# David T Blewett

List of Publications by Year
in descending order



| 93 | 5,697 | 66343 42 | 74163 75 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 96 | 96 | 96 | 2037 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Lunar iron and titanium abundance algorithms based on final processing of Clementine ultraviolet-visible images. Journal of Geophysical Research, 2000, 105, 20297-20305. | 3.3 | 503 |
| 2 | Mapping the FeO and TiO2content of the lunar surface with multispectral imagery. Journal of Geophysical Research, 1998, 103, 3679-3699. | 3.3 | 344 |
| 3 | Imaging of lunar surface maturity. Journal of Geophysical Research, 2000, 105, 20377-20386. | 3.3 | 286 |
| 4 | Flood Volcanism in the Northern High Latitudes of Mercury Revealed by MESSENGER. Science, 2011, 333, 1853-1856. | 12.6 | 225 |
| 5 | Clementine images of the lunar sample-return stations: Refinement of FeO and TiO2mapping techniques. Journal of Geophysical Research, 1997, 102, 16319-16325. | 3.3 | 194 |
| 6 | The Evolution of Mercuryâ€™s Crust: A Global Perspective from MESSENGER. Science, 2009, 324, 613-618. | 12.6 | 194 |
| 7 | Volcanism on Mercury: Evidence from the First MESSENGER Flyby. Science, 2008, 321, 69-72. | 12.6 | 169 |
| 8 | Reflectance and Color Variations on Mercury: Regolith Processes and Compositional Heterogeneity. Science, 2008, 321, 66-69. | 12.6 | 167 |
| 9 | Color and Albedo Heterogeneity of Vesta from Dawn. Science, 2012, 336, 700-704. | 12.6 | 166 |
| 10 | The origin of lunar crater rays. Icarus, 2004, 170, 1-16. | 2.5 | 141 |
| 11 | Geology of the Caloris Basin, Mercury: A View from MESSENGER. Science, 2008, 321, 73-76. | 12.6 | 140 |
| 12 | Hollows on Mercury: MESSENGER Evidence for Geologically Recent Volatile-Related Activity. Science, 2011, 333, 1856-1859. | 12.6 | 136 |
| 13 | Volcanism on Mercury: Evidence from the first MESSENGER flyby for extrusive and explosive activity and the volcanic origin of plains. Earth and Planetary Science Letters, 2009, 285, 227-242. | 4.4 | 135 |
| 14 | Explosive volcanic eruptions on Mercury: Eruption conditions, magma volatile content, and implications for interior volatile abundances. Earth and Planetary Science Letters, 2009, 285, 263-271. | 4.4 | 128 |
| 15 | A Comparison of Mercurian Reflectance and Spectral Quantities with Those of the Moon. Icarus, 1997, 129, 217-231. | 2.5 | 113 |
| 16 | Mercuryâ€™s Weather-Beaten Surface: Understanding Mercury in the Context of Lunar and Asteroidal Space Weathering Studies. Space Science Reviews, 2014, 181, 121-214. | 8.1 | 108 |
| 17 | The global distribution of pyroclastic deposits on Mercury: The view from MESSENGER flybys 1â€“3. Planetary and Space Science, 2011, 59, 1895-1909. | 1.7 | 105 |
| 18 | Mercury's hollows: Constraints on formation and composition from analysis of geological setting and spectral reflectance. Journal of Geophysical Research E: Planets, 2013, 118, 1013-1032. | 3.6 | 97 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Orbital multispectral mapping of Mercury with the MESSENGER Mercury Dual Imaging System: Evidence for the origins of plains units and low-reflectance material. Icarus, 2015, 254, 287-305. | 2.5 | 95 |
| 20 | Spectroscopic Observations of Mercury's Surface Reflectance During MESSENGER's First Mercury Flyby. Science, 2008, 321, 62-65. | 12.6 | 94 |
| 21 | Multispectral images of Mercury from the first MESSENGER flyby: Analysis of global and regional color trends. Earth and Planetary Science Letters, 2009, 285, 272-282. | 4.4 | 88 |
