

Siegbert Kuhn

List of Publications by Year in descending order

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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	Charge transfer of $\text{Ar}^{++} + \text{N}_2^{\pm}$, $\text{N}_2^{++} + \text{Ar}$ at near thermal energies. <i>Physical Review A</i> , 1981, 23, 2319-2326.	2.5	137
2	The plasma sheath matching problem. <i>Plasma Physics and Controlled Fusion</i> , 2005, 47, 1949-1970.	2.1	67
3	Link between fluid and kinetic parameters near the plasma boundary. <i>Physics of Plasmas</i> , 2006, 13, 013503.	1.9	61
4	Theory of the plasma sheath in a magnetic field parallel to the wall. <i>Physics of Plasmas</i> , 2005, 12, 103503.	1.9	53
5	Axial equilibria, disruptive effects, and Buneman instability in collisionless single-ended Q-machines. <i>Plasma Physics</i> , 1981, 23, 881-902.	0.9	47
6	Effects of energetic electrons on magnetized electrostatic plasma sheaths. <i>Physics of Plasmas</i> , 2002, 9, 2486-2496.	1.9	47
7	The Physics of Bounded Plasma Systems (BPS's): Simulation and Interpretation. <i>Contributions To Plasma Physics</i> , 1994, 34, 495-538.	1.1	41
8	Linear longitudinal oscillations in collisionless plasma diodes with thin sheaths. Part II. Application to an extended Pierce-type problem. <i>Physics of Fluids</i> , 1984, 27, 1834.	1.4	40
9	Fluid and kinetic parameters near the plasma-sheath boundary for finite Debye lengths. <i>Physics of Plasmas</i> , 2007, 14, .	1.9	37
10	Kinetic simulations of the parallel transport in the JET scrape-off layer. <i>Journal of Nuclear Materials</i> , 2009, 390-391, 335-338.	2.7	33
11	On the calculation of ion and electron swarm properties by path integral methods. <i>Journal Physics D: Applied Physics</i> , 1983, 16, 1225-1234.	2.8	32
12	Particle-in-cell simulations of the plasma-wall transition with a magnetic field almost parallel to the wall. <i>Journal of Nuclear Materials</i> , 2003, 313-316, 1119-1122.	2.7	32
13	Self-Consistent Simulations of the Plasma-Wall Transition Layer. <i>Contributions To Plasma Physics</i> , 2008, 48, 121-125.	1.1	31
14	Effect of $\mathbf{E} \times \mathbf{B}$ Drift on the Plasma Flow at the Magnetic Presheath Entrance. <i>Contributions To Plasma Physics</i> , 2002, 42, 302-308.	1.1	26
15	Influence of Initial Energy on the Effective Secondary-Electron Emission Coefficient in the Presence of an Oblique Magnetic Field. <i>Contributions To Plasma Physics</i> , 2000, 40, 484-490.	1.1	25
16	Kinetic (PIC) simulations of the magnetized plasma-wall transition. <i>Plasma Physics and Controlled Fusion</i> , 2005, 47, A327-A337.	2.1	25
17	Determination of axial steady-state potential distributions in collisionless single-ended Q-machines. <i>Plasma Physics</i> , 1979, 21, 613-626.	0.9	24
18	Particle simulations of the low- β Pierce diode. <i>Physics of Fluids</i> , 1985, 28, 2116.	1.4	24

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19	External circuit effects on Pierce diode stability behavior. Journal of Applied Physics, 1986, 60, 1952-1959.	2.5	23
20	The Magnetised Plasma-Wall Transition: Theory and PIC Simulation. Contributions To Plasma Physics, 2004, 44, 564-570.	1.1	23
21	Extension of the Bissell-Johnson plasma-sheath model for application to fusion-relevant and general plasmas. Physics of Plasmas, 2009, 16, .	1.9	21
22	Trapped electron effects on time-independent negative bias states of a collisionless single-emitter plasma device: Theory and simulation. Physics of Fluids B, 1991, 3, 244-254.	1.7	20
23	Weakly nonlinear steady-state oscillations in the Pierce diode. Physics of Fluids B, 1990, 2, 2741-2763.	1.7	19
24	Vlasov model using kinetic phase point trajectories. Physical Review E, 2003, 67, 026704.	2.1	19
25	On the theory of plasma-wall transition layers. Physics of Plasmas, 2004, 11, 3945-3954.	1.9	19
26	Linear longitudinal oscillations in collisionless plasma diodes with thin sheaths. Part I. Method. Physics of Fluids, 1984, 27, 1821.	1.4	17
27	Boundary conditions for the multi-ion magnetized plasma-wall transition. Journal of Nuclear Materials, 2005, 337-339, 405-409.	2.7	17
28	The Pierce-diode approximation to the single-emitter plasma diode. Physics of Plasmas, 2006, 13, 113506.	1.9	17
29	Formulation of Boundary Conditions for the Unmagnetized Multi-Ion-Component Plasma Sheath. Contributions To Plasma Physics, 2006, 46, 649-654.	1.1	16
30	MHD activity at low $q(a)$ in Iran Tokamak 1 (IR-T1)*. Nuclear Fusion, 2003, 43, 210-215.	3.5	15
31	Kinetic modeling of a two-dimensional, collisionless bounded plasma. Physics of Plasmas, 1994, 1, 13-31.	1.9	11
32	Revised generalized Child-Langmuir law. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 246, 318-324.	2.1	10
33	Integrated ELM Modelling. Contributions To Plasma Physics, 2006, 46, 726-738.	1.1	10
34	Effect of particle-induced electron emission (PIEE) on the plasma sheath voltage. Plasma Physics and Controlled Fusion, 2006, 48, 1093-1103.	2.1	10
35	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
36	Modeling and simulations of plasma and sheath edges in warm-ion collision-free discharges. AIP Advances, 2018, 8, .	1.3	10

