Holger Kersten

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/8042212/publications.pdf

Version: 2024-02-01

140	3,123	159525	214721
papers	citations	30 h-index	47 g-index

142	142	142	2072
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The energy balance at substrate surfaces during plasma processing. Vacuum, 2001, 63, 385-431.	1.6	318
2	Characterization of an atmospheric pressure plasma jet for surface modification and thin film deposition. European Physical Journal D, 2010, 60, 653-660.	0.6	82
3	Microcalorimetry of dust particles in a radio-frequency plasma. Journal of Applied Physics, 2000, 88, 1747-1755.	1.1	79
4	Plasma under control: Advanced solutions and perspectives for plasma flux management in material treatment and nanosynthesis. Applied Physics Reviews, 2017, 4, .	5.5	72
5	Effect of surface modifications on the bond strength of zirconia ceramic with resin cement resin. Dental Materials, 2016, 32, 631-639.	1.6	71
6	Energy influx from an rf plasma to a substrate during plasma processing. Journal of Applied Physics, 2000, 87, 3637-3645.	1.1	69
7	Micro-Disperse Particles in Plasmas: From Disturbing Side Effects to New Applications. Contributions To Plasma Physics, 2001, 41, 598-609.	0.5	63
8	Low-temperature plasmas in carbon nanostructure synthesis. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, .	0.6	63
9	Effect of surface treatments on the properties and morphological change of dental zirconia. Journal of Prosthetic Dentistry, 2016, 115, 341-349.	1.1	61
10	Energy flux measurements in high power impulse magnetron sputtering. Journal Physics D: Applied Physics, 2009, 42, 185202.	1.3	60
11	On the heating of nano- and microparticles in process plasmas. Journal Physics D: Applied Physics, 2011, 44, 174029.	1.3	60
12	On the Temperature Dependence of Plasma Polymerization. Contributions To Plasma Physics, 1988, 28, 149-155.	0.5	59
13	A calorimetric probe for plasma diagnostics. Review of Scientific Instruments, 2010, 81, 023504.	0.6	59
14	Investigations on the energy influx at plasma processes by means of a simple thermal probe. Thin Solid Films, 2000, 377-378, 585-591.	0.8	57
15	Real-time monitoring of nucleation-growth cycle of carbon nanoparticles in acetylene plasmas. Journal of Applied Physics, 2011, 109, .	1.1	50
16	Surface Processes of Dust Particles in Low Pressure Plasmas. Physica Scripta, 2001, T89, 168.	1.2	48
17	Microparticles in a Collisional Rf Plasma Sheath under Hypergravity Conditions as Probes for the Electric Field Strength and the Particle Charge. Physical Review Letters, 2011, 106, 115002.	2.9	47
18	Measurement and modeling of neutral, radical, and ion densities in H2-N2-Ar plasmas. Journal of Applied Physics, 2015, 117, .	1.1	46

#	Article	IF	Citations
19	On the temperature dependence of the deposition rate of amorphous, hydrogenated carbon films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1990, 8, 38-42.	0.9	44
20	Particles as probes for complex plasmas in front of biased surfaces. New Journal of Physics, 2009, 11, 013041.	1.2	42
21	Mass Spectrometric Investigations of Nanoâ€Size Cluster Ions Produced by High Pressure Magnetron Sputtering. Contributions To Plasma Physics, 2012, 52, 881-889.	0.5	40
22	Complex (dusty) plasmas: Examples for applications and observation of magnetron-induced phenomena. Pure and Applied Chemistry, 2005, 77, 415-428.	0.9	39
23	Surface States and the Charge of a Dust Particle in a Plasma. Physical Review Letters, 2008, 101, 175002.	2.9	38
24	Basic Mechanisms in Plasma Etching. Contributions To Plasma Physics, 1989, 29, 263-284.	0.5	37
25	Diagnostics of SiO_xâ€Containing Layers Deposited on Powder Particles by Dielectric Barrier Discharge. Plasma Processes and Polymers, 2007, 4, 629-637.	1.6	37
26	Charging of micro-particles in plasmaâ€“dust interaction. International Journal of Mass Spectrometry, 2004, 233, 51-60.	0.7	36
27	Plasmaâ€“powder interaction: trends in applications and diagnostics. International Journal of Mass Spectrometry, 2003, 223-224, 313-325.	0.7	35
28	Influence of humidity on atmospheric pressure air plasma treatment of aluminium surfaces. Applied Surface Science, 2012, 258, 5467-5471.	3.1	34
29	Microplasmas: scientific challenges & technological opportunities. European Physical Journal D, 2010, 60, 437-439.	0.6	33
30	Foundations of measurement of electrons, ions and species fluxes toward surfaces in low-temperature plasmas. Plasma Sources Science and Technology, 2021, 30, 033001.	1.3	32
31	Characterization of the energy flux toward the substrate during magnetron sputter deposition of ZnO thin films. Plasma Sources Science and Technology, 2013, 22, 025019.	1.3	31
32	On the determination of energy fluxes at plasmaâ€“surface processes. Applied Physics A: Materials Science and Processing, 2001, 72, 531-540.	1.1	30
33	Plasma based formation and deposition of metal and metal oxide nanoparticles using a gas aggregation source. European Physical Journal D, 2018, 72, 1.	0.6	29
34	Experimentally unraveling the energy flux originating from a DC magnetron sputtering source. Thin Solid Films, 2019, 669, 8-18.	0.8	27
35	Micro-disperse particles as probes for plasma surface interaction. Thin Solid Films, 2000, 377-378, 530-536.	0.8	25
36	Plasma Treatment of Polyethylene Powder Particles in a Hollow Cathode Glow Discharge. Plasma Processes and Polymers, 2009, 6, S392.	1.6	25

