Hideko Nomura

List of Publications by Year
in descending order

79 papers	3,624 citations	117625 34 h-index	138484 58 g-index
80 all docs	80 docs citations	80 times ranked	1929 citing authors

#	Article	IF	Citations
1	Complex organic molecules in protoplanetary disks. Astronomy and Astrophysics, 2014, 563, A33.	5.1	169
2	CHEMICAL PROCESSES IN PROTOPLANETARY DISKS. Astrophysical Journal, 2010, 722, 1607-1623.	4.5	168
3	FIRST DETECTION OF GAS-PHASE METHANOL IN A PROTOPLANETARY DISK. Astrophysical Journal Letters, 2016, 823, L10.	8.3	166
4	The molecular composition of the planet-forming regions of protoplanetary disks across the luminosity regime. Astronomy and Astrophysics, 2015, 582, A88.	5.1	133
5	Molecular Hydrogen Emission from Protoplanetary Disks. II. Effects of Xâ€Ray Irradiation and Dust Evolution. Astrophysical Journal, 2007, 661, 334-353.	4.5	133
6	Local Enhancement of the Surface Density in the Protoplanetary Ring Surrounding HD 142527. Publication of the Astronomical Society of Japan, 2013, 65, .	2.5	129
7	Molecular hydrogen emission from protoplanetary disks. Astronomy and Astrophysics, 2005, 438, 923-938.	5.1	125
8	CHEMICAL PROCESSES IN PROTOPLANETARY DISKS. II. ON THE IMPORTANCE OF PHOTOCHEMISTRY AND X-RAY IONIZATION. Astrophysical Journal, 2012, 747, 114.	4.5	123
9	Molecules with ALMA at Planet-forming Scales (MAPS). I. Program Overview and Highlights. Astrophysical Journal, Supplement Series, 2021, 257, 1.	7.7	117
10	ALMA HINTS AT THE PRESENCE OF TWO COMPANIONS IN THE DISK AROUND HD 100546. Astrophysical Journal Letters, 2014, 791, L6.	8.3	114
11	GASPSâ€"A Herschel Survey of Gas and Dust in Protoplanetary Disks: Summary and Initial Statistics. Publications of the Astronomical Society of the Pacific, 2013, 125, 477-505.	3.1	108
12	Opacity of fluffy dust aggregates. Astronomy and Astrophysics, 2014, 568, A42.	5.1	105
13	ALMA OBSERVATIONS OF A GAP AND A RING IN THE PROTOPLANETARY DISK AROUND TW HYA. Astrophysical Journal Letters, 2016, 819, L7.	8.3	105
14	Physical and Chemical Structure of Protoplanetary Disks with Grain Growth. Astrophysical Journal, 2006, 642, 1152-1162.	4.5	100
15	Radiative Grain Alignment in Protoplanetary Disks: Implications for Polarimetric Observations. Astrophysical Journal, 2017, 839, 56.	4.5	96
16	A GAP WITH A DEFICIT OF LARGE GRAINS IN THE PROTOPLANETARY DISK AROUND TW Hya. Astrophysical Journal Letters, 2016, 829, L35.	8.3	90
17	Molecules with ALMA at Planet-forming Scales (MAPS). V. CO Gas Distributions. Astrophysical Journal, Supplement Series, 2021, 257, 5.	7.7	87
18	CHEMICAL EVOLUTION OF PROTOPLANETARY DISKSâ€"THE EFFECTS OF VISCOUS ACCRETION, TURBULENT MIXING, AND DISK WINDS. Astrophysical Journal, 2011, 731, 115.	4.5	82

