

Andrew J Westphal

List of Publications by Year in descending order

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67
papers

4,619
citations

236925

25
h-index

138484

58
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67
all docs

67
docs citations

67
times ranked

2869
citing authors

#	ARTICLE	IF	CITATIONS
1	Comet 81P/Wild 2 Under a Microscope. <i>Science</i> , 2006, 314, 1711-1716.	12.6	848
2	Mineralogy and Petrology of Comet 81P/Wild 2 Nucleus Samples. <i>Science</i> , 2006, 314, 1735-1739.	12.6	589
3	Organics Captured from Comet 81P/Wild 2 by the Stardust Spacecraft. <i>Science</i> , 2006, 314, 1720-1724.	12.6	519
4	Isotopic Compositions of Cometary Matter Returned by Stardust. <i>Science</i> , 2006, 314, 1724-1728.	12.6	343
5	Impact Features on Stardust: Implications for Comet 81P/Wild 2 Dust. <i>Science</i> , 2006, 314, 1716-1719.	12.6	286
6	Elemental Compositions of Comet 81P/Wild 2 Samples Collected by Stardust. <i>Science</i> , 2006, 314, 1731-1735.	12.6	200
7	Evidence for interstellar origin of seven dust particles collected by the Stardust spacecraft. <i>Science</i> , 2014, 345, 786-791.	12.6	152
8	Kinetics of size changes of individual <i>Bacillus thuringiensis</i> spores in response to changes in relative humidity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 3461-3466.	7.1	148
9	Quantitative organic and light element analysis of comet 81P/Wild 2 particles using C _K , N _K , and O _K XANES. <i>Meteoritics and Planetary Science</i> , 2008, 43, 353-365.	1.6	137
10	Evidence against stellar chromospheric origin of Galactic cosmic rays. <i>Nature</i> , 1998, 396, 50-52.	27.8	101
11	Aerogel keystones: Extraction of complete hypervelocity impact events from aerogel collectors. <i>Meteoritics and Planetary Science</i> , 2004, 39, 1375-1386.	1.6	100
12	Cometary Dust. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	88
13	INCORPORATION OF A LATE-FORMING CHONDRULE INTO COMET WILD 2. <i>Astrophysical Journal Letters</i> , 2012, 745, L19.	8.3	73
14	Comprehensive examination of large mineral and rock fragments in Stardust tracks: Mineralogy, analogous extraterrestrial materials, and source regions. <i>Meteoritics and Planetary Science</i> , 2012, 47, 471-524.	1.6	68
15	MIXING FRACTION OF INNER SOLAR SYSTEM MATERIAL IN COMET 81P/WILD2. <i>Astrophysical Journal</i> , 2009, 694, 18-28.	4.5	67
16	Helium and Neon Abundances and Compositions in Cometary Matter. <i>Science</i> , 2008, 319, 75-78.	12.6	56
17	Assessment and control of organic and other contaminants associated with the Stardust sample return from comet 81P/Wild 2. <i>Meteoritics and Planetary Science</i> , 2010, 45, 406-433.	1.6	55
18	Nanoscale infrared spectroscopy as a non-destructive probe of extraterrestrial samples. <i>Nature Communications</i> , 2014, 5, 5445.	12.8	52

