SÃ©bastien Charnoz

List of Publications by Year
in descending order

84 papers	3,994 citations	126907 33 h-index	133252 59 g-index
84 all docs	84 docs citations	84 times ranked	2858 citing authors

#	Article	IF	Citations
1	Imaging of Titan from the Cassini spacecraft. Nature, 2005, 434, 159-168.	27.8	390
2	Cassini Imaging Science: Initial Results on Saturn's Rings and Small Satellites. Science, 2005, 307, 1226-1236.	12.6	183
3	Cassini Imaging Science: Initial Results on Phoebe and Iapetus. Science, 2005, 307, 1237-1242.	12.6	169
4	STRONG TIDAL DISSIPATION IN SATURN AND CONSTRAINTS ON ENCELADUS' THERMAL STATE FROM ASTROMETRY. Astrophysical Journal, 2012, 752, 14.	4.5	163
5	The CHEOPS mission. Experimental Astronomy, 2021, 51, 109-151.	3.7	140
6	Formation of Regular Satellites from Ancient Massive Rings in the Solar System. Science, 2012, 338, 1196-1199.	12.6	138
7	An Evolving View of Saturnâ€™s Dynamic Rings. Science, 2010, 327, 1470-1475.	12.6	127
8	Accretion of Saturnâ€™s mid-sized moons during the viscous spreading of young massive rings: Solving the paradox of silicate-poor rings versus silicate-rich moons. Icarus, 2011, 216, 535-550.	2.5	123
9	The recent formation of Saturn's moonlets from viscous spreading of the main rings. Nature, 2010, 465, 752-754.	27.8	114
10	Cassini Imaging Science: Initial Results on Saturn's Atmosphere. Science, 2005, 307, 1243-1247.	12.6	107
11	Did Saturn's rings form during the Late Heavy Bombardment?. Icarus, 2009, 199, 413-428.	2.5	107
12	Accretion of Phobos and Deimos in an extended debris disc stirred by transient moons. Nature Geoscience, 2016, 9, 581-583.	12.9	91
13	The ESA Hera Mission: Detailed Characterization of the DART Impact Outcome and of the Binary Asteroid (65803) Didymos. Planetary Science Journal, 2022, 3, 160.	3.6	82
14	Anatomy of a Flaring Proto-Planetary Disk Around a Young Intermediate-Mass Star. Science, 2006, 314, 621-623.	12.6	81
15	Scientific rationale for Uranus and Neptune in situ explorations. Planetary and Space Science, 2018, 155, 12-40.	1.7	69
16	The determination of the structure of Saturnâ€™s F ring by nearby moonlets. Nature, 2008, 453, 739-744.	27.8	67
17	Long-term and large-scale viscous evolution of dense planetary rings. Icarus, 2010, 209, 771-785.	2.5	67
18	Constraints on Mimasâ€™ interior from Cassini ISS libration measurements. Science, 2014, 346, 322-324.	12.6	65

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19	Coupling dynamical and collisional evolution of small bodies:. Icarus, 2003, 166, 141-156.	2.5	61
20	Ring formation around giant planets by tidal disruption of a single passing large Kuiper belt object. Icarus, 2017, 282, 195-213.	2.5	61
21	The hot dayside and asymmetric transit of WASP-189 b seen by CHEOPS. Astronomy and Astrophysics, 2020, 643, A94.	5.1	61
22	Contemporary formation of early Solar System planetesimals at two distinct radial locations. Nature Astronomy, 2022, 6, 72-79.	10.1	61
23	In-flight calibration of the Cassini imaging science sub-system cameras. Planetary and Space Science, 2010, 58, 1475-1488.	1.7	60
24	On the Impact Origin of Phobos and Deimos. I. Thermodynamic and Physical Aspects. Astrophysical Journal, 2017, 845, 125.	4.5	52
25	Transit detection of the long-period volatile-rich super-Earth Î½2 Lupi d with CHEOPS. Nature Astronomy, 2021, 5, 775-787.	10.1	51
26	The Equatorial Ridges of Pan and Atlas: Terminal Accretionary Ornaments?. Science, 2007, 318, 1622-1624.	12.6	50
27	FORMATION OF CENTAURSâ€™ RINGS THROUGH THEIR PARTIAL TIDAL DISRUPTION DURING PLANETARY ENCOUNTERS. Astrophysical Journal Letters, 2016, 828, L8.	8.3	50
28	Cassini Discovers a Kinematic Spiral Ring Around Saturn. Science, 2005, 310, 1300-1304.	12.6	49
29	MIGRATION OF A MOONLET IN A RING OF SOLID PARTICLES: THEORY AND APPLICATION TO SATURN'S PROPELLERS. Astronomical Journal, 2010, 140, 944-953.	4.7	44
30	Evolution of the protolunar disk: Dynamics, cooling timescale and implantation of volatiles onto the Earth. Icarus, 2015, 260, 440-463.	2.5	44
31	Dynamical Evolution of the Debris Disk after a Satellite Catastrophic Disruption around Saturn. Astronomical Journal, 2017, 154, 34.	4.7	43
32	On the Impact Origin of Phobos and Deimos. II. True Polar Wander and Disk Evolution. Astrophysical Journal, 2017, 851, 122.	4.5	41
33	A METHOD FOR COUPLING DYNAMICAL AND COLLISIONAL EVOLUTION OF DUST IN CIRCUMSTELLAR DISKS: THE EFFECT OF A DEAD ZONE. Astrophysical Journal, 2012, 753, 119.	4.5	39
34	Tin isotopes indicative of liquidâ€“vapour equilibration and separation in the Moon-forming disk. Nature Geoscience, 2019, 12, 707-711.	12.9	39
35	Ice Giant Systems: The scientific potential of orbital missions to Uranus and Neptune. Planetary and Space Science, 2020, 191, 105030.	1.7	39
36	THREE-DIMENSIONAL LAGRANGIAN TURBULENT DIFFUSION OF DUST GRAINS IN A PROTOPLANETARY DISK: METHOD AND FIRST APPLICATIONS. Astrophysical Journal, 2011, 737, 33.	4.5	38