#	Article	IF	Citations
37	Metal/polymer nanocomposite thin films prepared by plasma polymerization and high pressure magnetron sputtering. Surface and Coatings Technology, 2011, 205, S38-S41.	2.2	25
38	Transient calorimetric diagnostics for plasma processing. European Physical Journal D, 2013, 67, 1.	0.6	25
39	Improved Longâ€Term Stability and Reduced Humidity Effect in Gas Sensing: SiO₂ Ultraâ€Thin Layered ZnO Columnar Films. Advanced Materials Technologies, 2021, 6, 2001137.	3.0	24
40	About the EDF formation in a capacitively coupled argon plasma. Plasma Sources Science and Technology, 2006, 15, 507-516.	1.3	23
41	Measuring the temperature of microparticles in plasmas. Review of Scientific Instruments, 2008, 79, 093508.	0.6	23
42	Deposition of Zn-containing films using atmospheric pressure plasma jet. Open Chemistry, 2015, 13, .	1.0	22
43	Influence of a liquid surface on the NO x production of a cold atmospheric pressure plasma jet. Journal Physics D: Applied Physics, 2018, 51, 474002.	1.3	22
44	Modeling of argonâ€“acetylene dusty plasma. Plasma Physics and Controlled Fusion, 2019, 61, 014014.	0.9	22
45	Interaction of injected dust particles with metastable neon atoms in a radio frequency plasma. New Journal of Physics, 2008, 10, 053010.	1.2	21
46	Calorimetric investigations in a gas aggregation source. Journal of Applied Physics, 2018, 124, .	1.1	21
47	The method of conventional calorimetric probes â€" A short review and application for the characterization of nanocluster sources. Surface and Coatings Technology, 2011, 205, S388-S392.	2.2	20
48	Towards a Particle Based Simulation of Complex Plasma Driven Nanocomposite Formation. Contributions To Plasma Physics, 2012, 52, 890-898.	0.5	20
49	Electron energy distribution in a dusty plasma: Analytical approach. Physical Review E, 2015, 92, 033102.	0.8	20
50	Influence of nanoparticle formation on discharge properties in argon-acetylene capacitively coupled radio frequency plasmas. Applied Physics Letters, 2016, 108, .	1.5	20
51	Modification of polyethylene powder with an organic precursor in a spiral conveyor by hollow cathode glow discharge. European Physical Journal D, 2010, 58, 305-310.	0.6	19
52	On the Impact of Electron Temperature in Magnetron Sputtering Benchmarked with Energy Flux Measurements. Contributions To Plasma Physics, 2015, 55, 701-713.	0.5	19
53	Energy influx measurements with an active thermal probe in plasma-technological processes. EPJ Techniques and Instrumentation, 2015, 2, 2.	0.5	19
54	Investigation of a Commercial Atmospheric Pressure Plasma Jet by a Newly Designed Calorimetric Probe. IEEE Transactions on Plasma Science, 2015, 43, 1769-1773.	0.6	19

