Richard Wunsch

List of Publications by Year
in descending order

80 papers	2,582 citations	236833 25 h-index	189801 50 g-index
81 all docs	81 docs citations	81 times ranked	1669 citing authors

#	Article	IF	Citations
1	The SILCC (SImulating the LifeCycle of molecular Clouds) project â€“ I. Chemical evolution of the supernova-driven ISM. Monthly Notices of the Royal Astronomical Society, 2015, 454, 246-276.	1.6	255
2	Dispersal of molecular clouds by ionizing radiation. Monthly Notices of the Royal Astronomical Society, 2012, 427, 625-636.	1.6	182
3	The SILCC (SImulating the LifeCycle of molecular Clouds) project â€“ II. Dynamical evolution of the supernova-driven ISM and the launching of outflows. Monthly Notices of the Royal Astronomical Society, 2016, 456, 3432-3455.	1.6	166
4	LAUNCHING COSMIC-RAY-DRIVEN OUTFLOWS FROM THE MAGNETIZED INTERSTELLAR MEDIUM. Astrophysical Journal Letters, 2016, 816, L19.	3.0	163
5	The SILCC project â€“ III. Regulation of star formation and outflows by stellar winds and supernovae. Monthly Notices of the Royal Astronomical Society, 2017, 466, 1903-1924.	1.6	149
6	Modelling the supernova-driven ISM in different environments. Monthly Notices of the Royal Astronomical Society, 2015, 449, 1057-1075.	1.6	128
7	RADIATION-DRIVEN IMPLOSION AND TRIGGERED STAR FORMATION. Astrophysical Journal, 2011, 736, 142.	1.6	100
8	SILCC-Zoom: the dynamic and chemical evolution of molecular clouds. Monthly Notices of the Royal Astronomical Society, 2017, 472, 4797-4818.	1.6	89
9	The SILCC project â€“ IV. Impact of dissociating and ionizing radiation on the interstellar medium and HÎ± emission as a tracer of the star formation rate. Monthly Notices of the Royal Astronomical Society, 2017, 466, 3293-3308.	1.6	86
10	starbench: the D-type expansion of an Hâ€‰ii region. Monthly Notices of the Royal Astronomical Society, 2015, 453, 1324-1343.	1.6	80
11	Smoothed particle hydrodynamics simulations of expanding Hâ€‰IIÂregions. Astronomy and Astrophysics, 2009, 497, 649-659.	2.1	70
12	The relative impact of photoionizing radiation and stellar winds on different environments. Monthly Notices of the Royal Astronomical Society, 2018, 478, 4799-4815.	1.6	68
13	Clumps and triggered star formation in ionized molecular clouds. Monthly Notices of the Royal Astronomical Society, 2013, 435, 917-927.	1.6	67
14	Hydrodynamics of the Matter Reinserted within Super Stellar Clusters. Astrophysical Journal, 2007, 658, 1196-1202.	1.6	66
15	SILCC VI â€“ Multiphase ISM structure, stellar clustering, and outflows with supernovae, stellar winds, ionizing radiation, and cosmic rays. Monthly Notices of the Royal Astronomical Society, 2021, 504, 1039-1061.	1.6	61
16	Tree-based solvers for adaptive mesh refinement code flash â€“ I: gravity and optical depths. Monthly Notices of the Royal Astronomical Society, 2018, 475, 3393-3418.	1.6	58
17	Twoâ€dimensional Hydrodynamic Models of Super Star Clusters with a Positive Star Formation Feedback. Astrophysical Journal, 2008, 683, 683-692.	1.6	53
18	The SILCC project â€“ V. The impact of magnetic fields on the chemistry and the formation of molecular clouds. Monthly Notices of the Royal Astronomical Society, 2018, 480, 3511-3540.	1.6	42