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37	Integral approach of successive collisions to linear charged-particle transport through a slab. <i>Physical Review A</i> , 1980, 22, 2460-2467.	2.5	9
38	About localization and suppression of the so-called ion-acoustic instability in a low-density single-ended Q-machine. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1982, 87, 175-178.	2.1	9
39	Kinetic (PIC) simulations for a plane probe in a collisional plasma. <i>Journal of Nuclear Materials</i> , 2005, 337-339, 1111-1115.	2.7	9
40	Low-frequency longitudinal instability in collisionless single-ended Q machines. <i>Physics of Fluids</i> , 1981, 24, 1586.	1.4	8
41	Comment on "Dynamics of a Potential Barrier Formed on the Tail of a Moving Double Layer in a Collisionless Plasma". <i>Physical Review Letters</i> , 1983, 50, 217-217.	7.8	7
42	Including the effect of secondary-electron emission at the divertor targets in code modelling. <i>Plasma Physics and Controlled Fusion</i> , 2002, 44, 61-70.	2.1	6
43	Effects of electron-absorbing boundaries on the plasma parameters of a hot-filament discharge. <i>Contributions To Plasma Physics</i> , 2003, 43, 111-121.	1.1	6
44	Study of the Ionization Rate in the Scrape-off Layer. <i>Contributions To Plasma Physics</i> , 2004, 44, 252-255.	1.1	6
45	Fluid model of the magnetic presheath in a turbulent plasma. <i>Plasma Physics and Controlled Fusion</i> , 2005, 47, 685-712.	2.1	6
46	Collisionless self-consistent trapping of electrons into a nonstationary potential well: Dynamics of trapped electrons. <i>Technical Physics</i> , 2006, 51, 1257-1268.	0.7	6
47	Magnetized plasma-wall transition layer with cold ions. <i>Journal of Plasma Physics</i> , 2010, 76, 559-567.	2.1	6
48	Closure of the hierarchy of fluid equations by means of the polytropic-coefficient function (PCF). <i>AIP Conference Proceedings</i> , 2010, , .	0.4	6
49	Neoclassical transport analysis for a class of high- beta tokamak equilibria. <i>Plasma Physics and Controlled Fusion</i> , 1995, 37, 191-208.	2.1	4
50	Magnetic presheath in a weakly turbulent multicomponent plasma. <i>Physics of Plasmas</i> , 2007, 14, 013504.	1.9	4
51	Influence of trapped electrons on the time-independent states of a negatively biased single-ended Q machine. <i>Physics of Plasmas</i> , 1996, 3, 1192-1201.	1.9	3
52	The magnetized plasma-wall transition (PWT) and its relation to fluid boundary conditions. <i>Computer Physics Communications</i> , 2007, 177, 80-83.	7.5	3
53	Debye-sheath properties in the Tonks-Langmuir discharge with warm neutrals. <i>Journal of Plasma Physics</i> , 2013, 79, 1021-1024.	2.1	3
54	Extended Tonks-Langmuir-type model with non-Boltzmann-distributed electrons and cold ion sources. <i>Journal of Plasma Physics</i> , 2013, 79, 169-187.	2.1	3