#	Article	IF	Citations
55	Energy transfer from radio frequency sheath accelerated CF+3and Ar+ions to a Si wafer. Applied Physics Letters, 1994, 64, 1496-1498.	1.5	18
56	Measurement and simulation of forces generated when a surface is sputtered. Physics of Plasmas, 2017, 24, 093501.	0.7	18
57	Langmuir probe measurements in nanodust containing argon-acetylene plasmas. Vacuum, 2019, 166, 15-25.	1.6	18
58	Pretreatment of cutting tools by plasma electrolytic polishing (PEP) for enhanced adhesion of hard coatings. Surface and Coatings Technology, 2021, 405, 126504.	2.2	18
59	Calorimetric probe measurements for a high voltage pulsed substrate (PBII) in a HiPIMS process. Plasma Sources Science and Technology, 2017, 26, 065013.	1.3	18
60	Surface loss probability of atomic hydrogen for different electrode cover materials investigated in H2-Ar low-pressure plasmas. Journal of Applied Physics, 2014, 116, .	1.1	17
61	The energy influx during plasma deposition of amorphous hydrogenated carbon films. Surface and Coatings Technology, 2002, 149, 206-216.	2.2	16
62	Spatially resolved thermal probe measurement for the investigation of the energy influx in an rf-plasma. Vacuum, 2008, 83, 768-772.	1.6	16
63	Nonâ€Electrostatic Diagnostics for Ion Beams. Contributions To Plasma Physics, 2012, 52, 584-592.	0.5	16
64	An optical trapping system for particle probes in plasma diagnostics. Review of Scientific Instruments, 2018, 89, 103505.	0.6	16
65	Interaction of ion beams with dusty plasmas. Plasma Physics and Controlled Fusion, 2006, 48, B105-B113.	0.9	15
66	Temperature of Particulates in Lowâ€Pressure rfâ€Plasmas in Ar, Ar/H₂ and Ar/N₂ Mixtures. Contributions To Plasma Physics, 2010, 50, 954-961.	0.5	15
67	Versatile particle collection concept for correlation of particle growth and discharge parameters in dusty plasmas. Journal Physics D: Applied Physics, 2015, 48, 055203.	1.3	15
68	Plasma and ion beam characterization by non-conventional methods. Surface and Coatings Technology, 2005, 200, 809-813.	2.2	14
69	Angularly and Spatially Resolved Measurements of the Energy Flux in an RF Plasma Using a Thermal Probe. Plasma Processes and Polymers, 2009, 6, S626.	1.6	14
70	An experiment for the investigation of forces on microparticles in ion beams. Review of Scientific Instruments, 2010, 81, 013503.	0.6	14
71	Determination of sheath parameters by test particles upon local electrode bias and plasma switching. European Physical Journal D, 2011, 63, 431-440.	0.6	14
72	Microparticles as Plasma Diagnostic Tools. Contributions To Plasma Physics, 2011, 51, 218-227.	0.5	14

#	Article	IF	Citations
73	Instrument for spatially resolved simultaneous measurements of forces and currents in particle beams. Review of Scientific Instruments, 2015, 86, 015107.	0.6	14
74	Optical diagnostics of dusty plasmas during nanoparticle growth. Plasma Physics and Controlled Fusion, 2017, 59, 014034.	0.9	14
75	Correlation between sputter deposition parameters andI-Vcharacteristics in double-barrier memristive devices. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, 061203.	0.6	14
76	Measurement of the force on microparticles in a beam of energetic ions and neutral atoms. Physics of Plasmas, 2010, 17, 103702.	0.7	13
77	Energy fluxes in a radio-frequency magnetron discharge for the deposition of superhard cubic boron nitride coatings. Journal of Applied Physics, 2012, 112, .	1.1	13
78	Non-electrostatic diagnostics for ion beams and sputter effects. Plasma Physics and Controlled Fusion, 2012, 54, 124005.	0.9	13
79	Electron energy distribution function, effective electron temperature, and dust charge in the temporal afterglow of a plasma. Physics of Plasmas, 2016, 23, .	0.7	13
80	Atmospheric pressure plasma jet for biomedical applications characterised by passive thermal probe. European Physical Journal D, 2018, 72, 1.	0.6	13
81	Plasma properties as function of time in Ar/C₂H₂ dust-forming plasma. Journal Physics D: Applied Physics, 2020, 53, 135203.	1.3	13
82	Particle formation during deposition of SiO _x nanostructured thin films by atmospheric pressure plasma jet. Japanese Journal of Applied Physics, 2020, 59, SHHE06.	0.8	13
83	Plasma Chemical Study of a RF Discharge Containing Aluminum Triâ€isopropoxide Using MIR Absorption Spectroscopy Based on Externalâ€Cavity Quantum Cascade Lasers. Contributions To Plasma Physics, 2012, 52, 864-871.	0.5	12
84	Controlled synthesis of germanium nanoparticles by nonthermal plasmas. Applied Physics Letters, 2016, 108, .	1.5	12
85	An advanced electric propulsion diagnostic (AEPD) platform for in-situ characterization of electric propulsion thrusters and ion beam sources. European Physical Journal D, 2016, 70, 1.	0.6	12
86	Energy flux measurements on an atmospheric pressure surface barrier discharge. Journal Physics D: Applied Physics, 2019, 52, 325201.	1.3	12
87	Microparticles in plasmas as diagnostic tools and substrates. Faraday Discussions, 2008, 137, 157-171.	1.6	11
88	Characterization of a radio frequency hollow electrode discharge at low gas pressures. Physics of Plasmas, 2015, 22, .	0.7	11
89	Measurement of the force exerted on the surface of an object immersed in a plasma. European Physical Journal D, 2015, 69, 1.	0.6	11
90	Analysis of passive calorimetric probe measurements at high energy influxes. EPJ Techniques and Instrumentation, 2017, 4, .	0.5	11

