Patrick Hennebelle

List of Publications by Year
in descending order

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Version: 2024-02-01

57 papers	3,318 citations	172207 29 h-index	155451 55 g-index
57 all docs	57 docs citations	57 times ranked	2674 citing authors

#	Article	IF	Citations
1	Analytical Theory for the Initial Mass Function: CO Clumps and Prestellar Cores. Astrophysical Journal, 2008, 684, 395-410.	1.6	437
2	Turbulent molecular clouds. Astronomy and Astrophysics Review, 2012, 20, 1.	9.1	280
3	ANALYTICAL STAR FORMATION RATE FROM GRAVOTURBULENT FRAGMENTATION. Astrophysical Journal Letters, 2011, 743, L29.	3.0	211
4	ANALYTICAL THEORY FOR THE INITIAL MASS FUNCTION. II. PROPERTIES OF THE FLOW. Astrophysical Journal, 2009, 702, 1428-1442.	1.6	171
5	COLLAPSE OF MASSIVE MAGNETIZED DENSE CORES USING RADIATION MAGNETOHYDRODYNAMICS: EARLY FRAGMENTATION INHIBITION. Astrophysical Journal Letters, 2011, 742, L9.	3.0	150
6	The Role of Magnetic Field in Molecular Cloud Formation and Evolution. Frontiers in Astronomy and Space Sciences, 2019, 6, .	1.1	129
7	Molecular cloud evolution - IV. Magnetic fields, ambipolar diffusion and the star formation efficiency. Monthly Notices of the Royal Astronomical Society, 2011, 414, 2511-2527.	1.6	127
8	VARIATIONS OF THE STELLAR INITIAL MASS FUNCTION IN THE PROGENITORS OF MASSIVE EARLY-TYPE GALAXIES AND IN EXTREME STARBURST ENVIRONMENTS. Astrophysical Journal, 2014, 796, 75.	1.6	112
9	MAGNETICALLY SELF-REGULATED FORMATION OF EARLY PROTOPLANETARY DISKS. Astrophysical Journal Letters, 2016, 830, L8.	3.0	107
10	Mutual influence of supernovae and molecular clouds. Astronomy and Astrophysics, 2015, 576, A95.	2.1	99
11	ANALYTICAL THEORY FOR THE INITIAL MASS FUNCTION. III. TIME DEPENDENCE AND STAR FORMATION RATE. Astrophysical Journal, 2013, 770, 150.	1.6	84
12	Feedback in Clouds II: UV photoionization and the first supernova in a massive cloud. Monthly Notices of the Royal Astronomical Society, 2016, 463, 3129-3142.	1.6	68
13	FRAGMENTATION OF MASSIVE DENSE CORES DOWN TO â‰² 1000 AU: RELATION BETWEEN FRAGMENTATION AND DENSITY STRUCTURE. Astrophysical Journal, 2014, 785, 42.	1.6	66
14	Outflows and mass accretion in collapsing dense cores with misaligned rotation axis and magnetic field. Monthly Notices of the Royal Astronomical Society: Letters, 2010, 409, L39-L43.	1.2	64
15	THE ANGULAR MOMENTUM OF MAGNETIZED MOLECULAR CLOUD CORES: A TWO-DIMENSIONAL-THREE-DIMENSIONAL COMPARISON. Astrophysical Journal, 2010, 723, 425-439.	1.6	61
16	THE 21-SPONGE H i ABSORPTION SURVEY. I. TECHNIQUES AND INITIAL RESULTS. Astrophysical Journal, 2015, 804, 89.	1.6	60
17	Photoionization feedback in a self-gravitating, magnetized, turbulent cloud. Monthly Notices of the Royal Astronomical Society, 2015, 454, 4484-4502.	1.6	59
18	SUPERNOVA PROPAGATION AND CLOUD ENRICHMENT: A NEW MODEL FOR THE ORIGIN OF ⁶⁰ Fe IN THE EARLY SOLAR SYSTEM. Astrophysical Journal, 2009, 694, L1-L5.	1.6	54

