Hidekazu Tanaka

List of Publications by Year
in descending order

98 papers	7,003 citations	76326 40 h-index	64796 79 g-index
98 all docs	98 docs citations	98 times ranked	3005 citing authors

#	Article	IF	Citations
1	Eccentric Gap Induced by a Super-Jupiter-mass Planet. Astrophysical Journal, 2022, 925, 95.	4.5	6
2	Can Stellar-mass Black Hole Growth Disrupt Disks of Active Galactic Nuclei? The Role of Mechanical Feedback. Astrophysical Journal, 2022, 927, 41.	4.5	23
3	Impacts of Viscous Dissipation on Collisional Growth and Fragmentation of Dust Aggregates. Astrophysical Journal, 2022, 933, 144.	4.5	10
4	Ring Formation by Coagulation of Dust Aggregates in the Early Phase of Disk Evolution around a Protostar. Astrophysical Journal, 2021, 907, 80.	4.5	19
5	Collisional Growth and Fragmentation of Dust Aggregates with Low Mass Ratios. I. Critical Collision Velocity for Water Ice. Astrophysical Journal, 2021, 915, 22.	4.5	22
6	Dust Rings as a Footprint of Planet Formation in a Protoplanetary Disk. Astrophysical Journal, 2021, 921, 169.	4.5	6
7	Rapid Formation of Gas-giant Planets via Collisional Coagulation from Dust Grains to Planetary Cores. Astrophysical Journal, 2021, 922, 16.	4.5	22
8	Comments on â€˜Type II migration strikes back â€“ an old paradigm for planet migration in discsâ€™ by Scardoni etÂal.. Monthly Notices of the Royal Astronomical Society, 2020, 494, 3449-3452.	4.4	2
9	Final Masses of Giant Planets. III. Effect of Photoevaporation and a New Planetary Migration Model. Astrophysical Journal, 2020, 891, 143.	4.5	27
10	Tensile Strength of Porous Dust Aggregates. Astrophysical Journal, 2019, 874, 159.	4.5	29
11	Effect of dust size and structure on scattered-light images of protoplanetary discs. Monthly Notices of the Royal Astronomical Society, 2019, 485, 4951-4966.	4.4	34
12	Shock-generating Planetesimals Perturbed by a Giant Planet in a Gas Disk. Astrophysical Journal, 2019, 871, 110.	4.5	13
13	Unveiling Dust Aggregate Structure in Protoplanetary Disks by Millimeter-wave Scattering Polarization. Astrophysical Journal, 2019, 885, 52.	4.5	33
14	Slowing Down Type II Migration of Gas Giants to Match Observational Data. Astrophysical Journal, 2018, 864, 77.	4.5	44
15	From Planetesimal to Planet in Turbulent Disks. II. Formation of Gas Giant Planets. Astrophysical Journal, 2018, 862, 127.	4.5	15
16	Collisional disruption of planetesimals in the gravity regime with iSALE code: Comparison with SPH code for purely hydrodynamic bodies. Icarus, 2018, 314, 121-132.	2.5	10
17	Radial Migration of Gap-opening Planets in Protoplanetary Disks. I. The Case of a Single Planet. Astrophysical Journal, 2018, 861, 140.	4.5	151
18	Light Scattering by Fractal Dust Aggregates. II. Opacity and Asymmetry Parameter. Astrophysical Journal, 2018, 860, 79.	4.5	33