#	Article	IF	Citations
91	Dynamic determination of secondary electron emission using a calorimetric probe in a plasma immersion ion implantation experiment. Plasma Sources Science and Technology, 2018, 27, 044003.	1.3	11
92	Plasma Sheath Structures in Complex Electrode Geometries. Contributions To Plasma Physics, 2012, 52, 827-835.	0.5	10
93	Determination of the Energy Flux of a Commercial Atmospheric‚Pressure Plasma Jet for Different Process Gases and Distances Between Nozzle Outlet and Substrate Surface. Contributions To Plasma Physics, 2014, 54, 155-161.	0.5	10
94	Measurement of forces exerted by low-temperature plasmas on a plane surface. Plasma Sources Science and Technology, 2017, 26, 055011.	1.3	10
95	Spatiotemporal sampling of growing nanoparticles in an acetylene plasma. Journal of Applied Physics, 2020, 127, 173301.	1.1	10
96	Measurement of plasma-surface energy fluxes in an argon rf-discharge by means of calorimetric probes and fluorescent microparticles. Physics of Plasmas, 2010, 17, 113707.	0.7	9
97	Comparison of calorimetric plasma diagnostics in a plasma downstream reactor. Journal Physics D: Applied Physics, 2011, 44, 095201.	1.3	9
98	Acoustic emission by self-organising effects of micro-hollow cathode discharges. Applied Physics Letters, 2018, 112, .	1.5	9
99	An interferometric force probe for beam diagnostics and the study of sputtering. EPJ Techniques and Instrumentation, 2018, 5, .	0.5	9
100	Fabrication of ZnO Nanobrushes by H₂â€“C₂H₂ Plasma Etching for H₂ Sensing Applications. ACS Applied Materials & Interfaces, 2021, 13, 61758-61769.	4.0	9
101	Measurement and simulation of the momentum transferred to a surface by deposition of sputtered atoms*. European Physical Journal D, 2016, 70, 1.	0.6	8
102	Effects of process conditions on the chemistry of an Ar/C₂H₂ dustâ€forming plasma. Plasma Processes and Polymers, 2019, 16, 1800209.	1.6	8
103	Understanding the energy balance of a surface barrier discharge for various molecular gases by a multi-diagnostic approach. Journal of Applied Physics, 2021, 129, .	1.1	8
104	Disentangling fluxes of energy and matter in plasma-surface interactions: Effect of process parameters. Journal of Applied Physics, 2010, 108, 053302.	1.1	7
105	Energy transfer in interaction of a cold atmospheric pressure plasma jet with substrates. Plasma Sources Science and Technology, 2021, 30, 045004.	1.3	7
106	Investigations of the sheath in a dual-frequency capacitively coupled rf discharge by optically trapped microparticles. Physics of Plasmas, 2021, 28, 083506.	0.7	7
107	Determination of electron density and energy influx in a hollow cathode glow discharge used for powder modification. European Physical Journal D, 2012, 66, 1.	0.6	6
108	Calorimetric Probes for Energy Flux Measurements in Process Plasmas. Springer Series on Atomic, Optical, and Plasma Physics, 2014, , 197-234.	0.1	6

