William F Bottke

List of Publications by Year
in descending order

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90 papers	8,400 citations	41344 49 h-index	49909 87 g-index
90 all docs	90 docs citations	90 times ranked	4115 citing authors

#	Article	IF	Citations
1	THE YARKOVSKY AND YORP EFFECTS: Implications for Asteroid Dynamics. Annual Review of Earth and Planetary Sciences, 2006, 34, 157-191.	11.0	573
2	Asteroids were born big. Icarus, 2009, 204, 558-573.	2.5	424
3	COMETARY ORIGIN OF THE ZODIACAL CLOUD AND CARBONACEOUS MICROMETEORITES. IMPLICATIONS FOR HOT DEBRIS DISKS. Astrophysical Journal, 2010, 713, 816-836.	4.5	422
4	Velocity Distributions among Colliding Asteroids. Icarus, 1994, 107, 255-268.	2.5	361
5	An Archaean heavy bombardment from a destabilized extension of the asteroid belt. Nature, 2012, 485, 78-81.	27.8	345
6	Contamination of the asteroid belt by primordial trans-Neptunian objects. Nature, 2009, 460, 364-366.	27.8	250
7	Iron meteorites as remnants of planetesimals formed in the terrestrial planet region. Nature, 2006, 439, 821-824.	27.8	249
8	The recent breakup of an asteroid in the main-belt region. Nature, 2002, 417, 720-721.	27.8	243
9	Stochastic Late Accretion to Earth, the Moon, and Mars. Science, 2010, 330, 1527-1530.	12.6	194
10	Orbit and bulk density of the OSIRIS-REx target Asteroid (101955) Bennu. Icarus, 2014, 235, 5-22.	2.5	193
11	Tidal Distortion and Disruption of Earth-Crossing Asteroids. Icarus, 1998, 134, 47-76.	2.5	191
12	The vector alignments of asteroid spins by thermal torques. Nature, 2003, 425, 147-151.	27.8	182
13	The Late Heavy Bombardment. Annual Review of Earth and Planetary Sciences, 2017, 45, 619-647.	11.0	173
14	Sizeâ€“frequency distributions of fragments from SPH/N-body simulations of asteroid impacts: Comparison with observed asteroid families. Icarus, 2007, 186, 498-516.	2.5	169
15	An asteroid breakup 160â€‰Myr ago as the probable source of the K/T impactor. Nature, 2007, 449, 48-53.	27.8	156
16	Debiased orbit and absolute-magnitude distributions for near-Earth objects. Icarus, 2018, 312, 181-207.	2.5	156
17	Delivery of dark material to Vesta via carbonaceous chondritic impacts. Icarus, 2012, 221, 544-559.	2.5	152
18	The primordial excitation and clearing of the asteroid beltâ€”Revisited. Icarus, 2007, 191, 434-452.	2.5	151

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19	Recent Origin of the Solar System Dust Bands. Astrophysical Journal, 2003, 591, 486-497.	4.5	150
20	Towards initial mass functions for asteroids and Kuiper Belt Objects. Icarus, 2010, 208, 518-538.	2.5	144
21	Growing the terrestrial planets from the gradual accumulation of submeter-sized objects. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14180-14185.	7.1	142
22	DYNAMICAL MODEL FOR THE ZODIACAL CLOUD AND SPORADIC METEORS. Astrophysical Journal, 2011, 743, 129.	4.5	129
23	In search of the source of asteroid (101955) Bennu: Applications of the stochastic YORP model. Icarus, 2015, 247, 191-217.	2.5	125
24	Can planetesimals left over from terrestrial planet formation produce the lunar Late Heavy Bombardment?. Icarus, 2007, 190, 203-223.	2.5	119
25	The formation of asteroid satellites in large impacts: results from numerical simulations. Icarus, 2004, 170, 243-257.	2.5	109
26	Introducing the Eulalia and new Polana asteroid families: Re-assessing primitive asteroid families in the inner Main Belt. Icarus, 2013, 225, 283-297.	2.5	105
27	Evidence for very early migration of the Solar System planets from the Patroclusâ€“Menoetius binary Jupiter Trojan. Nature Astronomy, 2018, 2, 878-882.	10.1	104
28	Asteroidal source of L chondrite meteorites. Icarus, 2009, 200, 698-701.	2.5	103
29	THE IRREGULAR SATELLITES: THE MOST COLLISIONALLY EVOLVED POPULATIONS IN THE SOLAR SYSTEM. Astronomical Journal, 2010, 139, 994-1014.	4.7	103
30	The onset of the lunar cataclysm as recorded in its ancient crater populations. Earth and Planetary Science Letters, 2012, 325-326, 27-38.	4.4	103
31	CAPTURE OF TRANS-NEPTUNIAN PLANETESIMALS IN THE MAIN ASTEROID BELT. Astronomical Journal, 2016, 152, 39.	4.7	100
32	A late Miocene dust shower from the break-up of an asteroid in the main belt. Nature, 2006, 439, 295-297.	27.8	90
33	An Anomalous Basaltic Meteorite from the Innermost Main Belt. Science, 2009, 325, 1525-1527.	12.6	86
34	Detection of the Yarkovsky effect for main-belt asteroids. Icarus, 2004, 170, 324-342.	2.5	83
35	Collisional History of Gaspra. Icarus, 1994, 107, 84-97.	2.5	82
36	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