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37	Making the Planetary Material Diversity during the Early Assembling of the Solar System. Astrophysical Journal Letters, 2018, 867, L23.	8.3	38
38	Analysis of Early Science observations with the CHaracterising ExOPlanets Satellite (<i>CHEOPS</i>) using<scp>pycheops</scp>. Monthly Notices of the Royal Astronomical Society, 2022, 514, 77-104.	4.4	38
39	On the formation of the martian moons from a circum-martian accretion disk. Icarus, 2012, 221, 806-815.	2.5	37
40	TIME EVOLUTION OF A VISCOUS PROTOPLANETARY DISK WITH A FREE GEOMETRY: TOWARD A MORE SELF-CONSISTENT PICTURE. Astrophysical Journal, 2014, 786, 35.	4.5	36
41	Neptune and Triton: Essential pieces of the Solar System puzzle. Planetary and Space Science, 2014, 104, 108-121.	1.7	34
42	The origin of the neon isotopes in chondrites and on Earth. Earth and Planetary Science Letters, 2016, 433, 249-256.	4.4	33
43	The EChO science case. Experimental Astronomy, 2015, 40, 329-391.	3.7	31
44	Exoplanet recycling in massive white-dwarf debris discs. Monthly Notices of the Royal Astronomical Society, 2018, 480, 2784-2812.	4.4	31
45	Fingerprints of the Protosolar Cloud Collapse in the Solar System. II. Nucleosynthetic Anomalies in Meteorites. Astrophysical Journal, 2019, 884, 32.	4.5	31
46	Formation of rocky and icy planetesimals inside and outside the snow line: effects of diffusion, sublimation, and back-reaction. Astronomy and Astrophysics, 2019, 629, A90.	5.1	31
47	A pair of sub-Neptunes transiting the bright K-dwarf TOI-1064 characterized with <i>CHEOPS</i>. Monthly Notices of the Royal Astronomical Society, 2022, 511, 1043-1071.	4.4	30
48	Are Saturnâ€™s rings actually young?. Nature Astronomy, 2019, 3, 967-970.	10.1	25
49	Spi-OPS: <i>Spitzer</i> and CHEOPS confirm the near-polar orbit of MASCARA-1 b and reveal a hint of dayside reflection. Astronomy and Astrophysics, 2022, 658, A75.	5.1	25
50	Protoplanetary disk formation from the collapse of a prestellar core. Astronomy and Astrophysics, 2021, 648, A101.	5.1	24
51	Physical collisions of moonlets and clumps with the Saturn's F-ring core. Icarus, 2009, 201, 191-197.	2.5	23
52	Tidal pull of the Earth strips the proto-Moon of its volatiles. Icarus, 2021, 364, 114451.	2.5	23
53	Trapping planets in an evolving protoplanetary disk: preferred time, locations, and planet mass. Astronomy and Astrophysics, 2016, 590, A60.	5.1	22
54	Deciphering the origin of the regular satellites of gaseous giants â€“ Iapetus: The Rosetta ice-moon. Icarus, 2010, 207, 448-460.	2.5	20