| 22 | Caloris impact basin: Exterior geomorphology, stratigraphy, morphometry, radial sculpture, and smooth plains deposits. Earth and Planetary Science Letters, 2009, 285, 297-308. | 4.4 | 84 |
| 23 | Exposure of spectrally distinct material by impact craters on Mercury: Implications for global stratigraphy. Icarus, 2010, 209, 210-223. | 2.5 | 82 |
| 24 | The low-iron, reduced surface of Mercury as seen in spectral reflectance by MESSENGER. Icarus, 2014, 228, 364-374. | 2.5 | 82 |
| 25 | Properties of the Hermean regolith: V. New optical reflectance spectra, comparison with lunar anorthosites, and mineralogical modelling. Icarus, 2004, 168, 257-276. | 2.5 | 79 |
| 26 | Global inventory and characterization of pyroclastic deposits on Mercury: New insights into pyroclastic activity from MESSENGER orbital data. Journal of Geophysical Research E: Planets, 2014, 119, 635-658. | 3.6 | 79 |
| 27 | Lunar pure anorthosite as a spectral analog for Mercury. Meteoritics and Planetary Science, 2002, 37, 1245-1254. | 1.6 | 72 |
| 28 | Evidence for intrusive activity on Mercury from the first MESSENGER flyby. Earth and Planetary Science Letters, 2009, 285, 251-262. | 4.4 | 67 |
| 29 | Images of surface volatiles in Mercuryâ€™s polar craters acquired by the MESSENGER spacecraft. Geology, 2014, 42, 1051-1054. | 4.4 | 67 |
| 30 | Lunar swirls: Examining crustal magnetic anomalies and space weathering trends. Journal of Geophysical Research, 2011, 116, . | 3.3 | 62 |
| 31 | Remote sensing and geologic studies of the Schiller-Schickard region of the Moon. Journal of Geophysical Research, 1995, 100, 16959. | 3.3 | 58 |
| 32 | Pit-floor craters on Mercury: Evidence of near-surface igneous activity. Earth and Planetary Science Letters, 2009, 285, 243-250. | 4.4 | 58 |
| 33 | Constraints on the abundance of carbon in near-surface materials on Mercury: Results from the MESSENGER Gamma-Ray Spectrometer. Planetary and Space Science, 2015, 108, 98-107. | 1.7 | 57 |
| 34 | The distribution and extent of lunar swirls. Icarus, 2016, 273, 53-67. | 2.5 | 54 |
| 35 | Calibration, Projection, and Final Image Products of MESSENGERâ€™s Mercury Dual Imaging System. Space Science Reviews, 2018, 214, 1. | 8.1 | 53 |
| 36 | Identification and measurement of neutron-absorbing elements on Mercuryâ€™s surface. Icarus, 2010, 209, 195-209. | 2.5 | 52 |

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| 37 | Thermal measurements of dark and bright surface features on Vesta as derived from Dawn/VIR. Icarus, 2014, 240, 36-57. | 2.5 | 52 |
| 38 | A comparison of rayed craters on the Moon and Mercury. Journal of Geophysical Research E: Planets, 2013, 118, 2247-2261. | 3.6 | 47 |
| 39 | The apparent lack of lunar-like swirls on Mercury: Implications for the formation of lunar swirls and for the agent of space weathering. Icarus, 2010, 209, 239-246. | 2.5 | 46 |
| 40 | The surficial nature of lunar swirls as revealed by the Mini-RF instrument. Icarus, 2011, 215, 186-196. | 2.5 | 44 |
| 41 | Areas of permanent shadow in Mercury's south polar region ascertained by MESSENGER orbital imaging. Geophysical Research Letters, 2012, 39, . | 4.0 | 43 |
| 42 | Remote sensing studies of the Orientale Region of the Moon: A preâ€Galileo view. Geophysical Research Letters, 1991, 18, 2141-2144. | 4.0 | 42 |
| 43 | Mineralogical indicators of Mercury's hollows composition in MESSENGER color observations. Geophysical Research Letters, 2016, 43, 1450-1456. | 4.0 | 42 |
