Siegbert Kuhn

List of Publications by Year
in descending order

83 papers	1,208 citations	361413 20 h-index	414414 32 g-index
83 all docs	83 docs citations	83 times ranked	493 citing authors

#	ARTICLE	IF	CITATIONS
1	Time-dependent kinetic theory of the plasma-wall transition layer in a weakly ionized plasma. Physics of Plasmas, 2020, 27, 023517.	1.9	1
2	Introduction to the theory and application of a unified Bohm criterion for arbitrary-ion-temperature collision-free plasmas with finite Debye lengths. Physics of Plasmas, 2018, 25, 043509.	1.9	3
3	Modeling and simulations of plasma and sheath edges in warm-ion collision-free discharges. AIP Advances, 2018, 8, .	1.3	10
4	Numerical matching of the sheath and presheath solutions for a spherical probe in radial-motion theory. Physics of Plasmas, 2014, 21, 103509.	1.9	3
5	Debye-sheath properties in the Tonksâ€"Langmuir discharge with warm neutrals. Journal of Plasma Physics, 2013, 79, 1021-1024.	2.1	3
6	Extended Tonksâ€"Langmuir-type model with non-Boltzmann-distributed electrons and cold ion sources. Journal of Plasma Physics, 2013, 79, 169-187.	2.1	3
7	Polytropic-coefficient function (PCF) VS. polytropic-exponent function (PEF). , 2012, , .		0
8	Analytic-Numerical Matching of the Sheath and Plasma Solutions for a Spherical Probe in a Low-Density Plasma. Contributions To Plasma Physics, 2010, 50, 915-921.	1.1	10
9	Magnetized plasma-wall transition layer with cold ions. Journal of Plasma Physics, 2010, 76, 559-567.	2.1	6
10	A new method of solution for one-dimensional quasi-neutral bounded plasmas. Journal of Plasma Physics, 2010, 76, 617-625.	2.1	1
11	Closure of the hierarchy of fluid equations by means of the polytropic-coefficient function (PCF). AIP Conference Proceedings, 2010, , .	0.4	6
12	Extension of the Bissellâ€"Johnson plasma-sheath model for application to fusion-relevant and general plasmas. Physics of Plasmas, 2009, 16, .	1.9	21
13	Kinetic simulations of the parallel transport in the JET scrape-off layer. Journal of Nuclear Materials, 2009, 390-391, 335-338.	2.7	33
14	Selfâ€Consistent Simulations of the Plasmaâ€Wall Transition Layer. Contributions To Plasma Physics, 2008, 48, 121-125.	1.1	31
15	Magnetic presheath in a weakly turbulent multicomponent plasma. Physics of Plasmas, 2007, 14, 013504.	1.9	4
16	Fluid and kinetic parameters near the plasma-sheath boundary for finite Debye lengths. Physics of Plasmas, 2007, 14, .	1.9	37
17	The magnetized plasmaâ€"wall transition (PWT) and its relation to fluid boundary conditions. Computer Physics Communications, 2007, 177, 80-83.	7.5	3
18	Link between fluid and kinetic parameters near the plasma boundary. Physics of Plasmas, 2006, 13, 013503.	1.9	61