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19	EVOLUTION OF SUPER STAR CLUSTER WINDS WITH STRONG COOLING. Astrophysical Journal, 2011, 740, 75.	1.6	41
20	Comparing simulations of ionization triggered star formation and observations in RCW 120. Monthly Notices of the Royal Astronomical Society, 2015, 452, 2794-2803.	1.6	41
21	SILCC-Zoom: The early impact of ionizing radiation on forming molecular clouds. Monthly Notices of the Royal Astronomical Society, 2019, 482, 4062-4083.	1.6	39
22	The fragmentation of expanding shells - I. Limitations of the thin-shell approximation. Monthly Notices of the Royal Astronomical Society, 2009, 398, 1537-1548.	1.6	37
23	THE FORMATION OF SECONDARY STELLAR GENERATIONS IN MASSIVE YOUNG STAR CLUSTERS FROM RAPIDLY COOLING SHOCKED STELLAR WINDS. Astrophysical Journal, 2017, 835, 60.	1.6	35
24	THE TURBULENT FRAGMENTATION OF THE INTERSTELLAR MEDIUM: THE IMPACT OF METALLICITY ON GLOBAL STAR FORMATION. Astrophysical Journal, 2011, 733, 47.	1.6	30
25	The fragmentation of expanding shells - II. Thickness matters. Monthly Notices of the Royal Astronomical Society, 2010, 407, 1963-1971.	1.6	27
26	Synthetic [Câ€‰ii] emission maps of a simulated molecular cloud in formation. Monthly Notices of the Royal Astronomical Society, 2018, 481, 4277-4299.	1.6	25
27	Two-dimensional models of layered protoplanetary discs - I. The ring instability. Monthly Notices of the Royal Astronomical Society, 2005, 362, 361-368.	1.6	23
28	Super stellar clusters with a bimodal hydrodynamic solution: an approximate analytic approach. Astronomy and Astrophysics, 2007, 471, 579-583.	2.1	22
29	Gravitational instability of expanding shells. Astronomy and Astrophysics, 2001, 374, 746-755.	2.1	22
30	Non-equilibrium chemistry and destruction of CO by X-ray flares. Monthly Notices of the Royal Astronomical Society, 2019, 486, 1094-1122.	1.6	21
31	Supernovae within Pre-existing Wind-blown Bubbles: Dust Injection versus Ambient Dust Destruction. Astrophysical Journal, 2019, 887, 198.	1.6	21
32	YOUNG STELLAR CLUSTERS WITH A SCHUSTER MASS DISTRIBUTION. I. STATIONARY WINDS. Astrophysical Journal, 2013, 772, 128.	1.6	20
33	IMPACT OF SUPERNOVA AND COSMIC-RAY DRIVING ON THE SURFACE BRIGHTNESS OF THE GALACTIC HALO IN SOFT X-RAYS. Astrophysical Journal Letters, 2015, 813, L27.	3.0	20
34	Bonn Optimized Stellar Tracks (BoOST). Astronomy and Astrophysics, 2022, 658, A125.	2.1	20
35	Role of Supergiants in the Formation of Globular Clusters. Astrophysical Journal, 2019, 871, 20.	1.6	16
36	DUSTY SUPERNOVAE RUNNING THE THERMODYNAMICS OF THE MATTER REINSERTED WITHIN YOUNG AND MASSIVE SUPER STELLAR CLUSTERS. Astrophysical Journal, 2013, 778, 159.	1.6	15

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37	The Carina Flare. Astronomy and Astrophysics, 2012, 539, A116.	2.1	15
38	ON THE ONSET OF SECONDARY STELLAR GENERATIONS IN GIANT STAR-FORMING REGIONS AND MASSIVE STAR CLUSTERS. Astrophysical Journal, 2014, 792, 105.	1.6	14
39	ON THE EXTREME POSITIVE STAR FORMATION FEEDBACK CONDITION IN SCUBA SOURCES. Astrophysical Journal, 2010, 711, 25-31.	1.6	13
40	On the accuracy of Hâ€‰<scp>i</scp> observations in molecular clouds â€“ More cold Hâ€‰<scp>i</scp> than thought?. Monthly Notices of the Royal Astronomical Society, 2022, 512, 4765-4784.	1.6	13
41	SUPERSONIC LINE BROADENING WITHIN YOUNG AND MASSIVE SUPER STAR CLUSTERS. Astrophysical Journal, 2010, 708, 1621-1627.	1.6	12
42	Attack of the flying snakes: formation of isolated Hâ€‰i clouds by fragmentation of long streams. Monthly Notices of the Royal Astronomical Society, 2016, 461, 3001-3026.	1.6	12
43	The impact of magnetic fields on the chemical evolution of the supernova-driven ISM. Monthly Notices of the Royal Astronomical Society, 2017, 465, 4611-4633.	1.6	12
44	Tree-based solvers for adaptive mesh refinement code <scp>flash</scp> â€“ II: radiation transport module TreeRay. Monthly Notices of the Royal Astronomical Society, 2021, 505, 3730-3754.	1.6	12
45	Two-Dimensional Models of Layered Protoplanetary Discs -- II. The Effect of a Residual Viscosity in the Dead Zone. Monthly Notices of the Royal Astronomical Society, 2006, 367, 773-780.	1.6	11
46	The fragmentation of expanding shells - III. Oligarchic accretion and the mass spectrum of fragments. Monthly Notices of the Royal Astronomical Society, 2011, 411, 2230-2240.	1.6	10
47	Exploring GLIMPSE bubble N107. Astronomy and Astrophysics, 2014, 565, A6.	2.1	10
48	Pyroclastic Blowout: Dust Survival in Isolated versus Clustered Supernovae. Astrophysical Journal, 2018, 866, 40.	1.6	10
49	ON THE HYDRODYNAMIC INTERPLAY BETWEEN A YOUNG NUCLEAR STARBURST AND A CENTRAL SUPERMASSIVE BLACK HOLE. Astrophysical Journal, 2010, 716, 324-331.	1.6	9
50	Faint and Fading Tails: The Fate of Stripped H i Gas in Virgo Cluster Galaxies. Astronomical Journal, 2020, 159, 218.	1.9	9
51	Can Dust Injected by SNe Explain the NIRâ€“MIR Excess in Young Massive Stellar Clusters?. Astrophysical Journal, 2017, 843, 95.	1.6	8
52	Kinematic clues to the origins of starless HI clouds : dark galaxies or tidal debris?. Monthly Notices of the Royal Astronomical Society, 0, , stx187.	1.6	7
53	On the Star Formation Efficiencies and Evolution of Multiple Stellar Generations in Globular Clusters. Astrophysical Journal, 2019, 879, 58.	1.6	6
54	ON THE FATE OF THE MATTER REINSERTED WITHIN YOUNG NUCLEAR STELLAR CLUSTERS. Astrophysical Journal, 2013, 766, 92.	1.6	5

