Erik Asphaug

List of Publications by Year
in descending order

45 papers	3,865 citations	236925 25 h-index	243625 44 g-index
47 all docs	47 docs citations	47 times ranked	2777 citing authors

#	Article	IF	Citations
1	Measuring the mechanical properties of small body regolith layers using a granular penetrometer. Astrodynamics, 2023, 7, 15-29.	2.4	5
2	Large planets may not form fractionally large moons. Nature Communications, 2022, 13, 568.	12.8	4
3	Combining machine-learned regression models with Bayesian inference to interpret remote sensing data. , 2022, , 193-207.		2
4	Distinguishing the Origin of Asteroid (16) Psyche. Space Science Reviews, 2022, 218, 17.	8.1	13
5	Possible particle ejection contributions to the shape and spin stability of small near-Earth asteroids. Icarus, 2022, , 115078.	2.5	0
6	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
7	Reconstructing the formation history of top-shaped asteroids from the surface boulder distribution. Nature Astronomy, 2021, 5, 134-138.	10.1	27
8	The Effect of Inefficient Accretion on Planetary Differentiation. Planetary Science Journal, 2021, 2, 93.	3.6	11
9	The New Generation Planetary Population Synthesis (NGPPS). Astronomy and Astrophysics, 2021, 656, A69.	5.1	74
10	Collision Chains among the Terrestrial Planets. II. An Asymmetry between Earth and Venus. Planetary Science Journal, 2021, 2, 199.	3.6	11
11	Collision Chains among the Terrestrial Planets. III. Formation of the Moon. Planetary Science Journal, 2021, 2, 200.	3.6	10
12	Fine-regolith production on asteroids controlled by rock porosity. Nature, 2021, 598, 49-52.	27.8	45
13	Boulder stranding in ejecta launched by an impact generated seismic pulse. Icarus, 2020, 337, 113424.	2.5	7
14	Bennuâ€™s near-Earth lifetime of 1.75 million years inferred from craters on its boulders. Nature, 2020, 587, 205-209.	27.8	62
15	Gravity-dominated Collisions: A Model for the Largest Remnant Masses with Treatment for â€œHit and Runâ€•and Density Stratification. Astrophysical Journal, 2020, 892, 40.	4.5	16
16	Realistic On-the-fly Outcomes of Planetary Collisions. II. Bringing Machine Learning to N-body Simulations. Astrophysical Journal, 2020, 891, 6.	4.5	22
17	Observations, Meteorites, and Models: A Preflight Assessment of the Composition and Formation of (16) Psyche. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006296.	3.6	61
18	Interiors of small bodies and moons. Nature Communications, 2020, 11, 1564.	12.8	3

#	Article	IF	Citations
19	Constraining the thermal properties of planetary surfaces using machine learning: Application to airless bodies. Icarus, 2019, 325, 16-30.	2.5	12
20	Seismology on small planetary bodies by orbital laser Doppler vibrometry. Advances in Space Research, 2019, 64, 527-544.	2.6	8
21	Realistic On-the-fly Outcomes of Planetary Collisions: Machine Learning Applied to Simulations of Giant Impacts. Astrophysical Journal, 2019, 875, 40.	4.5	23
22	Fate of the Runner in Hit-and-run Collisions. Astrophysical Journal, 2019, 875, 95.	4.5	19
23	Properties of rubble-pile asteroid (101955) Bennu from OSIRIS-REx imaging and thermal analysis. Nature Astronomy, 2019, 3, 341-351.	10.1	188
24	Craters, boulders and regolith of (101955) Bennu indicative of an old and dynamic surface. Nature Geoscience, 2019, 12, 242-246.	12.9	161
25	Graze-and-merge Collisions under External Perturbers. Astrophysical Journal, 2019, 881, 102.	4.5	10
26	3D radar wavefield tomography of comet interiors. Advances in Space Research, 2018, 61, 2198-2213.	2.6	16
27	European component of the AIDA mission to a binary asteroid: Characterization and interpretation of the impact of the DART mission. Advances in Space Research, 2018, 62, 2261-2272.	2.6	118
28	Effect of Reimpacting Debris on the Solidification of the Lunar Magma Ocean. Journal of Geophysical Research E: Planets, 2018, 123, 1168-1191.	3.6	16
29	Impact disruption of gravity-dominated bodies: New simulation data and scaling. Icarus, 2016, 275, 85-96.	2.5	29
30	Tidal disruption of Phobos as the cause of surface fractures. Journal of Geophysical Research E: Planets, 2016, 121, 1054-1065.	3.6	31
31	The shape and structure of cometary nuclei as a result of low-velocity accretion. Science, 2015, 348, 1355-1358.	12.6	76
32	Impact Origin of the Moon?. Annual Review of Earth and Planetary Sciences, 2014, 42, 551-578.	11.0	92
33	Mercury and other iron-rich planetary bodies as relics of inefficient accretion. Nature Geoscience, 2014, 7, 564-568.	12.9	119
34	The structure of the asteroid 4â€‰Vesta as revealed by models of planet-scale collisions. Nature, 2013, 494, 207-210.	27.8	85
35	Late origin of the Saturn system. Icarus, 2013, 223, 544-565.	2.5	86
36	Chondrule formation during planetesimal accretion. Earth and Planetary Science Letters, 2011, 308, 369-379.	4.4	125

#	Article	IF	Citations
37	Geophysical consequences of planetary-scale impacts into a Mars-like planet. Icarus, 2011, 211, 960-985.	2.5	60
38	Similar-sized collisions and the diversity of planets. Chemie Der Erde, 2010, 70, 199-219.	2.0	100
39	Mega-impact formation of the Mars hemispheric dichotomy. Nature, 2008, 453, 1216-1219.	27.8	212
40	Hit-and-run planetary collisions. Nature, 2006, 439, 155-160.	27.8	285
41	Accretion Efficiency during Planetary Collisions. Astrophysical Journal, 2004, 613, L157-L160.	4.5	165
42	Interiors of small bodies: foundations and perspectives. Planetary and Space Science, 2003, 51, 443-454.	1.7	17
43	Origin of the Moon in a giant impact near the end of the Earth's formation. Nature, 2001, 412, 708-712.	27.8	858
44	Size, Density, and Structure of Comet Shoemakerâ€“Levy 9 Inferred from the Physics of Tidal Breakup. Icarus, 1996, 121, 225-248.	2.5	257
45	Impact Simulations with Fracture. I. Method and Tests. Icarus, 1994, 107, 98-116.	2.5	240