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55	Planetesimal formation in an evolving protoplanetary disk with a dead zone. Astronomy and Astrophysics, 2019, 627, A50.	5.1	19
56	On the Impact Origin of Phobos and Deimos. IV. Volatile Depletion. Astrophysical Journal, 2018, 860, 150.	4.5	18
57	Exploiting timing capabilities of the CHEOPS mission with warm-Jupiter planets. Monthly Notices of the Royal Astronomical Society, 2021, 506, 3810-3830.	4.4	18
58	Spinning particles in Saturn's C ring from mid-infrared observations: Pre-Cassini mission results. Icarus, 2008, 196, 625-641.	2.5	17
59	Growth of calciumâ€"aluminum-rich inclusions by coagulation and fragmentation in a turbulent protoplanetary disk: Observations and simulations. Icarus, 2015, 252, 440-453.	2.5	17
60	On the Impact Origin of Phobos and Deimos. III. Resulting Composition from Different Impactors. Astrophysical Journal, 2018, 853, 118.	4.5	16
61	The EBLM project â€" VIII. First results for M-dwarf mass, radius, and effective temperature measurements using <i>CHEOPS</i> light curves. Monthly Notices of the Royal Astronomical Society, 2021, 506, 306-322.	4.4	15
62	The opposition effect in Saturnâ€™s main rings as seen by Cassini ISS: 1. Morphology of phase functions and dependence on the local optical depth. Icarus, 2013, 226, 591-603.	2.5	14
63	The opposition effect in the outer Solar system: A comparative study of the phase function morphology. Planetary and Space Science, 2009, 57, 1282-1301.	1.7	13
64	Forming pressure traps at the snow line to isolate isotopic reservoirs in the absence of a planet. Astronomy and Astrophysics, 2021, 652, A35.	5.1	13
65	Constraints on Planetesimal Accretion Inferred from Particle-size Distribution in CO Chondrites. Astrophysical Journal Letters, 2021, 917, L25.	8.3	13
66	MIRS: an imaging spectrometer for the MMX mission. Earth, Planets and Space, 2021, 73, .	2.5	13
67	The Origin of Planetary Ring Systems. , 0, , 517-538.		12
68	High-temperature Ionization-induced Synthesis of Biologically Relevant Molecules in the Protosolar Nebula. Astrophysical Journal, 2018, 859, 142.	4.5	12
69	The Case for a New Frontiersâ€"Class Uranus Orbiter: System Science at an Underexplored and Unique World with a Mid-scale Mission. Planetary Science Journal, 2022, 3, 58.	3.6	12
70	Recipe for making Saturn's rings. Nature, 2010, 468, 903-905.	27.8	11
71	Fingerprints of the Protosolar Cloud Collapse in the Solar System. I. Distribution of Presolar Short-lived ²⁶Al. Astrophysical Journal, 2019, 884, 31.	4.5	11
72	Science Goals and Mission Objectives for the Future Exploration of Ice Giants Systems: A Horizon 2061 Perspective. Space Science Reviews, 2021, 217, 1.	8.1	11

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73	Kronos: exploring the depths of Saturn with probes and remote sensing through an international mission. Experimental Astronomy, 2009, 23, 947-976.	3.7	10
74	Formation of the Cassini Division â€“ I. Shaping the rings by Mimas inward migration. Monthly Notices of the Royal Astronomical Society, 2019, 486, 2933-2946.	4.4	8
75	Quantitative estimates of impact induced crustal erosion during accretion and its influence on the Sm/Nd ratio of the Earth. Icarus, 2021, 363, 114412.	2.5	8
76	Formation of the Cassini Division â€“ II. Possible histories of Mimas and Enceladus. Monthly Notices of the Royal Astronomical Society, 2019, 486, 2947-2963.	4.4	7
77	Complex satellite systems: a general model of formation from rings. Proceedings of the International Astronomical Union, 2014, 9, 182-189.	0.0	5
78	Rings in the Solar System: A Short Review. , 2018, , 1-20.		2
79	Rings in the Solar System: A Short Review. , 2018, , 375-394.		1
80	An introduction to the Kuiper Belt dynamics and collisional evolution. EAS Publications Series, 2010, 41, 367-377.	0.3	0
81	LIDT-DD: A New Self-Consistent Debris Disc Model Including Radiation Pressure and Coupling Dynamical and Collisional Evolution. Proceedings of the International Astronomical Union, 2013, 8, 346-347.	0.0	0
82	Protoplanetary Disk Evolution and Influence of the Host Star. Proceedings of the International Astronomical Union, 2013, 8, 374-375.	0.0	0
83	The first 200 kyr of the Solar System: making the planetary material diversity. Proceedings of the International Astronomical Union, 2018, 14, 137-140.	0.0	0
84	Fingerprints of the protosolar cloud collapse in the Solar System: Refractory inclusions distribution and isotopic anomalies in meteorites. Proceedings of the International Astronomical Union, 2019, 15, 100-102.	0.0	0