# Carsten GÃ¼ttler

List of Publications by Year
in descending order

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| 106 | 6,367 | 66343 | 66911 |
|---|---|---|---|
| papers | citations | 42 h-index | 78 g-index |

| 107 | 107 | 107 | 2222 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | AMBITION â€“ comet nucleus cryogenic sample return. Experimental Astronomy, 2022, 54, 1077-1128. | 3.7 | 4 |
| 2 | Observational constraints to the dynamics of dust particles in the coma of comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2021, 504, 4687-4705. | 4.4 | 5 |
| 3 | Long-term measurements of the erosion and accretion of dust deposits on comet 67P/Churyumovâ€“Gerasimenko with the OSIRIS instrument. Monthly Notices of the Royal Astronomical Society, 2021, 504, 2895-2910. | 4.4 | 7 |
| 4 | The CoPhyLab comet-simulation chamber. Review of Scientific Instruments, 2021, 92, 115102. | 1.3 | 6 |
| 5 | Spectrophotometric characterization of the Philae landing site and surroundings with the Rosetta/OSIRIS cameras. Monthly Notices of the Royal Astronomical Society, 2020, 498, 1221-1238. | 4.4 | 3 |
| 6 | Time evolution of dust deposits in the Hapi region of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2020, 636, A91. | 5.1 | 13 |
| 7 | Experimental Phase Function and Degree of Linear Polarization Curves of Millimeter-sized Cosmic Dust Analogs. Astrophysical Journal, Supplement Series, 2020, 247, 19. | 7.7 | 19 |
| 8 | 67P/Churyumovâ€“Gerasimenkoâ€™s dust activity from pre- to post-perihelion as detected by Rosetta/GIADA. Monthly Notices of the Royal Astronomical Society, 2020, 496, 125-137. | 4.4 | 15 |
| 9 | How comets work: nucleus erosion versus dehydration. Monthly Notices of the Royal Astronomical Society, 2020, 493, 4039-4044. | 4.4 | 46 |
| 10 | Global-scale brittle plastic rheology at the cometesimals merging of comet 67P/Churyumovâ€“Gerasimenko. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 10181-10187. | 7.1 | 5 |
| 11 | Compressive strength of comet 67P/Churyumov-Gerasimenko derived from Philae surface contacts. Astronomy and Astrophysics, 2019, 630, A2. | 5.1 | 16 |
| 12 | Multidisciplinary analysis of the Hapi region located on Comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2019, 485, 2139-2154. | 4.4 | 9 |
| 13 | The search campaign to identify and image the Philae Lander on the surface of comet 67P/Churyumov-Gerasimenko. Acta Astronautica, 2019, 157, 199-214. | 3.2 | 9 |
| 14 | Bilobate comet morphology and internal structure controlled by shear deformation. Nature Geoscience, 2019, 12, 157-162. | 12.9 | 22 |
| 15 | Synthesis of the morphological description of cometary dust at comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2019, 630, A24. | 5.1 | 100 |
| 16 | Surface evolution of the Anhur region on comet 67P/Churyumov-Gerasimenko from high-resolution OSIRIS images. Astronomy and Astrophysics, 2019, 630, A13. | 5.1 | 15 |
| 17 | Diurnal variation of dust and gas production in comet 67P/Churyumov-Gerasimenko at the inbound equinox as seen by OSIRIS and VIRTIS-M on board Rosetta. Astronomy and Astrophysics, 2019, 630, A23. | 5.1 | 9 |
| 18 | Seasonal variations in source regions of the dust jets on comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2019, 630, A17. | 5.1 | 9 |