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19	WATER IN PROTOPLANETARY DISKS: DEUTERATION AND TURBULENT MIXING. Astrophysical Journal, 2013, 779, 11.	4.5	80
20	LIGHT SCATTERING BY FRACTAL DUST AGGREGATES. I. ANGULAR DEPENDENCE OF SCATTERING. Astrophysical Journal, 2016, 823, 70.	4.5	72
21	THE SOLAR NEBULA ON FIRE: A SOLUTION TO THE CARBON DEFICIT IN THE INNER SOLAR SYSTEM. Astrophysical Journal Letters, 2010, 710, L21-L25.	8.3	59
22	CANDIDATE WATER VAPOR LINES TO LOCATE THE H₂O SNOWLINE THROUGH HIGH-DISPERSION SPECTROSCOPIC OBSERVATIONS. I. THE CASE OF A T TAURI STAR. Astrophysical Journal, 2016, 827, 113.	4.5	58
23	Molecules with ALMA at Planet-forming Scales (MAPS). IV. Emission Surfaces and Vertical Distribution of Molecules. Astrophysical Journal, Supplement Series, 2021, 257, 4.	7.7	58
24	Molecules with ALMA at Planet-forming Scales (MAPS). II. CLEAN Strategies for Synthesizing Images of Molecular Line Emission in Protoplanetary Disks. Astrophysical Journal, Supplement Series, 2021, 257, 2.	7.7	58
25	Molecules with ALMA at Planet-forming Scales (MAPS). III. Characteristics of Radial Chemical Substructures. Astrophysical Journal, Supplement Series, 2021, 257, 3.	7.7	57
26	The First Detection of ¹³C¹⁷O in a Protoplanetary Disk: A Robust Tracer of Disk Gas Mass. Astrophysical Journal Letters, 2019, 882, L31.	8.3	54
27	Radiation Hydrodynamics Simulations of Photoevaporation of Protoplanetary Disks by Ultraviolet Radiation: Metallicity Dependence. Astrophysical Journal, 2018, 857, 57.	4.5	51
28	ANALYTICAL FORMULAE OF MOLECULAR ION ABUNDANCES AND THE N₂H⁺RING IN PROTOPLANETARY DISKS. Astrophysical Journal, 2015, 807, 120.	4.5	49
29	PARAMETRIC STUDY OF THE ROSSBY WAVE INSTABILITY IN A TWO-DIMENSIONAL BAROTROPIC DISK. Astrophysical Journal, 2016, 823, 84.	4.5	46
30	Radiation Hydrodynamics Simulations of Photoevaporation of Protoplanetary Disks. II. Metallicity Dependence of UV and X-Ray Photoevaporation. Astrophysical Journal, 2018, 865, 75.	4.5	46
31	ALMA REVEALS THE ANATOMY OF THE mm-SIZED DUST AND MOLECULAR GAS IN THE HD 97048 DISK. Astrophysical Journal, 2016, 831, 200.	4.5	42
32	An inherited complex organic molecule reservoir in a warm planet-hosting disk. Nature Astronomy, 2021, 5, 684-690.	10.1	40
33	Molecules with ALMA at Planet-forming Scales (MAPS). VII. Substellar O/H and C/H and Superstellar C/O in Planet-feeding Gas. Astrophysical Journal, Supplement Series, 2021, 257, 7.	7.7	40
34	Discovery of An au-scale Excess in Millimeter Emission from the Protoplanetary Disk around TW Hya. Astrophysical Journal Letters, 2019, 878, L8.	8.3	37
35	Candidate Water Vapor Lines to Locate the H₂O Snowline Through High-dispersion Spectroscopic Observations. II. The Case of a Herbig Ae Star. Astrophysical Journal, 2017, 836, 118.	4.5	34
36	Molecules with ALMA at Planet-forming Scales (MAPS). XIX. Spiral Arms, a Tail, and Diffuse Structures Traced by CO around the GM Aur Disk. Astrophysical Journal, Supplement Series, 2021, 257, 19.	7.7	33