#	Article	IF	Citations
109	Evidence of secondary electron emission during PIII pulses as measured by calorimetric probe. European Physical Journal D, 2016, 70, 1.	0.6	6
110	Changes of ²H and ¹⁸O abundances in water treated with nonâ€thermal atmospheric pressure plasma jet. Plasma Processes and Polymers, 2017, 14, 1600239.	1.6	6
111	Nanoparticle forming reactive plasmas: a multidiagnostic approach. European Physical Journal D, 2018, 72, 1.	0.6	6
112	Force probes for development and testing of different electric propulsion systems. EPJ Techniques and Instrumentation, 2022, 9, .	0.5	6
113	Microâ€Particles as Electrostatic Probes for Plasma Sheath Diagnostics. Plasma Processes and Polymers, 2009, 6, S620.	1.6	5
114	An instrument for direct measurements of sputtering related momentum transfer to targets. Nuclear Instruments & Methods in Physics Research B, 2013, 301, 47-52.	0.6	5
115	Plasma characterization in reactive sputtering processes of Ti in Ar/O2 mixtures operated in metal, transition and poisoned modes: a comparison between direct current and high-power impulse magnetron discharges. European Physical Journal D, 2017, 71, 1.	0.6	5
116	InÂvitro proinflammatory gene expression changes in human whole blood after contact with plasma-treated implant surfaces. Journal of Cranio-Maxillo-Facial Surgery, 2019, 47, 1255-1261.	0.7	5
117	Particle-in-Cell Simulation of a Down-Scaled HEMP Thruster. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2016, 14, Pb_235-Pb_242.	0.1	4
118	Directionally resolved measurements of momentum transport in sputter plumes as a critical test for simulations. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, 033013.	0.9	4
119	The Use of Passive Thermal Probes for the Determination of Energy Fluxes in Atmospheric Pressure Plasmas. IEEE Transactions on Plasma Science, 2021, 49, 3325-3335.	0.6	4
120	Influence of the nozzle head geometry on the energy flux of an atmospheric pressure plasma jet. EPJ Techniques and Instrumentation, 2021, 8, .	0.5	4
121	Wall loss of atomic nitrogen determined by ionization threshold mass spectrometry. Journal of Applied Physics, 2014, 116, 193302.	1.1	3
122	Direct calorimetric measurements in a PBII and deposition (PBII&D) experiment with a HiPIMS plasma source. Surface and Coatings Technology, 2018, 352, 663-670.	2.2	3
123	On improved understanding of plasma-chemical processes in complex low-temperature plasmas. European Physical Journal D, 2018, 72, 1.	0.6	3
124	Deposition of SiO_x thin films using hexamethyldisiloxane in atmospheric pressure plasma enhanced chemical vapor deposition. Journal of Physics: Conference Series, 2020, 1492, 012023.	0.3	3
125	Whispering Gallery Mode Spectroscopy as a Diagnostic for Dusty Plasmas. AIP Conference Proceedings, 2008, , .	0.3	2
126	Measurement of the Force on Microparticles in an Energetic Ion Beam. IEEE Transactions on Plasma Science, 2010, 38, 774-780.	0.6	2

#	Article	IF	Citations
127	Mass Spectrometric Investigations on Aluminum Isopropoxide Containing Plasmas. Plasma Processes and Polymers, 2012, 9, 904-910.	1.6	2
128	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.	0.9	2
129	Plasma response to nanoparticle growth. AIP Conference Proceedings, 2018, , .	0.3	2
130	An in-flight plasma diagnostic package for spacecraft with electric propulsion. EPJ Techniques and Instrumentation, 2021, 8, .	0.5	2
131	Plasma Bubble in an RF Reactor. IEEE Transactions on Plasma Science, 2008, 36, 1370-1371.	0.6	1
132	Electric field measurements in the sheath of an argon rf discharge by probing with microparticles under varying gravity conditions. , 2010, , .		1
133	Particle Trapping in Corners of Horizontal Electrodes and Vertical Walls. AIP Conference Proceedings, 2011, , .	0.3	1
134	On the Plasma Chemistry of an RF Discharge Containing Aluminium Triâ€Isopropoxide Studied by FTIR Spectroscopy. Contributions To Plasma Physics, 2014, 54, 170-186.	0.5	1
135	Micro-Disperse Particles in Plasmas: From Disturbing Side Effects to New Applications. , 0, .		1
136	Micro-Disperse Particles in Plasmas: From Disturbing Side Effects to New Applications. , 2001, 41, 598.		1
137	On the use of microscopic test particles for non-conventional plasma sheath diagnostics. , 2012, , .		0
138	Recent development for a plasma diagnostic with optically trapped microparticles. , 2015, , .		0
139	Non-conventional diagnostics of energy and momentum transfer at particle-surface interactions. , 2016, , .		0
140	Understanding the Force Low-Temperature Plasmas Exert on Solid Boundaries. , 2020, , .		0