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37	Collisional and Dynamical History of Ida. Icarus, 1996, 120, 106-118.	2.5	78
38	Escape of asteroids from the main belt. Astronomy and Astrophysics, 2017, 598, A52.	5.1	77
39	Origin of the Near-Ecliptic Circumsolar Dust Band. Astrophysical Journal, 2008, 679, L143-L146.	4.5	76
40	Formation of asteroid satellites and doublet craters by planetary tidal forces. Nature, 1996, 381, 51-53.	27.8	73
41	The Breakup of a Main-Belt Asteroid 450 Thousand Years Ago. Science, 2006, 312, 1490-1490.	12.6	71
42	Earth and Moon impact flux increased at the end of the Paleozoic. Science, 2019, 363, 253-257.	12.6	71
43	Modeling the Historical Flux of Planetary Impactors. Astronomical Journal, 2017, 153, 103.	4.7	70
44	Karin cluster formation by asteroid impact. Icarus, 2006, 183, 296-311.	2.5	63
45	Analysis of the Hungaria asteroid population. Icarus, 2009, 204, 172-182.	2.5	58
46	Considerations on the magnitude distributions of the Kuiper belt and of the Jupiter Trojans. Icarus, 2009, 202, 310-315.	2.5	55
47	Rare meteorites common in the Ordovician period. Nature Astronomy, 2017, 1, .	10.1	53
48	Olivine-dominated asteroids: Mineralogy and origin. Icarus, 2014, 228, 288-300.	2.5	52
49	The formation of asteroid satellites in large impacts: results from numerical simulations. Icarus, 2004, 167, 382-396.	2.5	51
50	ON A SCATTERED-DISK ORIGIN FOR THE 2003 EL₆₁COLLISIONAL FAMILYâ€”AN EXAMPLE OF THE IMPORTANCE OF COLLISIONS ON THE DYNAMICS OF SMALL BODIES. Astronomical Journal, 2008, 136, 1079-1088.	4.7	51
51	OBSERVED BINARY FRACTION SETS LIMITS ON THE EXTENT OF COLLISIONAL GRINDING IN THE KUIPER BELT. Astronomical Journal, 2011, 141, 159.	4.7	50
52	Ages of large lunar impact craters and implications for bombardment during the Moonâ€™s middle age. Icarus, 2013, 225, 325-341.	2.5	50
53	The oxygen isotope composition of diogenites: Evidence for early global melting on a single, compositionally diverse, HED parent body. Earth and Planetary Science Letters, 2014, 390, 165-174.	4.4	50
54	Do planetary encounters reset surfaces of near Earth asteroids?. Icarus, 2010, 209, 510-519.	2.5	49