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19	Particle simulations of the nonlinear electron dynamics in the classical Pierce diode. Journal of Plasma Physics, 2006, 72, 851.	2.1	1
20	Collisionless self-consistent trapping of electrons into a nonstationary potential well: Dynamics of trapped electrons. Technical Physics, 2006, 51, 1257-1268.	0.7	6
21	PIC-Simulation Resolved Period-Doubling Route to Chaos in the Classical Pierce Diode. Contributions To Plasma Physics, 2006, 46, 322-327.	1.1	2
22	Formulation of Boundary Conditions for the Unmagnetized Multi-Ion-Component Plasma Sheath. Contributions To Plasma Physics, 2006, 46, 649-654.	1.1	16
23	Integrated ELM Modelling. Contributions To Plasma Physics, 2006, 46, 726-738.	1.1	10
24	Theory of rf-driven plasma sheath. Physica Scripta, 2006, 74, 686-691.	2.5	0
25	Effect of particle-induced electron emission (PIEE) on the plasma sheath voltage. Plasma Physics and Controlled Fusion, 2006, 48, 1093-1103.	2.1	10
26	Response to â€œComment on â€˜On the theory of plasma-wall transition layersâ€™ [Phys. Plasmas 13, 024701 (2006)]. Physics of Plasmas, 2006, 13, 024702.	1.9	1
27	The Pierce-diode approximation to the single-emitter plasma diode. Physics of Plasmas, 2006, 13, 113506.	1.9	17
28	Boundary conditions for the multi-ion magnetized plasma-wall transition. Journal of Nuclear Materials, 2005, 337-339, 405-409.	2.7	17
29	Kinetic (PIC) simulations for a plane probe in a collisional plasma. Journal of Nuclear Materials, 2005, 337-339, 1111-1115.	2.7	9
30	Anomalous Ion Diffusion and Radial-Electric-Field Generation in a Turbulent Edge Plasma Potential Weakly Correlated in Time and Space. Physica Scripta, 2005, 72, 327-332.	2.5	2
31	Fluid model of the magnetic presheath in a turbulent plasma. Plasma Physics and Controlled Fusion, 2005, 47, 685-712.	2.1	6
32	Theory of the plasma sheath in a magnetic field parallel to the wall. Physics of Plasmas, 2005, 12, 103503.	1.9	53
33	The plasmaâ€"sheath matching problem. Plasma Physics and Controlled Fusion, 2005, 47, 1949-1970.	2.1	67
34	Kinetic (PIC) simulations of the magnetized plasmaâ€"wall transition. Plasma Physics and Controlled Fusion, 2005, 47, A327-A337.	2.1	25
35	Anomalous impurity diffusion in models of tokamak edge plasma turbulence. European Physical Journal D, 2004, 54, C157-C163.	0.4	2
36	Anomalous diffusion and radial electric field generation due to edge plasma turbulence. Contributions To Plasma Physics, 2004, 44, 203-204.	1.1	2

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37	Study of the Ionization Rate in the Scrape-off Layer. Contributions To Plasma Physics, 2004, 44, 252-255.	1.1	6
38	The Magnetised Plasma-Wall Transition: Theory and PIC Simulation. Contributions To Plasma Physics, 2004, 44, 564-570.	1.1	23
39	On the theory of plasma-wall transition layers. Physics of Plasmas, 2004, 11, 3945-3954.	1.9	19
40	Similarity rules for collisionless hot-filament discharges. Contributions To Plasma Physics, 2003, 43, 94-110.	1.1	2
41	Effects of electron-absorbing boundaries on the plasma parameters of a hot-filament discharge. Contributions To Plasma Physics, 2003, 43, 111-121.	1.1	6
42	Particle-in-cell simulations of the plasma-wall transition with a magnetic field almost parallel to the wall. Journal of Nuclear Materials, 2003, 313-316, 1119-1122.	2.7	32
43	Vlasov model using kinetic phase point trajectories. Physical Review E, 2003, 67, 026704.	2.1	19
44	MHD activity at lowq(a) in Iran Tokamak 1 (IR-T1)*. Nuclear Fusion, 2003, 43, 210-215.	3.5	15
45	Effects of energetic electrons on magnetized electrostatic plasma sheaths. Physics of Plasmas, 2002, 9, 2486-2496.	1.9	47
46	Including the effect of secondary-electron emission at the divertor targets in code modelling. Plasma Physics and Controlled Fusion, 2002, 44, 61-70.	2.1	6
47	Effect of E Ã— B Drift on the Plasma Flow at the Magnetic Presheath Entrance. Contributions To Plasma Physics, 2002, 42, 302-308.	1.1	26
48	Computational Modelling of a Purely Neoclassical Scrape-Off Layer. Contributions To Plasma Physics, 2002, 42, 350-355.	1.1	0
49	Kinetic and Fluid Study of Classical Transport Phenomena in Scrape-off Layer Plasmas. Contributions To Plasma Physics, 2002, 42, 372-378.	1.1	2
50	Behaviour of a dust cloud in the plasma sheath adjacent to a conducting wall. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 302, 190-195.	2.1	1
51	Effect of E Ã— B Drift on the Plasma Flow at the Magnetic Presheath Entrance. Contributions To Plasma Physics, 2002, 42, 302-308.	1.1	1
52	Charged Fusion Product Fluxes in the Tokamak SOL Region. Contributions To Plasma Physics, 2000, 40, 346-351.	1.1	1
53	Influence of Initial Energy on the Effective Secondary-Electron Emission Coefficient in the Presence of an Oblique Magnetic Field. Contributions To Plasma Physics, 2000, 40, 484-490.	1.1	25
54	Influence of Initial Energy on the Effective Secondary-Electron Emission Coefficient in the Presence of an Oblique Magnetic Field. Contributions To Plasma Physics, 2000, 40, 484-490.	1.1	1