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55	Can supernova shells feed supermassive black holes in galactic nuclei?. Astronomy and Astrophysics, 2020, 644, A72.	2.1	5
56	X-Ray Emission from Star-cluster Winds in Starburst Galaxies. Astrophysical Journal, 2022, 927, 212.	1.6	5
57	HI shells in the Leiden-Dwingeloo HI survey. Astrophysics and Space Science, 2004, 289, 279-282.	0.5	4
58	Expanding shells in low and high density environments. Astrophysics and Space Science, 2003, 284, 873-876.	0.5	3
59	Globular Cluster formation in a collapsing supershell. Astrophysics and Space Science, 2017, 362, 1.	0.5	3
60	Impact of the ERF on the structure and evolution of SNRs. Monthly Notices of the Royal Astronomical Society, 2021, 505, 5301-5310.	1.6	3
61	<scp>flash</scp>-light on the <scp>ring</scp>: hydrodynamic simulations of expanding supernova shells near supermassive black holes. Monthly Notices of the Royal Astronomical Society, 2022, 510, 5266-5279.	1.6	3
62	Origin of Star-to-Star Abundance Inhomogeneities in Star Clusters. Proceedings of the International Astronomical Union, 2008, 4, 233-238.	0.0	2
63	Simulating the evolution of optically dark HI clouds in the Virgo cluster : will no-one rid me of this turbulent sphere ?. Monthly Notices of the Royal Astronomical Society, 0, , .	1.6	2
64	Mass Spectrum of a Starburst. Symposium - International Astronomical Union, 2004, 217, 318-323.	0.1	1
65	2D hydrodynamic simulations of super star cluster winds inÂaÂbimodal regime. Astrophysics and Space Science, 2009, 324, 219-223.	0.5	1
66	The astrophysical consequences of the bimodal hydrodynamic solution of the super star cluster winds. Astrophysics and Space Science, 2009, 324, 195-198.	0.5	1
67	Radiation Driven Implosion and Triggered Star Formation. Proceedings of the International Astronomical Union, 2010, 6, 263-266.	0.0	1
68	Bimodal regime in young massive clusters leading to subsequent stellar generations. Proceedings of the International Astronomical Union, 2015, 12, 294-301.	0.0	1
69	Fragmentation of vertically stratified gaseous layers: monolithic or coalescenceâ€“driven collapse. Monthly Notices of the Royal Astronomical Society, 2016, , stw3354.	1.6	1
70	Star Formation and Evolution of Galaxies. AIP Conference Proceedings, 2008, , .	0.3	0
71	Super star clusters and their emission lines. Proceedings of the International Astronomical Union, 2009, 5, 555-555.	0.0	0
72	Stellar feedback and triggered star formation. Proceedings of the International Astronomical Union, 2009, 5, 41-45.	0.0	0

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73	The fragmentation of expanding shells â€“ limitations of the thin-shell model. Proceedings of the International Astronomical Union, 2009, 5, 375-375.	0.0	0
74	SMBH Luminosity in the Starburst Environment. Proceedings of the International Astronomical Union, 2009, 5, 336-336.	0.0	0
75	The interaction of an H<scp>ii</scp> region with a fractal molecular cloud. Proceedings of the International Astronomical Union, 2010, 6, 323-326.	0.0	0
76	Action of Winds Inside and Outside of Star Clusters. Proceedings of the International Astronomical Union, 2010, 6, 267-274.	0.0	0
77	Gravitational fragmentation of the Carina Flare supershell. Proceedings of the International Astronomical Union, 2012, 10, 614-614.	0.0	0
78	Self-shielding clumps in starburst clusters. Proceedings of the International Astronomical Union, 2015, 12, 251-252.	0.0	0
79	Gravitational Fragmentation of the Carina Flare Supershell. Thirty Years of Astronomical Discovery With UKIRT, 2014, , 199-203.	0.3	0
80	[CII] synthetic emission maps of simulated galactic disks. EAS Publications Series, 2015, 75-76, 385-386.	0.3	0