Thomas Davison

List of Publications by Year
in descending order

36 papers	1,126 citations	279798 23 h-index	395702 33 g-index
36 all docs	36 docs citations	36 times ranked	1164 citing authors

#	Article	IF	Citations
1	Pressureâ€“temperature evolution of primordial solar system solids during impact-induced compaction. Nature Communications, 2014, 5, 5451.	12.8	103
2	Numerical modelling of heating in porous planetesimal collisions. Icarus, 2010, 208, 468-481.	2.5	99
3	Post-impact thermal evolution of porous planetesimals. Geochimica Et Cosmochimica Acta, 2012, 95, 252-269.	3.9	65
4	Numerical modeling of oblique hypervelocity impacts on strong ductile targets. Meteoritics and Planetary Science, 2011, 46, 1510-1524.	1.6	61
5	A steeply-inclined trajectory for the Chicxulub impact. Nature Communications, 2020, 11, 1480.	12.8	55
6	The role of asteroid strength, porosity and internal friction in impact momentum transfer. Icarus, 2019, 329, 282-295.	2.5	54
7	The early impact histories of meteorite parent bodies. Meteoritics and Planetary Science, 2013, 48, 1894-1918.	1.6	49
8	The size-frequency distribution of elliptical impact craters. Earth and Planetary Science Letters, 2011, 310, 1-8.	4.4	46
9	Post-impact thermal structure and cooling timescales of Occator crater on asteroid 1 Ceres. Icarus, 2019, 320, 110-118.	2.5	44
10	Precise radiometric age establishes Yarrabubba, Western Australia, as Earthâ€™s oldest recognised meteorite impact structure. Nature Communications, 2020, 11, 300.	12.8	44
11	Lobate and flow-like features on asteroid Vesta. Planetary and Space Science, 2014, 103, 24-35.	1.7	42
12	Thermal consequences of impacts in the early solar system. Meteoritics and Planetary Science, 2013, 48, 2559-2576.	1.6	39
13	MESOSCALE MODELING OF IMPACT COMPACTION OF PRIMITIVE SOLAR SYSTEM SOLIDS. Astrophysical Journal, 2016, 821, 68.	4.5	36
14	Evidence for an impactâ€induced magnetic fabric in Allende, and exogenous alternatives to the core dynamo theory for Allende magnetization. Meteoritics and Planetary Science, 2017, 52, 2132-2146.	1.6	36
15	Benchmarking impact hydrocodes in the strength regime: Implications for modeling deflection by a kinetic impactor. Icarus, 2020, 338, 113446.	2.5	32
16	Stressâ€Strain Evolution During Peakâ€Ring Formation: A Case Study of the Chicxulub Impact Structure. Journal of Geophysical Research E: Planets, 2019, 124, 396-417.	3.6	30
17	The effects of asteroid layering on ejecta mass-velocity distribution and implications for impact momentum transfer. Planetary and Space Science, 2020, 180, 104756.	1.7	29
18	The effect of the oceans on the terrestrial crater sizeâ€frequency distribution: Insight from numerical modeling. Meteoritics and Planetary Science, 2007, 42, 1915-1927.	1.6	28

#	Article	IF	Citations
19	Collisional history of asteroid Itokawa. Geology, 2017, 45, 819-822.	4.4	26
20	Ejecta distribution and momentum transfer from oblique impacts on asteroid surfaces. Icarus, 2022, 374, 114793.	2.5	26
21	The effects of impacts on the cooling rates of iron meteorites. Meteoritics and Planetary Science, 2019, 54, 1604-1618.	1.6	25
22	Hidden secrets of deformation: Impact-induced compaction within a CV chondrite. Earth and Planetary Science Letters, 2016, 452, 133-145.	4.4	24
23	A numerical assessment of simple airblast models of impact airbursts. Meteoritics and Planetary Science, 2017, 52, 1542-1560.	1.6	24
24	Influence of the projectile geometry on the momentum transfer from a kinetic impactor and implications for the DART mission. International Journal of Impact Engineering, 2022, 162, 104147.	5.0	22
25	The effect of impact obliquity on shock heating in planetesimal collisions. Meteoritics and Planetary Science, 2014, 49, 2252-2265.	1.6	17
26	Defining the mechanism for compaction of the CV chondrite parent body. Geology, 2017, 45, 559-562.	4.4	15
27	Impact-induced compaction of primitive solar system solids: The need for mesoscale modelling and experiments. Procedia Engineering, 2017, 204, 405-412.	1.2	12
28	Enhancement of Impact Heating in Pressureâ€Strengthened Rocks in Oblique Impacts. Geophysical Research Letters, 2019, 46, 13678-13686.	4.0	10
29	Jetting during oblique impacts of spherical impactors. Icarus, 2021, 360, 114365.	2.5	9
30	Morphological Diversity of Impact Craters on Asteroid (16) Psyche: Insight From Numerical Models. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006466.	3.6	8
31	Mesoscale simulations of shock compaction of a granular ceramic: effects of mesostructure and mixed-cell strength treatment. Modelling and Simulation in Materials Science and Engineering, 2018, 26, 035009.	2.0	4
32	Assessing the survivability of biomarkers within terrestrial material impacting the lunar surface. Icarus, 2021, 354, 114026.	2.5	4
33	Impactor material records the ancient lunar magnetic field in antipodal anomalies. Nature Communications, 2021, 12, 6543.	12.8	4
34	Investigating shock processes in bimodal powder compaction through modelling and experiment at the mesoscale. International Journal of Solids and Structures, 2019, 163, 211-219.	2.7	3
35	Chondrule formation via impact jetting in the icy outer solar system. Icarus, 2022, 384, 115110.	2.5	1
36	Interrogating heterogeneous compaction of analogue materials at the mesoscale through numerical modeling and experiments. AIP Conference Proceedings, 2018, , .	0.4	0