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37	GW Ori: Interactions between a Triple-star System and Its Circumtriple Disk in Action. Astrophysical Journal Letters, 2020, 895, L18.	8.3	32
38	Effects of accretion flow on the chemical structure in the inner regions of protoplanetary disks. Astronomy and Astrophysics, 2009, 495, 183-188.	5.1	31
39	Comprehensive Study of Thermal Desorption of Grain-surface Species by Accretion Shocks around Protostars. Astrophysical Journal, 2017, 839, 47.	4.5	30
40	Molecules with ALMA at Planet-forming Scales (MAPS). IX. Distribution and Properties of the Large Organic Molecules HC₃N, CH₃CN, and c-C₃H₂. Astrophysical Journal, Supplement Series, 2021, 257, 9.	7.7	30
41	Molecules with ALMA at Planet-forming Scales (MAPS). XII. Inferring the C/O and S/H Ratios in Protoplanetary Disks with Sulfur Molecules. Astrophysical Journal, Supplement Series, 2021, 257, 12.	7.7	30
42	Dust Continuum Emission and the Upper Limit Fluxes of Submillimeter Water Lines of the Protoplanetary Disk around HD 163296 Observed by ALMA. Astrophysical Journal, 2019, 875, 96.	4.5	28
43	The composition of hot Jupiter atmospheres assembled within chemically evolved protoplanetary discs. Monthly Notices of the Royal Astronomical Society, 2020, 499, 2229-2244.	4.4	27
44	Molecules with ALMA at Planet-forming Scales (MAPS). XI. CN and HCN as Tracers of Photochemistry in Disks. Astrophysical Journal, Supplement Series, 2021, 257, 11.	7.7	25
45	Molecules with ALMA at Planet-forming Scales (MAPS). XIII. HCO⁺ and Disk Ionization Structure. Astrophysical Journal, Supplement Series, 2021, 257, 13.	7.7	24
46	Early Evolution of Disk, Outflow, and Magnetic Field of Young Stellar Objects: Impact of Dust Model. Astrophysical Journal, 2020, 896, 158.	4.5	22
47	Molecules with ALMA at Planet-forming Scales (MAPS). XV. Tracing Protoplanetary Disk Structure within 20 au. Astrophysical Journal, Supplement Series, 2021, 257, 15.	7.7	21
48	Molecules with ALMA at Planet-forming Scales (MAPS). XVI. Characterizing the Impact of the Molecular Wind on the Evolution of the HD 163296 System. Astrophysical Journal, Supplement Series, 2021, 257, 16.	7.7	20
49	The Effect of Carbon Grain Destruction on the Chemical Structure of Protoplanetary Disks. Astrophysical Journal, 2019, 870, 129.	4.5	19
50	FAUST. II. Discovery of a Secondary Outflow in IRAS 15398â˜3359: Variability in Outflow Direction during the Earliest Stage of Star Formation?. Astrophysical Journal, 2021, 910, 11.	4.5	19
51	Molecules with ALMA at Planet-forming Scales (MAPS). XVII. Determining the 2D Thermal Structure of the HD 163296 Disk. Astrophysical Journal, Supplement Series, 2021, 257, 17.	7.7	19
52	Candidate Water Vapor Lines to Locate the H₂O Snowline through High-dispersion Spectroscopic Observations. III. Submillimeter H₂ ¹⁶O and H₂ ¹⁸O Lines. Astrophysical Journal, 2018, 855, 62.	4.5	18
53	X-ray-induced chemistry of water and related molecules in low-mass protostellar envelopes. Astronomy and Astrophysics, 2021, 650, A180.	5.1	18
54	Molecules with ALMA at Planet-forming Scales (MAPS). X. Studying Deuteration at High Angular Resolution toward Protoplanetary Disks. Astrophysical Journal, Supplement Series, 2021, 257, 10.	7.7	15

