journal of Applied Physics, 2013, 113, 204102.	2.5	24
14	A better understanding of microcathode sustained discharges. Plasma Physics and Controlled Fusion, 2007, 49, B233-B238.	2.1	20
15	Cyclic evolution of the electron temperature and density in dusty low-pressure radio frequency plasmas with pulsed injection of hexamethyldisiloxane. Applied Physics Letters, 2015, 107, .	3.3	18
16	Wave-sustained discharges in heliumâ€“argon gas mixtures. Journal of Applied Physics, 2002, 92, 6461-6470.	2.5	16
17	Reduction of perfluorinated compound emissions using atmospheric pressure microwave plasmas: Mechanisms and energy efficiency. Pure and Applied Chemistry, 2006, 78, 1173-1185.	1.9	16
18	Cyclic powder formation during pulsed injection of hexamethyldisiloxane in an axially asymmetric radiofrequency argon discharge. Journal of Applied Physics, 2012, 112, .	2.5	16

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19	Controlled elaboration of large-area plasmonic substrates by plasma process. Materials Research Express, 2015, 2, 065005.	1.6	16
20	Methodology for extraction of space charge density profiles at nanoscale from Kelvin probe force microscopy measurements. Nanotechnology, 2017, 28, 505701.	2.6	16
21	Adsorption properties of BSA and DsRed proteins deposited on thin SiO₂layers: optically non-absorbing versus absorbing proteins. Nanotechnology, 2018, 29, 115101.	2.6	15
22	Multi-scale investigation in the frequency domain of Ar/HMDSO dusty plasma with pulsed injection of HMDSO. Plasma Sources Science and Technology, 2019, 28, 055019.	3.1	15
23	Controlled fabrication of Si nanocrystals embedded in thin SiON layers by PPECVD followed by oxidizing annealing. Nanotechnology, 2010, 21, 285605.	2.6	14
24	Dielectric charging by AFM in tip-to-sample space mode: overview and challenges in revealing the appropriate mechanisms. Nanotechnology, 2015, 26, 295704.	2.6	14
25	Towards 3D charge localization by a method derived from atomic force microscopy: the electrostatic force distance curve. Journal Physics D: Applied Physics, 2014, 47, 455302.	2.8	13
26	Diffusion-controlled regime of surface-wave-produced plasmas in helium gas. Plasma Sources Science and Technology, 2002, 11, 208-217.	3.1	12
27	Charge injection phenomena at the metal/dielectric interface investigated by Kelvin probe force microscopy. Journal Physics D: Applied Physics, 2017, 50, 175302.	2.8	12
28	Interface tailoring for charge injection control in polyethylene. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 1319-1330.	2.9	12
29	Using radio astronomical receivers for molecular spectroscopic characterization in astrochemical laboratory simulations: A proof of concept. Astronomy and Astrophysics, 2018, 609, A15.	5.1	12
30	Ignition of Microcathode Sustained Discharge. IEEE Transactions on Plasma Science, 2008, 36, 1236-1237.	1.3	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. AIP Advances, 2016, 6, .	1.3	11
32	Atomic force microscopy developments for probing space charge at sub-micrometer scale in thin dielectric films. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 713-720.	2.9	11
33	Plasma parameters of diffusion-controlled microwave discharges in surface-wave fields. IEEE Transactions on Plasma Science, 2002, 30, 384-390.	1.3	10
34	On line-ratio analysis for heliumâ€“argon microwave discharges. Journal of Applied Physics, 2005, 97, 043302.	2.5	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 Si₃N₄matrix. Journal Physics D: Applied Physics, 2014, 47, 255302.	2.8	9

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37	Timeâ€resolved analysis of the precursor fragmentation kinetics in an hybrid PVD/PECVD dusty plasma with pulsed injection of HMDSO. Plasma Processes and Polymers, 2019, 16, 1900044.	3.0	9
38	Silicon nanocrystals: Novel synthesis routes for photovoltaic applications. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 649-657.	1.8	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. Thin Solid Films, 2012, 522, 136-144.	1.8	7
41	Influence of dielectric layer thickness on charge injection, accumulation and transport phenomena in thin silicon oxynitride layers: a nanoscale study. Nanotechnology, 2021, 32, 065706.	2.6	7
42	Diagnostics of microwave discharges sustained by propagating surface waves. Vacuum, 2000, 58, 280-286.	3.5	5
43	Evidence of local power deposition and electron heating by a standing electromagnetic wave in electron-cyclotron-resonance plasma. Physical Review E, 2014, 90, 033106.	2.1	5
44	Waveguide Stationary and Nonstationary Discharges: Modelling and Experiments. , 1999, , 245-270.		5
45	Travelling-wave-sustained discharges. Vacuum, 2004, 76, 369-376.	3.5	4
46	Physico-Chemical Characterization of the Interaction of Red Fluorescent Proteinâ€"DsRed With Thin Silica Layers. IEEE Transactions on Nanobioscience, 2016, 15, 412-417.	3.3	4
47	Atypical secondary electron emission yield curves of very thin SiO2 layers: Experiments and modeling. Journal of Applied Physics, 2021, 130, .	2.5	4
48	Analysis of the charging kinetics in silver nanoparticles-silica nanocomposite dielectrics at different temperatures. Nano Express, 2021, 2, 044001.	2.4	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. Materials Research Express, 2018, 5, 035027.	1.6	3
52	Detection of the conformational changes of Discosoma red fluorescent proteins adhered on silver nanoparticles-based nanocomposites via surface-enhanced Raman scattering. Nanotechnology, 2019, 30, 165101.	2.6	3
53	Spectroscopic characterization of phase transformation in Ge-rich Al2O3 films grown by magnetron co-sputtering. Materials Letters, 2020, 277, 128306.	2.6	3
54	Combined effect of proteins and AgNPs on the adhesion of yeast Candida albicans 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.	0.5	3
56	Discharge maintenance in surface wave fields. Vacuum, 2000, 58, 215-221.	3.5	2
57	Applied signal-propagation properties in surface-wave-produced discharges. Vacuum, 2004, 76, 397-400.	3.5	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.	1.3	2
61	A contribution to breakdown voltage characteristics in air for inter-electrode distances 1â€“10 Î¼m 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.	1.8	2
65	Impact of Metals on (Star)Dust Chemistry: A Laboratory Astrophysics Approach. Frontiers in Astronomy and Space Sciences, 2021, 8, .	2.8	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.	1.6	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 â€" 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 LIMM/(F)LIMM. , 2021, , .		0
89	Protein interaction with SiO₂ and AgNPs: from adsorption on solid surfaces to organization and conformational changes. , 2021, , .		0