Truell Hyde

List of Publications by Year in Descending Order

121 papers	1,192 citations	18 h-index	26 g-index
148 ext. papers	1,407 ext. citations	2.4 avg, IF	4.52 L-index

#	Paper	IF	Citations
121	Influence of temporal variations in plasma conditions on the electric potential near self-organized dust chains. *Physics of Plasmas*, **2022**, 29, 023701	2.1	0
120	A machine learning based Bayesian optimization solution to non-linear responses in dusty plasmas. *Machine Learning: Science and Technology*, **2021**, 2, 035017	5.1	0
119	Fractional Laplacian spectral approach to turbulence in a dusty plasma monolayer. *Physics of Plasmas*, **2021**, 28, 073705	2.1	0
118	Investigating the impact of flexible furniture in the elementary classroom. *Learning Environments Research*, **2021**, 24, 153-167	2.1	5
117	The initial structure of chondrule dust rims II: Charged grains. *Icarus*, **2021**, 354, 114053	3.8	2
116	Effect of ionization waves on dust chain formation in a DC discharge. *Journal of Plasma Physics*, **2021**, 87,	2.7	1
115	Dust as probes: Determining confinement and interaction forces. *Physical Review E*, **2020**, 102, 043210	2.4	7
114	Dust charging in dynamic ion wakes. *Physics of Plasmas*, **2020**, 27, 023703	2.1	8
113	Anomalous diffusion in one-dimensional disordered systems: a discrete fractional Laplacian method. *Journal of Physics A: Mathematical and Theoretical*, **2020**, 53, 135205	2	9
112	Operational behaviour of the inductively-heated plasma generator IPG6-B for scientific applications. *Vacuum*, **2020**, 176, 109338	3.7	3
111	Numerical study of anomalous diffusion of light in semicrystalline polymer structures. *Physical Review Research*, **2020**, 2,	3.9	5
110	Detailed Model of the Growth of Fluffy Dust Aggregates in a Protoplanetary Disk: Effects of Nebular Conditions. *Astrophysical Journal*, **2020**, 897, 182	4.7	1
109	Discharge parameters of PlasmaKristall-4BU: A modifiable dusty plasma experiment. *Review of Scientific Instruments*, **2020**, 91, 083506	1.7	2
108	Experimental study of the nonreciprocal effective interactions between microparticles in an anisotropic plasma. *Scientific Reports*, **2020**, 10, 13653	4.9	10
107	Mapping the Plasma Potential in a Glass Box. *IEEE Transactions on Plasma Science*, **2019**, 47, 3079-3086	1.3	2
106	Spectral approach to transport in a two-dimensional honeycomb lattice with substitutional disorder. *Physical Review B*, **2019**, 99,	3.3	2
105	Nonlinear response of vertical paired structure in complex plasma. *Plasma Physics and Controlled Fusion*, **2019**, 61, 055004	2	4

104	Dust Particle Pair Correlation Functions and the Nonlinear Effect of Interaction Potentials. *IEEE Transactions on Plasma Science*, **2019**, 47, 3057-3062	1.3	2
103	Nonlinear mode coupling and internal resonance observed in a dusty plasma. *New Journal of Physics*, **2019**, 21, 103051	2.9	5
102	Self-diffusion in two-dimensional quasimagnetized rotating dusty plasmas. *Physical Review E*, **2019**, 99, 013203	2.4	17
101	The initial structure of chondrule dust rims I: Electrically neutral grains. *Icarus*, **2019**, 321, 99-111	3.8	9
100	Transport properties of disordered two-dimensional complex plasma crystal. *Contributions To Plasma Physics*, **2018**, 58, 209-216	1.4	5
99	Particle Growth in an Experimental Dusty Plasma System. *Chinese Physics Letters*, **2018**, 35, 125201	1.8	2
98	Mode-coupling instability in a single-layer complex plasma crystal: Strong damping regime. *Physics of Plasmas*, **2018**, 25, 093702	2.1	3
97	Discrete stochastic charging of aggregate grains. *Physical Review E*, **2018**, 97, 053207	2.4	4
96	Delocalization in infinite disordered two-dimensional lattices of different geometry. *Physical Review B*, **2017**, 96,	3.3	5
95	Simple experiment on the sputtering rate of solids in gas discharges. *Physics of Plasmas*, **2017**, 24, 060701	1.1	1
94	Dynamics of spinning particle pairs in a single-layer complex plasma crystal. *Physical Review E*, **2017**, 96, 011201	2.4	2
93	The magnetic field inside a protoplanetary disc gap opened by planets of different masses. *Monthly Notices of the Royal Astronomical Society*, **2017**, 472, 3277-3287	4.3	17
92	Comparison of Plasma Magnetic Field Interactions in a Static and Dynamic Plasma Facility. *Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan*, **2016**, 14, Pe_21-Pe_26	0.3	2
91	Design of a 1.5 Seconds High Quality Microgravity Drop Tower Facility. *Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan*, **2016**, 14, Ph_7-Ph_14	0.3	1
90	Physical interpretation of the spectral approach to delocalization in infinite disordered systems. *Materials Research Express*, **2016**, 3, 125904	1.7	8
89	Photophoretic force on aggregate grains. *Monthly Notices of the Royal Astronomical Society*, **2016**, 455, 2582-2591	4.3	9
88	Multipole Expansions of Aggregate Charge: How Far to Go?. *IEEE Transactions on Plasma Science*, **2016**, 44, 519-524	1.3	4
87	DUST COAGULATION IN THE VICINITY OF A GAP-OPENING JUPITER-MASS PLANET. *Astrophysical Journal*, **2016**, 823, 80	4.7	20