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19	Comprehensive Study of Thermal Desorption of Grain-surface Species by Accretion Shocks around Protostars. Astrophysical Journal, 2017, 839, 47.	4.5	30
20	Impact erosion model for gravity-dominated planetesimals. Icarus, 2017, 294, 234-246.	2.5	22
21	Evolution of Morphological and Physical Properties of Laboratory Interstellar Organic Residues with Ultraviolet Irradiation. Astrophysical Journal, 2017, 837, 35.	4.5	17
22	Analyzing multistep homogeneous nucleation in vapor-to-solid transitions using molecular dynamics simulations. Physical Review E, 2017, 96, 022804.	2.1	10
23	Modelling of deep gaps created by giant planets in protoplanetary disks. Publication of the Astronomical Society of Japan, 2017, 69, .	2.5	54
24	Thermal conductivity of porous aggregates. Astronomy and Astrophysics, 2017, 608, L7.	5.1	15
25	FROM PLANETESIMALS TO PLANETS IN TURBULENT PROTOPLANETARY DISKS. I. ONSET OF RUNAWAY GROWTH. Astrophysical Journal, 2016, 817, 105.	4.5	38
26	FINAL MASSES OF GIANT PLANETS. II. JUPITER FORMATION IN A GAS-DEPLETED DISK. Astrophysical Journal, 2016, 823, 48.	4.5	102
27	SINTERING-INDUCED DUST RING FORMATION IN PROTOPLANETARY DISKS: APPLICATION TO THE HL TAU DISK. Astrophysical Journal, 2016, 821, 82.	4.5	275
28	Reply to â€œComment on â€˜Simple improvements to classical bubble nucleation modelsâ€™â€‰â€• Physical Review E, 2016, 94, 026802.	2.1	1
29	LIGHT SCATTERING BY FRACTAL DUST AGGREGATES. I. ANGULAR DEPENDENCE OF SCATTERING. Astrophysical Journal, 2016, 823, 70.	4.5	72
30	Mass constraint for a planet in a protoplanetary disk from the gap width. Publication of the Astronomical Society of Japan, 2016, 68, .	2.5	104
31	Resolution dependence of disruptive collisions between planetesimals in the gravity regime. Icarus, 2015, 262, 58-66.	2.5	41
32	Simple improvements to classical bubble nucleation models. Physical Review E, 2015, 92, 022401.	2.1	34
33	MASS ESTIMATES OF A GIANT PLANET IN A PROTOPLANETARY DISK FROM THE GAP STRUCTURES. Astrophysical Journal Letters, 2015, 806, L15.	8.3	153
34	Detailed structure of the outer disk around HDâ€‰169142 with polarized light in <i>H</i>-band. Publication of the Astronomical Society of Japan, 2015, 67, .	2.5	65
35	Formation of a disc gap induced by a planet: effect of the deviation from Keplerian disc rotation. Monthly Notices of the Royal Astronomical Society, 2015, 448, 994-1006.	4.4	98
36	Homogeneous SPC/E water nucleation in large molecular dynamics simulations. Journal of Chemical Physics, 2015, 143, 064507.	3.0	32

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37	Opacity of fluffy dust aggregates. Astronomy and Astrophysics, 2014, 568, A42.	5.1	105
38	REVISITING JOVIAN-RESONANCE INDUCED CHONDRULE FORMATION. Astrophysical Journal Letters, 2014, 794, L7.	8.3	10
39	Properties of liquid clusters in large-scale molecular dynamics nucleation simulations. Journal of Chemical Physics, 2014, 140, 074303.	3.0	36
40	Bubble evolution and properties in homogeneous nucleation simulations. Physical Review E, 2014, 90, 063301.	2.1	21
41	Direct simulations of homogeneous bubble nucleation: Agreement with classical nucleation theory and no local hot spots. Physical Review E, 2014, 90, 052407.	2.1	51
42	Free energy of cluster formation and a new scaling relation for the nucleation rate. Journal of Chemical Physics, 2014, 140, 194310.	3.0	27
43	Molecular dynamics simulations of the nucleation of water: Determining the sticking probability and formation energy of a cluster. Journal of Chemical Physics, 2014, 140, 114302.	3.0	33
44	EVAPORATION OF ICY PLANETESIMALS DUE TO BOW SHOCKS. Astrophysical Journal, 2013, 764, 120.	4.5	32
45	Large scale MD simulations of nucleation. , 2013, , .		0
46	The physics of nucleated droplets in large-scale MD Lennard-Jones simulations. , 2013, , .		0
47	Large scale molecular dynamics simulations of homogeneous nucleation. Journal of Chemical Physics, 2013, 139, 074309.	3.0	102
48	Fluffy dust forms icy planetesimals by static compression. Astronomy and Astrophysics, 2013, 557, L4.	5.1	207
49	Growth efficiency of dust aggregates through collisions with high mass ratios. Astronomy and Astrophysics, 2013, 559, A62.	5.1	121
50	Growth of Cosmic Dust Aggregates and Reexamination of Particle Interaction Models. Progress of Theoretical Physics Supplement, 2012, 195, 101-113.	0.1	28
51	MIGRATION RATES OF PLANETS DUE TO SCATTERING OF PLANETESIMALS. Astrophysical Journal, 2012, 758, 80.	4.5	53
52	RAPID COAGULATION OF POROUS DUST AGGREGATES OUTSIDE THE SNOW LINE: A PATHWAY TO SUCCESSFUL ICY PLANETESIMAL FORMATION. Astrophysical Journal, 2012, 752, 106.	4.5	331
53	GEOMETRIC CROSS SECTIONS OF DUST AGGREGATES AND A COMPRESSION MODEL FOR AGGREGATE COLLISIONS. Astrophysical Journal, 2012, 753, 115.	4.5	75
54	Molecular dynamics simulations of nucleation from vapor to solid composed of Lennard-Jones molecules. Journal of Chemical Physics, 2011, 134, 204313.	3.0	41