| 44 | Characterization of lunar swirls at Mare Ingenii: A model for space weathering at magnetic anomalies. Journal of Geophysical Research, 2011, 116, . | 3.3 | 36 |
| 45 | Craters hosting radarâ€bright deposits in Mercury's north polar region: Areas of persistent shadow determined from MESSENGER images. Journal of Geophysical Research E: Planets, 2013, 118, 26-36. | 3.6 | 36 |
| 46 | Remote sensing studies of the terrain northwest of Humorum Basin. Geophysical Research Letters, 1993, 20, 419-422. | 4.0 | 35 |
| 47 | Whole-disk spectrophotometric properties of Mercury: Synthesis of MESSENGER and ground-based observations. Icarus, 2010, 209, 101-124. | 2.5 | 35 |
| 48 | Analysis of Chang'E-2 brightness temperature data and production of high spatial resolution microwave maps of the Moon. Icarus, 2019, 319, 627-644. | 2.5 | 33 |
| 49 | Imaging Mercury's polar deposits during MESSENGER's lowâ€altitude campaign. Geophysical Research Letters, 2016, 43, 9461-9468. | 4.0 | 31 |
| 50 | Remote sensing and geological studies of the Hadleyâ€Apennine region of the Moon. Meteoritics and Planetary Science, 2001, 36, 701-730. | 1.6 | 30 |
| 51 | Analysis of MESSENGER highâ€resolution images of Mercury's hollows and implications for hollow formation. Journal of Geophysical Research E: Planets, 2016, 121, 1798-1813. | 3.6 | 30 |
| 52 | Geologic map of the northern hemisphere of Vesta based on Dawn Framing Camera (FC) images. Icarus, 2014, 244, 41-59. | 2.5 | 29 |
| 53 | The geological nature of dark material on Vesta and implications for the subsurface structure. Icarus, 2014, 240, 3-19. | 2.5 | 28 |
| 54 | Phase-ratio images of the surface of Mercury: Evidence for differences in sub-resolution texture. Icarus, 2014, 242, 142-148. | 2.5 | 27 |

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| 55 | Submicroscopic metallic iron in lunar soils estimated from the in situ spectra of the Chang'Eâ€3 mission. Geophysical Research Letters, 2017, 44, 3485-3492. | 4.0 | 27 |
| 56 | A comparison of the ultraviolet to near-infrared spectral properties of Mercury and the Moon as observed by MESSENGER. Icarus, 2010, 209, 179-194. | 2.5 | 26 |
| 57 | Spectral analysis of the bright materials on the asteroid Vesta. Icarus, 2014, 240, 73-85. | 2.5 | 26 |
| 58 | Igneous activity in the southern highlands of the Moon. Journal of Geophysical Research, 2002, 107, 5-1-5-7. | 3.3 | 24 |
| 59 | A Mariner 10 color study of Mercurian craters. Journal of Geophysical Research, 2007, 112, . | 3.3 | 23 |
| 60 | Dark spots on Mercury: A distinctive lowâ€reflectance material and its relation to hollows. Journal of Geophysical Research E: Planets, 2013, 118, 1752-1765. | 3.6 | 23 |
| 61 | Photometric correction of Mercury's global color mosaic. Planetary and Space Science, 2011, 59, 1873-1887. | 1.7 | 22 |
| 62 | Determination of iron metal optical constants: Implications for ultraviolet, visible, and nearâ€infrared remote sensing of airless bodies. Geophysical Research Letters, 2012, 39, . | 4.0 | 22 |
| 63 | Lunar optical maturity investigations: A possible recent impact crater and a magnetic anomaly. Journal of Geophysical Research, 2005, 110, . | 3.3 | 19 |
| 64 | A magnetic anomaly associated with an albedo feature near Airy crater in the lunar nearside highlands. Geophysical Research Letters, 2007, 34, . | 4.0 | 16 |
| 65 | Remote sensing studies of the Dionysius region of the Moon. Journal of Geophysical Research, 2006, 111, . | 3.3 | 14 |
| 66 | Vestaâ€™s north pole quadrangle Av-1 (Albana): Geologic map and the nature of the south polar basin antipodes. Icarus, 2014, 244, 13-22. | 2.5 | 14 |