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55	Kinetic study of electrom impact ionization in a bounded helium plasma. European Physical Journal D, 1998, 48, 225-230.	0.4	0
56	The pierce-diode approximation to the single-emitter plasma diode. European Physical Journal D, 1998, 48, 251-256.	0.4	2
57	Revised generalized Child-Langmuir law. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 246, 318-324.	2.1	10
58	Influence of trapped electrons on the timeâ€independent states of a negatively biased singleâ€ended Q machine. Physics of Plasmas, 1996, 3, 1192-1201.	1.9	3
59	Kinetic theory of bounded plasmas. AIP Conference Proceedings, 1995, , .	0.4	0
60	Neoclassical transport analysis for a class of high- beta tokamak equilibria. Plasma Physics and Controlled Fusion, 1995, 37, 191-208.	2.1	4
61	Collision integral for ionization by electron impact for nonisotropic electron distribution functions. Physical Review A, 1994, 49, 3610-3619.	2.5	2
62	Kinetic modeling of a twoâ€dimensional, collisionless bounded plasma. Physics of Plasmas, 1994, 1, 13-31.	1.9	11
63	The Physics of Bounded Plasma Systems (BPS's): Simulation and Interpretation. Contributions To Plasma Physics, 1994, 34, 495-538.	1.1	41
64	Current Research on Fusion, Laboratory and Astrophysical Plasmas. , 1993, , .		0
65	Particle simulations of boundaryâ€condition and hfâ€field effects on strong double layers in a collisionless bounded plasma. Physics of Fluids B, 1992, 4, 2871-2884.	1.7	2
66	Trappedâ€electron effects on timeâ€independent negativeâ€bias states of a collisionless singleâ€emitter plasma device: Theory and simulation. Physics of Fluids B, 1991, 3, 244-254.	1.7	20
67	Weakly nonlinear steadyâ€state oscillations in the Pierce diode. Physics of Fluids B, 1990, 2, 2741-2763.	1.7	19
68	Radiation of ion-sound waves from a pulsating Langmuir soliton. Physical Review A, 1988, 38, 1427-1432.	2.5	1
69	Externalâ€circuit effects on Pierceâ€diode stability behavior. Journal of Applied Physics, 1986, 60, 1952-1959.	2.5	23
70	Particle simulations of the low-Î± Pierce diode. Physics of Fluids, 1985, 28, 2116.	1.4	24
71	Linear longitudinal oscillations in collisionless plasma diodes with thin sheaths. Part II. Application to an extended Pierce-type problem. Physics of Fluids, 1984, 27, 1834.	1.4	40
72	Linear longitudinal oscillations in collisionless plasma diodes with thin sheaths. Part I. Method. Physics of Fluids, 1984, 27, 1821.	1.4	17

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73	Velocity Distribution Functions of Atomic Ions in Drift Tubes. , 1984, , 13-26.		0
74	On the calculation of ion and electron swarm properties by path integral methods. Journal Physics D: Applied Physics, 1983, 16, 1225-1234.	2.8	32
75	Comment on "Dynamics of a Potential Barrier Formed on the Tail of a Moving Double Layer in a Collisionless Plasma". Physical Review Letters, 1983, 50, 217-217.	7.8	7
76	Quasilinear theory of current-driven ion-acoustic turbulence in a magnetized collisional plasma. Physics of Fluids, 1983, 26, 3482.	1.4	0
77	About localization and suppression of the so-called ion-acoustic instability in a low-density single-ended Q-machine. Physics Letters, Section A: General, Atomic and Solid State Physics, 1982, 87, 175-178.	2.1	9
78	Experiment planning, mathematical modelling, and nonlinear optimization of the ion-nitriding process in a glow-discharge plasma. Plasma Chemistry and Plasma Processing, 1982, 2, 167-183.	2.4	2
79	Low-frequency longitudinal instability in collisionless single-ended Q machines. Physics of Fluids, 1981, 24, 1586.	1.4	8
80	Charge transfer of $Ar^+ + N_2 \rightarrow N_2^+ + Ar$ at near thermal energies. Physical Review A, 1981, 23, 2319-2326.	2.5	137
81	Axial equilibria, disruptive effects, and Buneman instability in collisionless single-ended Q-machines. Plasma Physics, 1981, 23, 881-902.	0.9	47
82	Integral approach of successive collisions to linear charged-particle transport through a slab. Physical Review A, 1980, 22, 2460-2467.	2.5	9
83	Determination of axial steady-state potential distributions in collisionless single-ended Q-machines. Plasma Physics, 1979, 21, 613-626.	0.9	24