86	Temperature measurement of a dust particle in a RF plasma GEC reference cell. *Journal of Plasma Physics*, **2016**, 82,	2.7	7
85	Mapping of force fields in a capacitively driven radiofrequency plasma discharge. *Journal of Plasma Physics*, **2016**, 82,	2.7	2
84	Ion-wake field inside a glass box. *Physical Review E*, **2016**, 94, 033201	2.4	12
83	Aerodynamic and engineering design of a 1.5 s high quality microgravity drop tower facility. *Acta Astronautica*, **2016**, 129, 335-344	2.9	10
82	Mode couplings and resonance instabilities in finite dust chains. *Physical Review E*, **2015**, 91, 053101	2.4	5
81	Electrical conductivity of the thermal dusty plasma under the conditions of a hybrid plasma environment simulation facility. *New Journal of Physics*, **2015**, 17, 053041	2.9	19
80	Dusty plasma cavities: Probe-induced and natural. *Physical Review E*, **2015**, 91, 063105	2.4	9
79	Analysis of magnetic field plasma interactions using microparticles as probes. *Physical Review E*, **2015**, 92, 023107	2.4	7
78	Spontaneous formation and spin of particle pairs in a single-layer complex plasma crystal. *Europhysics Letters*, **2015**, 112, 45003	1.6	7
77	Dust as probe for horizontal field distribution in low pressure gas discharges. *Plasma Sources Science and Technology*, **2014**, 23, 045008	3.5	20
76	Photophoresis on polydisperse basalt microparticles under microgravity. *Journal of Aerosol Science*, **2014**, 76, 126-137	4.3	13
75	Slow plastic creep of 2D dusty plasma solids. *Physical Review Letters*, **2014**, 113, 025002	7.4	42
74	Mode coupling and resonance instabilities in quasi-two-dimensional dust clusters in complex plasmas. *Physical Review E*, **2014**, 90, 033109	2.4	17
73	Measurement of net electric charge and dipole moment of dust aggregates in a complex plasma. *Physical Review E*, **2014**, 90, 033101	2.4	23
72	Interaction force in a vertical dust chain inside a glass box. *Physical Review E*, **2014**, 90, 013107	2.4	7
71	Two-dimensional and three-dimensional Coulomb clusters in parabolic traps. *Physics of Plasmas*, **2014**, 21, 093702	2.1	9
70	Mode couplings and resonance instabilities in dust clusters. *Physical Review E*, **2013**, 88, 043103	2.4	18
69	CHARGING OF AGGREGATE GRAINS IN ASTROPHYSICAL ENVIRONMENTS. *Astrophysical Journal*, **2013**, 763, 77	4.7	42