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55	ELECTROSTATIC BARRIER AGAINST DUST GROWTH IN PROTOPLANETARY DISKS. II. MEASURING THE SIZE OF THE â€œFROZENâ€•ZONE. Astrophysical Journal, 2011, 731, 96.	4.5	61
56	PLANETARY CORE FORMATION WITH COLLISIONAL FRAGMENTATION AND ATMOSPHERE TO FORM GAS GIANT PLANETS. Astrophysical Journal, 2011, 738, 35.	4.5	58
57	THE REBOUND CONDITION OF DUST AGGREGATES REVEALED BY NUMERICAL SIMULATION OF THEIR COLLISIONS. Astrophysical Journal, 2011, 737, 36.	4.5	127
58	ELECTROSTATIC BARRIER AGAINST DUST GROWTH IN PROTOPLANETARY DISKS. I. CLASSIFYING THE EVOLUTION OF SIZE DISTRIBUTION. Astrophysical Journal, 2011, 731, 95.	4.5	75
59	Fragmentation model dependence of collision cascades. Icarus, 2010, 206, 735-746.	2.5	101
60	Planetary growth with collisional fragmentation and gas drag. Icarus, 2010, 209, 836-847.	2.5	82
61	Dust Growth in Protoplanetary Disks. , 2009, , .		0
62	Electric Charging of Dust Aggregates and its Effect on Dust Coagulation in Protoplanetary Disks. , 2009, , .		4
63	COLLISIONAL GROWTH CONDITIONS FOR DUST AGGREGATES. Astrophysical Journal, 2009, 702, 1490-1501.	4.5	284
64	Numerical Simulation of Dust Aggregate Collisions: Growth and Disruption of Dust Aggregates. , 2009, , .		2
65	Numerical Simulation of Structure Evolution of Dust Aggregates Growing in Protoplanetary Disks. , 2009, , .		0
66	NUMERICAL MODELING OF THE COAGULATION AND POROSITY EVOLUTION OF DUST AGGREGATES. Astrophysical Journal, 2009, 707, 1247-1263.	4.5	131
67	Numerical Simulation of Density Evolution of Dust Aggregates in Protoplanetary Disks. I. Headâ€on Collisions. Astrophysical Journal, 2008, 684, 1310-1322.	4.5	137
68	Numerical Simulation of Dust Aggregate Collisions. II. Compression and Disruption of Threeâ€Dimensional Aggregates in Headâ€on Collisions. Astrophysical Journal, 2008, 677, 1296-1308.	4.5	176
69	Numerical Simulation of Dust Aggregate Collisions. I. Compression and Disruption of Twoâ€Dimensional Aggregates. Astrophysical Journal, 2007, 661, 320-333.	4.5	142
70	Orbital evolution and accretion of protoplanets tidally interacting with a gas disk. Icarus, 2006, 185, 492-507.	2.5	22
71	Dust Growth and Settling in Protoplanetary Disks and Disk Spectral Energy Distributions. I. Laminar Disks. Astrophysical Journal, 2005, 625, 414-426.	4.5	164
72	A new theory of bubble formation in magma. Journal of Geophysical Research, 2005, 110, .	3.3	42