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19	Energy loss and impact cratering in aerogels: theory and experiment. <i>Icarus</i> , 2004, 172, 613-624.	2.5	50
20	Kosmochloric Ca-rich pyroxenes and FeO-rich olivines (Kool grains) and associated phases in Stardust tracks and chondritic porous interplanetary dust particles: Possible precursors to FeO-rich type II chondrules in ordinary chondrites. <i>Meteoritics and Planetary Science</i> , 2009, 44, 1561-1588.	1.6	45
21	TOF-SIMS analysis of cometary matter in Stardust aerogel tracks. <i>Meteoritics and Planetary Science</i> , 2008, 43, 233-246.	1.6	42
22	Oxygen isotopic composition of coarse- and fine-grained material from comet 81P/Wild 2. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 166, 74-91.	3.9	31
23	Measurement of cross sections for electron capture and stripping by highly relativistic ions. <i>Physical Review Letters</i> , 1993, 71, 1160-1163.	7.8	30
24	Constraints on the formation environment of two chondrule-like igneous particles from comet 81P/Wild 2. <i>Meteoritics and Planetary Science</i> , 2015, 50, 976-1004.	1.6	30
25	Final reports of the Stardust Interstellar Preliminary Examination. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1720-1733.	1.6	29
26	Formation of Glass with Embedded Metal and Sulfides from Shock-accelerated Crystalline Dust in Superbubbles. <i>Astrophysical Journal</i> , 2004, 617, 1131-1141.	4.5	24
27	Stardust Interstellar Preliminary Examination X: Impact speeds and directions of interstellar grains on the Stardust dust collector. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1680-1697.	1.6	24
28	Measurement of cross sections for charge pickup by relativistic holmium ions on heavy targets. <i>Physical Review C</i> , 1991, 44, 1687-1690.	2.9	22
29	Small hypervelocity particles captured in aerogel collectors: Location, extraction, handling and storage. <i>Meteoritics and Planetary Science</i> , 2002, 37, 855-865.	1.6	21
30	Infrared spectroscopy of Wild 2 particle hypervelocity tracks in Stardust aerogel: Evidence for the presence of volatile organics in cometary dust. <i>Meteoritics and Planetary Science</i> , 2009, 44, 471-484.	1.6	20
31	Interstellar Dust in the Solar System. <i>Space Science Reviews</i> , 2019, 215, 1.	8.1	20
32	Characterization of preserved primitive fine-grained material from the Jupiter family comet 81P/Wild 2 – A new link between comets and CP-IDPs. <i>Earth and Planetary Science Letters</i> , 2014, 388, 367-373.	4.4	18
33	Stardust Interstellar Preliminary Examination II: Curating the interstellar dust collector, picrokeystones, and sources of impact tracks. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1522-1547.	1.6	18
34	Stardust Interstellar Preliminary Examination IV: Scanning transmission X-ray microscopy analyses of impact features in the Stardust Interstellar Dust Collector. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1562-1593.	1.6	18
35	Investigation of ion beam techniques for the analysis and exposure of particles encapsulated by silica aerogel: Applicability for Stardust. <i>Meteoritics and Planetary Science</i> , 2004, 39, 1461-1473.	1.6	17
36	Iron valence state of fine-grained material from the Jupiter family comet 81P/Wild 2 – A coordinated TEM/STEM EDS/STXM study. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 122, 1-16.	3.9	17