68	Mode Couplings and Conversions for Horizontal Dust Particle Pairs in Complex Plasmas. *IEEE Transactions on Plasma Science*, **2013**, 41, 745-753	1.3	9
67	A New Inductively Driven Plasma Generator (IPG6): Setup and Initial Experiments. *IEEE Transactions on Plasma Science*, **2013**, 41, 804-810	1.3	6
66	Glow and Dust in Plasma Boundaries. *IEEE Transactions on Plasma Science*, **2013**, 41, 799-803	1.3	4
65	Vertical Interaction Between Dust Particles Confined in a Glass Box in a Complex Plasma. *IEEE Transactions on Plasma Science*, **2013**, 41, 794-798	1.3	3
64	Helical structures in vertically aligned dust particle chains in a complex plasma. *Physical Review E*, **2013**, 87, 053106	2.4	25
63	Vertical-probe-induced asymmetric dust oscillation in complex plasma. *Physical Review E*, **2013**, 87, 053109	2.4	4
62	Guest Editorial Special Issue on Dusty Plasmas. *IEEE Transactions on Plasma Science*, **2013**, 41, 733-734	1.3	2
61	Effects of monomer shape on the formation of aggregates from a power law monomer distribution. *New Journal of Physics*, **2013**, 15, 073026	2.9	
60	COSMIC DUST AGGREGATION WITH STOCHASTIC CHARGING. *Astrophysical Journal*, **2013**, 776, 103	4.7	18
59	SARIM PLUS: Sample return of comet 67P/CG and of interstellar matter. *Experimental Astronomy*, **2012**, 33, 723-751	1.3	2
58	Determination of the levitation limits of dust particles within the sheath in complex plasma experiments. *Physics of Plasmas*, **2012**, 19, 013707	2.1	27
57	CHARGING AND COAGULATION OF DUST IN PROTOPLANETARY PLASMA ENVIRONMENTS. *Astrophysical Journal*, **2012**, 744, 8	4.7	37
56	The influence of monomer shape on aggregate morphologies. *Astronomy and Astrophysics*, **2012**, 539, A99	5.1	7
55	Modeling Agglomeration of Dust Particles in Plasma **2011**,		3
54	The effect of dust charge variation, due to ion flow and electron depletion, on dust levitation **2011**,		3
53	One-dimensional vertical dust strings in a glass box. *Physical Review E*, **2011**, 84, 016411	2.4	30
52	Dust particle charge in plasma with ion flow and electron depletion near plasma boundaries. *Physics of Plasmas*, **2011**, 18, 083706	2.1	21
51	Agglomeration of Dust Particles in the Lab **2011**,		2

50	The effect of electrode heating on the discharge parameters in complex plasma experiments. *Plasma Sources Science and Technology*, **2011**, 20, 015026	3.5	1
49	Fluid modeling of void closure in microgravity noble gas complex plasmas. *Physical Review E*, **2010**, 81, 056402	2.4	23
48	DipoleDipole Interactions of Charged-Magnetic Grains. *IEEE Transactions on Plasma Science*, **2010**, 38, 792-797	1.3	12
47	Vibrational Modes and Instabilities of a Dust-Particle Pair in a Complex Plasma. *IEEE Transactions on Plasma Science*, **2010**, 38, 826-832	1.3	11
46	Crystallization dynamics of a single layer complex plasma. *Physical Review Letters*, **2010**, 105, 115004	7.4	85
45	Probing the Sheath Electric Field With a Crystal Lattice by Using Thermophoresis in Dusty Plasma. *IEEE Transactions on Plasma Science*, **2010**, 38, 768-773	1.3	9
44	Simple method to measure the interaction potential of dielectric grains in a dusty plasma. *Physical Review E*, **2010**, 82, 036401	2.4	15
43	Experimental and computational characterization of a modified GEC cell for dusty plasma experiments. *New Journal of Physics*, **2009**, 11, 063024	2.9	14
42	Effect of dipoledipole charge interactions on dust coagulation. *New Journal of Physics*, **2009**, 11, 063030	2.9	14
41	Measurement of the Vertical Nonuniformity of the Plasma Sheath in a Complex Plasma. *IEEE Transactions on Plasma Science*, **2009**, 37, 1620-1625	1.3	7
40	Charging and Growth of Fractal Dust Grains. *IEEE Transactions on Plasma Science*, **2008**, 36, 310-314	1.3	12
39	Structural Phase Transitions and Vertical Mode Spectra in 2-D Finite Plasma Crystals. *IEEE Transactions on Plasma Science*, **2008**, 36, 2753-2758	1.3	2
38	Employing dust particle chains as a wakefield diagnostic. *IEEE Transactions on Plasma Science*, **2008**, 36, 554-558	1.3	4
37	Phase transitions in a dusty plasma with two distinct particle sizes. *Advances in Space Research*, **2008**, 41, 1510-1513	2.4	19
36	Kuiper binary formation. *Advances in Space Research*, **2007**, 40, 280-283	2.4	5
35	Structural Phases of Bounded Three-Dimensional Screened Coulomb Clusters (Finite Yukawa System). *IEEE Transactions on Plasma Science*, **2007**, 35, 346-351	1.3	3
34	Relationship Between the DC Bias and the Debye Length in a Complex Plasma. *IEEE Transactions on Plasma Science*, **2007**, 35, 323-327	1.3	4
33	Formation of Cosmic Dust Bunnies. *IEEE Transactions on Plasma Science*, **2007**, 35, 260-265	1.3	13