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55	High Spatial Resolution Observations of Molecular Lines toward the Protoplanetary Disk around TW Hya with ALMA. Astrophysical Journal, 2021, 914, 113.	4.5	14
56	Photoevaporation of Grain-depleted Protoplanetary Disks around Intermediate-mass Stars: Investigating the Possibility of Gas-rich Debris Disks as Protoplanetary Remnants. Astrophysical Journal, 2021, 915, 90.	4.5	14
57	Shock-generating Planetesimals Perturbed by a Giant Planet in a Gas Disk. Astrophysical Journal, 2019, 871, 110.	4.5	13
58	The Detection of Dust Gap-ring Structure in the Outer Region of the CR Cha Protoplanetary Disk. Astrophysical Journal, 2020, 888, 72.	4.5	9
59	Model of a Gap Formed by a Planet with Fast Inward Migration. Astrophysical Journal, 2020, 892, 83.	4.5	7
60	Modeling Nitrogen Fractionation in the Protoplanetary Disk around TW Hya: Model Constraints on Grain Population and Carbon-to-oxygen Elemental Abundance Ratio. Astrophysical Journal, 2021, 908, 82.	4.5	7
61	ALMA Observation of the Protoplanetary Disk around WW Cha: Faint Double-peaked Ring and Asymmetric Structure. Astrophysical Journal, 2021, 909, 212.	4.5	7
62	Misaligned Rotations of the Envelope, Outflow, and Disks in the Multiple Protostellar System of VLA 1623â€“2417: FAUST. III. Astrophysical Journal, 2022, 927, 54.	4.5	7
63	ROTATIONAL INSTABILITY IN THE OUTER REGION OF PROTOPLANETARY DISKS. Astrophysical Journal, 2014, 787, 37.	4.5	6
64	The Synthetic ALMA Multiband Analysis of the Dust Properties of the TW Hya Protoplanetary Disk. Astrophysical Journal, 2019, 872, 179.	4.5	6
65	ALMA Super-resolution Imaging of T Tau: r = 12 au Gap in the Compact Dust Disk around T Tau N. Astrophysical Journal, 2021, 923, 121.	4.5	6
66	Unveiling the outer dust disc of TW Hya with deep ALMA observations. Monthly Notices of the Royal Astronomical Society: Letters, 2022, 515, L23-L28.	3.0	6
67	A New Method for Direct Measurement of Isotopologue Ratios in Protoplanetary Disks: A Case Study of the ¹²CO/¹³CO Ratio in the TW Hya Disk. Astrophysical Journal, 2022, 932, 126.	4.5	6
68	Detection of HC¹⁸O⁺ in a Protoplanetary Disk: Exploring Oxygen Isotope Fractionation of CO. Astrophysical Journal, 2022, 926, 148.	4.5	5
69	ALMA High-resolution Multiband Analysis for the Protoplanetary Disk around TW Hya. Astrophysical Journal, 2022, 928, 49.	4.5	5
70	Physical Conditions of Gas Components in Debris Disks of 49 Ceti and HD 21997. Astrophysical Journal, 2020, 905, 122.	4.5	4
71	ALMA Observations of Layered Structures due to CO Selective Dissociation in the Ï•Ophiuchi A Plane-parallel PDR. Astrophysical Journal, 2019, 875, 62.	4.5	3
72	The formation of planetary systems with SPICA. Publications of the Astronomical Society of Australia, 2021, 38, .	3.4	3

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73	ALMA View of the Ï•Ophiuchi A PDR with a 360 au Beam: The [C i] Emission Originates from the Plane-parallel PDR and Extended Gas. Astrophysical Journal Letters, 2021, 914, L9.	8.3	2
74	Possibility of concentration of nonvolatile species near the surface of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2021, 645, A134.	5.1	2
75	Possibility to locate the position of the H₂O snowline in protoplanetary disks through spectroscopic observations. Proceedings of the International Astronomical Union, 2017, 13, 113-120.	0.0	0
76	Chemistry in carbon-rich protoplanetary disks: Effect of carbon grain destruction. Proceedings of the International Astronomical Union, 2018, 14, 289-290.	0.0	0
77	ALMA observations of sulfur-bearing molecules in protoplanetary disks. Proceedings of the International Astronomical Union, 2018, 14, 360-361.	0.0	0
78	Possibility to locate the position of the H₂O snowline in protoplanetary disks through spectroscopic observations. Proceedings of the International Astronomical Union, 2018, 14, 393-395.	0.0	0
79	Superrotation of Titanâ€™s Stratosphere Driven by the Radiative Heating of the Haze Layer. Astrophysical Journal, 2022, 928, 149.	4.5	0