| 67 | Near-UV and near-IR reflectance studies of lunar swirls: Implications for nanosize iron content and the nature of anomalous space weathering. Icarus, 2021, 364, 114472. | 2.5 | 13 |
| 68 | Mercuryâ€™s Hollows. , 2018, , 324-345. | | 12 |
| 69 | Global variations in regolith properties on asteroid Vesta from Dawn's lowâ€altitude mapping orbit. Meteoritics and Planetary Science, 2016, 51, 2366-2386. | 1.6 | 11 |
| 70 | Mapping iron abundances on the surface of Mercury: Predicted spatial resolution of the MESSENGER Gamma-Ray Spectrometer. Planetary and Space Science, 2011, 59, 1654-1658. | 1.7 | 10 |
| 71 | Spectral analysis of the quadrangles Av-13 and Av-14 on Vesta. Icarus, 2015, 259, 181-193. | 2.5 | 9 |
| 72 | Lithologic variation within bright material on Vesta revealed by linear spectral unmixing. Icarus, 2016, 272, 16-31. | 2.5 | 9 |

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| 73 | Optical space weathering on Vesta: Radiative-transfer models and Dawn observations. Icarus, 2016, 265, 161-174. | 2.5 | 9 |
| 74 | Spectral Reflectance Constraints on the Composition and Evolution of Mercuryâ€™s Surface. , 2018, , 191-216. | | 9 |
| 75 | Spectra of the Wells lunar glass simulants: New old data for reflectance modeling. Journal of Geophysical Research E: Planets, 2014, 119, 925-940. | 3.6 | 8 |
| 76 | A spectral survey of the Crisium Basin Region of the Moon. Geophysical Research Letters, 1995, 22, 3059-3062. | 4.0 | 7 |
| 77 | Optical constants of iron and nickel metal and an assessment of their relative influences on silicate mixture spectra from the FUV to the NIR. Icarus, 2019, 317, 229-241. | 2.5 | 7 |
| 78 | A New Method for Simulation of Lunar Microwave Brightness Temperatures and Evaluation of Chang'Eâ€2 MRM Data Using Thermal Constraints From Diviner. Journal of Geophysical Research E: Planets, 2019, 124, 1433-1450. | 3.6 | 7 |
| 79 | Correction to â€œLunar swirls: Examining crustal magnetic anomalies and space weathering trendsâ€• Journal of Geophysical Research, 2011, 116, . | 3.3 | 4 |
| 80 | MESSENGER at Mercury: Early orbital operations. Acta Astronautica, 2014, 93, 509-515. | 3.2 | 4 |
| 81 | Volcanic Processes in the Gassendi Region of the Moon. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006034. | 3.6 | 4 |
| 82 | Optical constants and diffuse reflectance of opaque minerals: A modeling study using magnetite. Icarus, 2021, 361, 114331. | 2.5 | 4 |
| 83 | Surveying the South Pole-Aitken basin magnetic anomaly for remnant impactor metallic iron. Icarus, 2014, 243, 27-30. | 2.5 | 3 |
| 84 | The ungrouped achondrite Northwest Africa (NWA) 7325: Spectral reflectance properties and implications for parent body identification. Icarus, 2018, 311, 384-393. | 2.5 | 3 |
| 85 | Temperatures of the Lacus Mortis Region of the Moon. Earth and Space Science, 2022, 9, . | 2.6 | 2 |
| 86 | Science Goals and Mission Concept for a Landed Investigation of Mercury. Planetary Science Journal, 2022, 3, 68. | 3.6 | 2 |
| 87 | Hollows (Mercury). , 2015, , 935-937. | | 1 |
| 88 | Introduction to the special issue of Icarus on â€œMercury after Two MESSENGER Flybysâ€• Icarus, 2010, 209, 1-2. | 2.5 | 0 |
| 89 | Antipodal Terrain. , 2014, , 1-3. | | 0 |
| 90 | One the Case For Landed Mercury Science. , 2021, 53, . | | 0 |

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| 91 | The case for landed Mercury science. Experimental Astronomy, 0, , 1. | 3.7 | 0 |
| 92 | Hollows (Mercury). , 2014, , 1-4. | | 0 |
| 93 | Antipodal Terrain. , 2015, , 81-83. | | 0 |