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55	A comparison between rubble-pile and monolithic targets in impact simulations: Application to asteroid satellites and family size distributions. Icarus, 2012, 219, 57-76.	2.5	45
56	Express delivery of fossil meteorites from the inner asteroid belt to Sweden. Icarus, 2007, 188, 400-413.	2.5	44
57	Almahata Sitta (=asteroid 2008 TC₃) and the search for the ureilite parent body. Meteoritics and Planetary Science, 2010, 45, 1590-1617.	1.6	44
58	Can Tidal Disruption of Asteroids Make Crater Chains on the Earth and Moon?. Icarus, 1997, 126, 470-474.	2.5	43
59	On the origin of shocked and unshocked CM clasts in Hâ€chondrite regolith breccias. Meteoritics and Planetary Science, 2009, 44, 701-724.	1.6	42
60	Constraining the cratering chronology of Vesta. Planetary and Space Science, 2014, 103, 131-142.	1.7	41
61	A post-accretionary lull in large impacts on earlyÂMars. Nature Geoscience, 2017, 10, 344-348.	12.9	39
62	The case of the missing Ceres family. Icarus, 2014, 243, 429-439.	2.5	37
63	Doublet craters on Venus. Icarus, 2003, 165, 90-100.	2.5	34
64	Forming the Flora Family: Implications for the Near-Earth Asteroid Population and Large Terrestrial Planet Impactors. Astronomical Journal, 2017, 153, 172.	4.7	33
65	SEARCHING FOR TROJAN ASTEROIDS IN THE HD 209458 SYSTEM: SPACE-BASEDMOSTPHOTOMETRY AND DYNAMICAL MODELING. Astrophysical Journal, 2010, 716, 315-323.	4.5	32
66	Black rain: The burial of the Galilean satellites in irregular satellite debris. Icarus, 2013, 223, 775-795.	2.5	30
67	Impact histories of angrites, eucrites, and their parent bodies. Meteoritics and Planetary Science, 2011, 46, 1878-1887.	1.6	29
68	Spin-driven evolution of asteroids' top-shapes at fast and slow spins seen from (101955) Bennu and (162173) Ryugu. Icarus, 2020, 352, 113946.	2.5	28
69	Meteorite evidence for partial differentiation and protracted accretion of planetesimals. Science Advances, 2020, 6, eaba1303.	10.3	24
70	The Depletion of the Putative Vulcanoid Population via the Yarkovsky Effect. Icarus, 2000, 148, 147-152.	2.5	22
71	Origin and dynamics of Near Earth Objects. Comptes Rendus Physique, 2005, 6, 291-301.	0.9	18
72	COLLISIONALLY BORN FAMILY ABOUT 87 SYLVIA. Astronomical Journal, 2010, 139, 2148-2158.	4.7	18

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73	Candidates for Asteroid Dust Trails. Astronomical Journal, 2006, 132, 582-595.	4.7	17
74	Earth's Minimoons: Opportunities for Science and Technology. Frontiers in Astronomy and Space Sciences, 2018, 5, .	2.8	16
75	Establishing Earthâ€™s Minimoon Population through Characterization of Asteroid 2020 CD₃. Astronomical Journal, 2020, 160, 277.	4.7	16
76	Search for the H Chondrite Parent Body among the Three Largest S-type Asteroids: (3) Juno, (7) Iris, and (25) Phocaea. Astronomical Journal, 2019, 158, 213.	4.7	13
77	Distinguishing the Origin of Asteroid (16) Psyche. Space Science Reviews, 2022, 218, 17.	8.1	13
78	Production of Tunguska-sized bodies by Earth's tidal forces. Planetary and Space Science, 1998, 46, 311-322.	1.7	11
79	Link between the potentially hazardous Asteroid (86039) 1999 NC43 and the Chelyabinsk meteoroid tenuous. Icarus, 2015, 252, 129-143.	2.5	11
80	Nanospacecraft fleet for multi-asteroid touring with electric solar wind sails. , 2018, , .		10
81	Very Slow Rotators from Tidally Synchronized Binaries. Astrophysical Journal Letters, 2020, 893, L16.	8.3	9
82	Dark primitive asteroids account for a large share of K/Pg-scale impacts on the Earth. Icarus, 2021, 368, 114621.	2.5	9
83	Towards understanding the dynamical evolution of asteroid 25143 Itokawa: constraints from sample analysis. Earth, Planets and Space, 2015, 67, .	2.5	8
84	Suggestion that recent (â‰ 3ÂGa) flux of kilometer and larger impactors in the Earth-Moon system has not been constant. Icarus, 2021, 355, 114110.	2.5	7
85	Characterization of Exogenic Boulders on the Near-Earth Asteroid (101955) Bennu from OSIRIS-REx Color Images. Planetary Science Journal, 2021, 2, 114.	3.6	5
86	12. Oxygen and Asteroids. , 2008, , 273-344.		4
87	Potentially hazardous Asteroid 2007 LE: Compositional link to the black chondrite Rose City and Asteroid (6) Hebe. Icarus, 2015, 250, 430-437.	2.5	3
88	How to make a flying saucer. Nature, 2008, 454, 173-174.	27.8	2
89	Spun in the sun. Nature, 2007, 446, 382-383.	27.8	1
90	Collisional Evolution of the Main Belt as Recorded by Vesta. , 2022, , 250-261.		1