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19	AUTONOMOUS GAUSSIAN DECOMPOSITION. Astronomical Journal, 2015, 149, 138.	1.9	53
20	Interpreting the star formation efficiency of nearby molecular clouds with ionizing radiation. Monthly Notices of the Royal Astronomical Society, 2017, 471, 4844-4855.	1.6	51
21	Structure distribution and turbulence in self-consistently supernova-driven ISM of multiphase magnetized galactic discs. Astronomy and Astrophysics, 2017, 604, A70.	2.1	49
22	On the indeterministic nature of star formation on the cloud scale. Monthly Notices of the Royal Astronomical Society, 2018, 481, 2548-2569.	1.6	46
23	Formation of a protocluster: A virialized structure from gravoturbulent collapse. Astronomy and Astrophysics, 2016, 591, A30.	2.1	45
24	Dust Polarization toward Embedded Protostars in Ophiuchus with ALMA. III. Survey Overview. Astrophysical Journal, Supplement Series, 2019, 245, 2.	3.0	44
25	What determines the formation and characteristics of protoplanetary discs?. Astronomy and Astrophysics, 2020, 635, A67.	2.1	42
26	Stellar mass spectrum within massive collapsing clumps. Astronomy and Astrophysics, 2018, 611, A89.	2.1	41
27	The FRIGG project: From intermediate galactic scales to self-gravitating cores. Astronomy and Astrophysics, 2018, 611, A24.	2.1	40
28	From Diffuse Gas to Dense Molecular Cloud Cores. Space Science Reviews, 2020, 216, 1.	3.7	38
29	Stellar mass spectrum within massive collapsing clumps. Astronomy and Astrophysics, 2018, 611, A88.	2.1	36
30	Indirect evidence of significant grain growth in young protostellar envelopes from polarized dust emission. Monthly Notices of the Royal Astronomical Society, 2019, 488, 4897-4904.	1.6	31
31	STAR FORMATION: STATISTICAL MEASURE OF THE CORRELATION BETWEEN THE PRESTELLAR CORE MASS FUNCTION AND THE STELLAR INITIAL MASS FUNCTION. Astrophysical Journal Letters, 2010, 725, L79-L83.	3.0	29
32	The Origin of the Stellar Mass Distribution and Multiplicity. Space Science Reviews, 2020, 216, 1.	3.7	29
33	Can Warm Neutral Medium Survive inside Molecular Clouds?. Astrophysical Journal, 2006, 647, 404-411.	1.6	29
34	Impact of galactic shear and stellar feedback on star formation. Astronomy and Astrophysics, 2018, 620, A21.	2.1	28
35	Protoplanetary Disk Birth in Massive Star-forming Clumps: The Essential Role of the Magnetic Field. Astrophysical Journal Letters, 2021, 917, L10.	3.0	28
36	THE THERMALLY UNSTABLE WARM NEUTRAL MEDIUM: KEY FOR MODELING THE INTERSTELLAR MEDIUM. Astrophysical Journal, 2010, 725, 1779-1785.	1.6	24

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37	EXCITATION TEMPERATURE OF THE WARM NEUTRAL MEDIUM AS A NEW PROBE OF THE LyÎ± RADIATION FIELD. Astrophysical Journal Letters, 2014, 781, L41.	3.0	24
38	Analytical Core Mass Function (CMF) from Filaments: Under Which Circumstances Can Filament Fragmentation Reproduce the CMF?. Astrophysical Journal, 2017, 847, 114.	1.6	24
39	Protoplanetary disk formation from the collapse of a prestellar core. Astronomy and Astrophysics, 2021, 648, A101.	2.1	24
40	Stellar mass spectrum within massive collapsing clumps. Astronomy and Astrophysics, 2019, 622, A125.	2.1	23
41	A statistical analysis of dust polarization properties in ALMA observations of Class 0 protostellar cores. Astronomy and Astrophysics, 2020, 644, A11.	2.1	23
42	Core and stellar mass functions in massive collapsing filaments. Astronomy and Astrophysics, 2019, 625, A82.	2.1	22
43	What Is the Role of Stellar Radiative Feedback in Setting the Stellar Mass Spectrum?. Astrophysical Journal, 2020, 904, 194.	1.6	22
44	Multifractal analysis of the interstellar medium: first application to Hi-GAL observations. Monthly Notices of the Royal Astronomical Society, 2018, 481, 509-532.	1.6	17
45	How First Hydrostatic Cores, Tidal Forces, and Gravoturbulent Fluctuations Set the Characteristic Mass of Stars. Astrophysical Journal, 2019, 883, 140.	1.6	15
46	Large-scale Turbulent Driving Regulates Star Formation in High-redshift Gas-rich Galaxies. Astrophysical Journal Letters, 2020, 896, L34.	3.0	15
47	Protostellar disk formation by a nonrotating, nonaxisymmetric collapsing cloud: model and comparison with observations. Astronomy and Astrophysics, 2020, 635, A130.	2.1	14
48	Gravity and Rotation Drag the Magnetic Field in High-mass Star Formation. Astrophysical Journal, 2020, 904, 168.	1.6	14
49	An observational correlation between magnetic field, angular momentum and fragmentation in the envelopes of Class 0 protostars?. Astronomy and Astrophysics, 2020, 644, A47.	2.1	13
50	Submillimeter Studies of Prestellar Cores and Protostars: Probing the Initial Conditions for Protostellar Collapse. Astrophysics and Space Science, 2004, 292, 325-337.	0.5	11
51	A two-step gravitational cascade for the fragmentation of self-gravitating discs. Monthly Notices of the Royal Astronomical Society, 2021, 503, 4192-4207.	1.6	10
52	Amplification and generation of turbulence during self-gravitating collapse. Astronomy and Astrophysics, 2021, 655, A3.	2.1	7
53	The signature of large-scale turbulence driving on the structure of the interstellar medium. Monthly Notices of the Royal Astronomical Society, 2022, 514, 3670-3684.	1.6	7
54	Universal Protoplanetary Disk Size under Complete Nonideal Magnetohydrodynamics: The Interplay between Ion-neutral Friction, Hall Effect, and Ohmic Dissipation. Astrophysical Journal, 2021, 922, 36.	1.6	6

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55	Theories of the initial mass function. Proceedings of the International Astronomical Union, 2010, 6, 159-168.	0.0	5
56	The Early Era: How do protostellar discs form?. Proceedings of the International Astronomical Union, 2013, 8, 163-164.	0.0	0
57	Chemical Evolution of Turbulent Multiphase Molecular Clouds. Proceedings of the International Astronomical Union, 2017, 13, 242-248.	0.0	0