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55	Numerical matching of the sheath and presheath solutions for a spherical probe in radial-motion theory. <i>Physics of Plasmas</i> , 2014, 21, 103509.	1.9	3
56	Introduction to the theory and application of a unified Bohm criterion for arbitrary-ion-temperature collision-free plasmas with finite Debye lengths. <i>Physics of Plasmas</i> , 2018, 25, 043509.	1.9	3
57	Experiment planning, mathematical modelling, and nonlinear optimization of the ion-nitriding process in a glow-discharge plasma. <i>Plasma Chemistry and Plasma Processing</i> , 1982, 2, 167-183.	2.4	2
58	Particle simulations of boundary-condition and hf-field effects on strong double layers in a collisionless bounded plasma. <i>Physics of Fluids B</i> , 1992, 4, 2871-2884.	1.7	2
59	Collision integral for ionization by electron impact for nonisotropic electron distribution functions. <i>Physical Review A</i> , 1994, 49, 3610-3619.	2.5	2
60	The pierce-diode approximation to the single-emitter plasma diode. <i>European Physical Journal D</i> , 1998, 48, 251-256.	0.4	2
61	Kinetic and Fluid Study of Classical Transport Phenomena in Scrape-off Layer Plasmas. <i>Contributions To Plasma Physics</i> , 2002, 42, 372-378.	1.1	2
62	Similarity rules for collisionless hot-filament discharges. <i>Contributions To Plasma Physics</i> , 2003, 43, 94-110.	1.1	2
63	Anomalous impurity diffusion in models of tokamak edge plasma turbulence. <i>European Physical Journal D</i> , 2004, 54, C157-C163.	0.4	2
64	Anomalous diffusion and radial electric field generation due to edge plasma turbulence. <i>Contributions To Plasma Physics</i> , 2004, 44, 203-204.	1.1	2
65	Anomalous Ion Diffusion and Radial-Electric-Field Generation in a Turbulent Edge Plasma Potential Weakly Correlated in Time and Space. <i>Physica Scripta</i> , 2005, 72, 327-332.	2.5	2
66	PIC-Simulation Resolved Period-Doubling Route to Chaos in the Classical Pierce Diode. <i>Contributions To Plasma Physics</i> , 2006, 46, 322-327.	1.1	2
67	Radiation of ion-sound waves from a pulsating Langmuir soliton. <i>Physical Review A</i> , 1988, 38, 1427-1432.	2.5	1
68	Charged Fusion Product Fluxes in the Tokamak SOL Region. <i>Contributions To Plasma Physics</i> , 2000, 40, 346-351.	1.1	1
69	Behaviour of a dust cloud in the plasma sheath adjacent to a conducting wall. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2002, 302, 190-195.	2.1	1
70	Particle simulations of the nonlinear electron dynamics in the classical Pierce diode. <i>Journal of Plasma Physics</i> , 2006, 72, 851.	2.1	1
71	Response to "Comment on "On the theory of plasma-wall transition layers"™ [Phys. Plasmas 13, 024701 (2006)]. <i>Physics of Plasmas</i> , 2006, 13, 024702.	1.9	1
72	A new method of solution for one-dimensional quasi-neutral bounded plasmas. <i>Journal of Plasma Physics</i> , 2010, 76, 617-625.	2.1	1

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73	Time-dependent kinetic theory of the plasma-wall transition layer in a weakly ionized plasma. <i>Physics of Plasmas</i> , 2020, 27, 023517.	1.9	1
74	Influence of Initial Energy on the Effective Secondary-Electron Emission Coefficient in the Presence of an Oblique Magnetic Field. <i>Contributions To Plasma Physics</i> , 2000, 40, 484-490.	1.1	1
75	Effect of $E \times B$ Drift on the Plasma Flow at the Magnetic Presheath Entrance. <i>Contributions To Plasma Physics</i> , 2002, 42, 302-308.	1.1	1
76	Quasilinear theory of current-driven ion-acoustic turbulence in a magnetized collisional plasma. <i>Physics of Fluids</i> , 1983, 26, 3482.	1.4	0
77	Kinetic theory of bounded plasmas. <i>AIP Conference Proceedings</i> , 1995, , .	0.4	0
78	Kinetic study of electrom impact ionization in a bounded helium plasma. <i>European Physical Journal D</i> , 1998, 48, 225-230.	0.4	0
79	Computational Modelling of a Purely Neoclassical Scrape-Off Layer. <i>Contributions To Plasma Physics</i> , 2002, 42, 350-355.	1.1	0
80	Theory of rf-driven plasma sheath. <i>Physica Scripta</i> , 2006, 74, 686-691.	2.5	0
81	Polytropic-coefficient function (PCF) VS. polytropic-exponent function (PEF). , 2012, , .		0
82	Velocity Distribution Functions of Atomic Ions in Drift Tubes. , 1984, , 13-26.		0
83	Current Research on Fusion, Laboratory and Astrophysical Plasmas. , 1993, , .		0