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73	The evidence of an early stellar encounter in Edgeworthâ€"Kuiper belt. Icarus, 2005, 177, 246-255.	2.5	33
74	Orbital evolution and accretion of protoplanets tidally interacting with a gas disk. Icarus, 2005, 178, 540-552.	2.5	20
75	Tests of the homogeneous nucleation theory with molecular-dynamics simulations. I. Lennard-Jones molecules. Journal of Chemical Physics, 2005, 122, 184514.	3.0	51
76	Threeâ€dimensional Interaction between a Planet and an Isothermal Gaseous Disk. II. Eccentricity Waves and Bending Waves. Astrophysical Journal, 2004, 602, 388-395.	4.5	281
77	A new formulation of the viscosity in planetary rings. Icarus, 2003, 161, 144-156.	2.5	12
78	Radial diffusion rate of planetesimals due to gravitational encounters. Icarus, 2003, 162, 47-58.	2.5	8
79	Gravitational interaction between a planet and an optically thin disc. Monthly Notices of the Royal Astronomical Society, 2003, 346, 915-923.	4.4	15
80	Orbital Stability of a Protoplanet System under a Drag Force Proportional to the Random Velocity. Publication of the Astronomical Society of Japan, 2002, 54, 471-479.	2.5	33
81	Threeâ€dimensional Interaction between a Planet and an Isothermal Gaseous Disk. I. Corotation and Lindblad Torques and Planet Migration. Astrophysical Journal, 2002, 565, 1257-1274.	4.5	823
82	Excitation of Orbital Inclinations of Asteroids during Depletion of a Protoplanetary Disk: Dependence on the Disk Configuration. Icarus, 2002, 159, 322-327.	2.5	21
83	Non-equilibrium Condensation ina Primordial Solar Nebula: Formation of Refractory Metal Nuggets. Icarus, 2002, 160, 197-207.	2.5	26
84	Origin of high orbital eccentricity and inclination of asteroids. Earth, Planets and Space, 2001, 53, 1085-1091.	2.5	39
85	High-Accuracy Statistical Simulation of Planetary Accretion: II. Comparison with N-Body Simulation. Icarus, 2001, 149, 235-250.	2.5	145
86	Viscosity in a Dense Planetary Ring with Self-Gravitating Particles. Icarus, 2001, 154, 296-312.	2.5	124
87	The Gas-Drag Effect on the Orbital Instability of a Protoplanet System. Publication of the Astronomical Society of Japan, 2001, 53, 321-329.	2.5	27
88	Orbital Migration of Neptune and Orbital Distribution of Transâ€Neptunian Objects. Astrophysical Journal, 2000, 534, 428-445.	4.5	127
89	Orbital Evolution of Asteroids during Depletion of the Solar Nebula. Astronomical Journal, 2000, 119, 1480-1497.	4.7	100
90	Growth of a Migrating Protoplanet. Icarus, 1999, 139, 350-366.	2.5	159

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91	High-accuracy statistical simulation of planetary accretion: I. Test of the accuracy by comparison with the solution to the stochastic coagulation equation. Earth, Planets and Space, 1999, 51, 205-217.	2.5	23
92	Gravitational Interaction between a Protoplanet and a Protoplanetary Disk. I. Local Threeâ€Dimensional Simulations. Astrophysical Journal, 1999, 516, 451-464.	4.5	61
93	Shock Heating Due to Accretion of a Clumpy Cloud onto a Protoplanetary Disk. Icarus, 1998, 134, 137-154.	2.5	20
94	Distribution of Planetesimals around a Protoplanet in the Nebula Gas. Icarus, 1997, 125, 302-316.	2.5	56
95	Distribution of Planetesimals around a Protoplanet in the Nebula Gas. Icarus, 1996, 120, 371-386.	2.5	35
96	Steady-State Size Distribution for the Self-Similar Collision Cascade. Icarus, 1996, 123, 450-455.	2.5	172
97	Validity of the Statistical Coagulation Equation and Runaway Growth of Protoplanets. Icarus, 1994, 107, 404-412.	2.5	27
98	Stochastic Coagulation Equation and Validity of the Statistical Coagulation Equation.. Journal of Geomagnetism and Geoelectricity, 1993, 45, 361-381.	0.9	22