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37	Measurement of the Isotopic Composition of Manganese, Iron, and Nickel in the Galactic Cosmic Rays. <i>Astrophysical Journal</i> , 1996, 468, 679.	4.5	17
38	Upper limit on the cross section for nuclear charge pickup by relativistic uranium ions. <i>Physical Review C</i> , 1992, 45, 2423-2426.	2.9	16
39	Stardust Interstellar Preliminary Examination <scp>XI</scp>: Identification and elemental analysis of impact craters on Al foils from the Stardust Interstellar Dust Collector. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1698-1719.	1.6	16
40	Stardust Interstellar Preliminary Examination I: Identification of tracks in aerogel. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1509-1521.	1.6	16
41	The future of Stardust science. <i>Meteoritics and Planetary Science</i> , 2017, 52, 1859-1898.	1.6	16
42	Discovery of non-random spatial distribution of impacts in the Stardust cometary collector. <i>Meteoritics and Planetary Science</i> , 2008, 43, 415-429.	1.6	15
43	Nebular mixing constrained by the Stardust samples. <i>Meteoritics and Planetary Science</i> , 2009, 44, 1675-1681.	1.6	15
44	Measurement of the Oxidation State of Fe in the ISM Using X-Ray Absorption Spectroscopy. <i>Astrophysical Journal</i> , 2019, 872, 66.	4.5	15
45	Helium and neon in comet 81P/Wild 2 samples from the NASA Stardust mission. <i>Meteoritics and Planetary Science</i> , 2019, 54, 3-53.	1.6	14
46	Smelting of Fe-bearing glass during hypervelocity capture in aerogel. <i>Meteoritics and Planetary Science</i> , 2008, 43, 87-96.	1.6	13
47	Stardust Interstellar Preliminary Examination <scp>VII</scp>: Synchrotron X-ray fluorescence analysis of six Stardust interstellar candidates measured with the Advanced Photon Source 2-Å microprobe. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1626-1644.	1.6	13
48	Stardust Interstellar Preliminary Examination VIII: Identification of crystalline material in two interstellar candidates. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1645-1665.	1.6	12
49	Stardust Interstellar Preliminary Examination <scp>VI</scp>: Quantitative elemental analysis by synchrotron X-ray fluorescence nanoimaging of eight impact features in aerogel. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1612-1625.	1.6	12
50	Stardust Interstellar Preliminary Examination V: <scp>XRF</scp> analyses of interstellar dust candidates at <scp>ESRF ID</scp>13. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1594-1611.	1.6	12
51	Stardust Interstellar Preliminary Examination <scp>III</scp>: Infrared spectroscopic analysis of interstellar dust candidates. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1548-1561.	1.6	12
52	TOF-SIMS analysis of Allende projectiles shot into silica aerogel. <i>Meteoritics and Planetary Science</i> , 2006, 41, 211-216.	1.6	11
53	Non-destructive search for interstellar dust using synchrotron microprobes. , 2010, , .		8
54	Automated searching of Stardust interstellar foils. <i>Meteoritics and Planetary Science</i> , 2012, 47, 729-736.	1.6	7

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55	Fine-grained material associated with a large sulfide returned from Comet 81P/Wild 2. <i>Meteoritics and Planetary Science</i> , 2019, 54, 1069-1091.	1.6	6
56	Q-gases in a late-forming refractory interplanetary dust particle: A link to comet Wild 2. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 271, 116-131.	3.9	6
57	ECCO: The extremely heavy cosmic ray composition observer. , 1999, , .		4
58	GEMS at the Galactic Cosmic-Ray Source. <i>Space Science Reviews</i> , 2007, 130, 451-456.	8.1	2
59	Surface modifications of comet-exposed aerogel from the Stardust cometary collector. <i>Meteoritics and Planetary Science</i> , 2012, 47, 1336-1346.	1.6	1
60	Atomic layer deposition of 2D and 3D standards for synchrotron-based quantitative composition and structure analysis methods. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2018, 36, 02D403.	2.1	1
61	Automatic detection of impact craters on Al foils from the Stardust interstellar dust collector using convolutional neural networks. <i>Meteoritics and Planetary Science</i> , 2021, 56, 1890-1904.	1.6	1
62	A measurement of the isotopic composition of iron-group elements in the galactic cosmic rays using balloon-borne track-recording detectors in Antarctica. <i>AIP Conference Proceedings</i> , 1990, , .	0.4	0
63	Exposure and analysis of microparticles embedded in silica aerogel keystones using NF ₃ -mediated electron beam-induced etching and energy-dispersive X-ray spectroscopy. <i>Meteoritics and Planetary Science</i> , 2016, 51, 1223-1232.	1.6	0
64	XAS Between the Stars. <i>Microscopy and Microanalysis</i> , 2019, 25, 258-259.	0.4	0
65	Fast, Computer-Assisted Detection of 1/4m-Scale Dust Impact Craters on Spacecraft Materials. <i>Microscopy and Microanalysis</i> , 2020, 26, 2062-2064.	0.4	0
66	Fast, computer-assisted detection of dust and debris impact craters on Stardust interstellar foils. <i>Meteoritics and Planetary Science</i> , 2021, 56, 944.	1.6	0
67	Averaging of backscatter intensities in compounds. <i>Journal of Research of the National Institute of Standards and Technology</i> , 2002, 107, 547.	1.2	0