32	Charging of fractal dust agglomerates in a plasma environment **2007**,		2
31	Dynamics of a dust crystal with two different size dust species. *Advances in Space Research*, **2006**, 38, 2564-2570	2.4	10
30	Effect of multi-sized dust distribution on local plasma sheath potentials. *Advances in Space Research* , **2006**, 38, 2575-2580	2.4	6
29	Numerical study of structural phase transitions in a vertically confined plasma crystal. *Advances in Space Research*, **2006**, 38, 2571-2574	2.4	
28	Structural phase transitions and out-of-plane dust lattice instabilities in vertically confined plasma crystals. *Physical Review E*, **2005**, 71, 026406	2.4	16
27	Finite coulomb crystal formation. *Advances in Space Research*, **2004**, 34, 2396-2401	2.4	3
26	Dusty plasma correlation function experiment. *Advances in Space Research*, **2004**, 34, 2379-2383	2.4	15
25	Numerical simulation and analysis of thermally excited waves in plasma crystals. *Advances in Space Research*, **2004**, 34, 2390-2395	2.4	6
24	Charged grains in Saturn F-Ring: interaction with Saturn magnetic field. *Advances in Space Research*, **2004**, 33, 2292-2297	2.4	7
23	A model of coagulation in dust clouds during grain charging. *Advances in Space Research*, **2004**, 34, 2384-2389	2.4	1
22	Digital imaging and analysis of dusty plasmas. *Advances in Space Research*, **2004**, 34, 2374-2378	2.4	17
21	Effects of the charge-dipole interaction on the coagulation of fractal aggregates. *IEEE Transactions on Plasma Science*, **2004**, 32, 586-593	1.3	33
20	Gravitoelectrodynamics in Saturn's F ring: encounters with Prometheus and Pandora. *Journal of Physics A*, **2003**, 36, 6207-6214		16
19	Dust grain orbital behavior around ceres. *Advances in Space Research*, **2003**, 31, 2591-2597	2.4	3
18	Dispersion relations for thermally excited waves in plasma crystals. *Journal of Physics A*, **2003**, 36, 6109-6115		10
17	Dispersion properties of the out-of-plane transverse wave in a two-dimensional Coulomb crystal. *Physical Review E*, **2003**, 68, 046403	2.4	46
16	Numerical Simulation of Gravitoelectrodynamics in Dusty Plasmas **2002**, 199-202		
15	Dust grain orbital behavior around Neptune. *Advances in Space Research*, **2002**, 29, 1271-1275	2.4	

14	The calculation of grain charge in a dense dusty plasma with a nonuniform surface potential. *Advances in Space Research*, **2002**, 29, 1277-1282	2.4	9
13	Charging in a dusty plasma with a size distribution: a comparison of three models. *Advances in Space Research*, **2002**, 29, 1283-1288	2.4	17
12	A charging model for a dust cloud with a size distribution and a nonuniform potential. *Advances in Space Research*, **2002**, 29, 1289-1294	2.4	8
11	Plasma condensation and the one component plasma model. *Advances in Space Research*, **2002**, 29, 1295-1300	2.4	2
10	Mutual gravitational perturbations between planetesimals within protoplanetary disks. *Advances in Space Research*, **2002**, 29, 1301-1306	2.4	
9	Modeling chondrule melting using a resizing box_tree code. *Advances in Space Research*, **2002**, 29, 1311-1314	2.4	3
8	Computer simulations of Coulomb crystallization in a dusty plasma. *IEEE Transactions on Plasma Science*, **2001**, 29, 231-237	1.3	17
7	The dust bands of the planet Mars. *Advances in Space Research*, **1997**, 20, 1535-1538	2.4	3
6	Charging in a dusty plasma. *Advances in Space Research*, **1997**, 20, 1539-1542	2.4	10
5	A modified particle-particle approach to the charging of grain lattices within a dusty plasma. *Advances in Space Research*, **1993**, 13, 179-182	2.4	1
4	Micron and submicron debris□unar ejecta concentrations between L values of 1.7 and 3.0 in the earth's magnetosphere. *Advances in Space Research*, **1990**, 10, 409-412	2.4	3
3	The impact of dust grains on fast fly-by spacecraft: Momentum multiplication, measurements and theory. *Advances in Space Research*, **1984**, 4, 297-301	2.4	13
2	Mass loading of planetary atmospheres by rocky satellites□: Transport and enhanced lifetimes of satellite ejecta in planetary magnetospheres. *Advances in Space Research*, **1984**, 4, 27-30	2.4	7
1	Ionization waves in the PK-4 direct current neon discharge. *Plasma Sources Science and Technology*,	3.5	5