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| 19 | Quantitative analysis of isolated boulder fields on comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2019, 630, A15. | 5.1 | 4 |
| 20 | The Rockyâ€Like Behavior of Cometary Landslides on 67P/Churyumovâ€Gerasimenko. Geophysical Research Letters, 2019, 46, 14336-14346. | 4.0 | 9 |
| 21 | The phase function and density of the dust observed at comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2018, 476, 2835-2839. | 4.4 | 20 |
| 22 | On deviations from free-radial outflow in the inner coma of comet 67P/Churyumovâ€“Gerasimenko. Icarus, 2018, 311, 1-22. | 2.5 | 21 |
| 23 | Meter-scale thermal contraction crack polygons on the nucleus of comet 67P/Churyumov-Gerasimenko. Icarus, 2018, 301, 173-188. | 2.5 | 33 |
| 24 | Models of Rosetta/OSIRIS 67P Dust Coma Phase Function. Astronomical Journal, 2018, 156, 237. | 4.7 | 20 |
| 25 | Coma morphology of comet 67P controlled by insolation over irregular nucleus. Nature Astronomy, 2018, 2, 562-567. | 10.1 | 19 |
| 26 | Regional unit definition for the nucleus of comet 67P/Churyumov-Gerasimenko on the SHAP7 model. Planetary and Space Science, 2018, 164, 19-36. | 1.7 | 32 |
| 27 | The big lobe of 67P/Churyumovâ€“Gerasimenko comet: morphological and spectrophotometric evidences of layering as from OSIRIS data. Monthly Notices of the Royal Astronomical Society, 2018, 479, 1555-1568. | 4.4 | 7 |
| 28 | The MASCOT Magnetometer. Space Science Reviews, 2017, 208, 433-449. | 8.1 | 41 |
| 29 | Distance determination method of dust particles using Rosetta OSIRIS NAC and WAC data. Planetary and Space Science, 2017, 143, 256-264. | 1.7 | 8 |
| 30 | Regional surface morphology of comet 67P/Churyumov-Gerasimenko from Rosetta/OSIRIS images: The southern hemisphere (Corrigendum). Astronomy and Astrophysics, 2017, 598, C2. | 5.1 | 8 |
| 31 | Surface changes on comet 67P/Churyumov-Gerasimenko suggest a more active past. Science, 2017, 355, 1392-1395. | 12.6 | 63 |
| 32 | The pristine interior of comet 67P revealed by the combined Aswan outburst and cliff collapse. Nature Astronomy, 2017, 1, . | 10.1 | 100 |
| 33 | The opposition effect of 67P/Churyumovâ€“Gerasimenko on post-perihelion Rosetta images. Monthly Notices of the Royal Astronomical Society, 2017, 469, S550-S567. | 4.4 | 22 |
| 34 | Long-term monitoring of comet 67P/Churyumovâ€“Gerasimenkoâ€™s jets with OSIRIS onboard Rosetta. Monthly Notices of the Royal Astronomical Society, 2017, 469, S380-S385. | 4.4 | 13 |
| 35 | Reconstruction of the flight and attitude of Rosetta's lander Philae. Acta Astronautica, 2017, 140, 509-516. | 3.2 | 4 |
| 36 | Seasonal erosion and restoration of the dust cover on comet 67P/Churyumov-Gerasimenko as observed by OSIRIS onboard Rosetta. Astronomy and Astrophysics, 2017, 604, A114. | 5.1 | 43 |

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| 37 | Seasonal mass transfer on the nucleus of comet 67P/Chuyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2017, 469, S357-S371. | 4.4 | 111 |
| 38 | Dust mass distribution around comet 67P/Churyumovâ€“Gerasimenko determined via parallax measurements using Rosetta's OSIRIS cameras. Monthly Notices of the Royal Astronomical Society, 2017, 469, S276-S284. | 4.4 | 43 |
| 39 | The highly active Anhurâ€“Bes regions in the 67P/Churyumovâ€“Gerasimenko comet: results from OSIRIS/ROSETTA observations. Monthly Notices of the Royal Astronomical Society, 2017, 469, S93-S107. | 4.4 | 30 |
| 40 | Thermal modelling of water activity on comet 67P/Churyumov-Gerasimenko with global dust mantle and plural dust-to-ice ratio. Monthly Notices of the Royal Astronomical Society, 2017, 469, S295-S311. | 4.4 | 39 |
| 41 | Characterization of dust aggregates in the vicinity of the Rosetta spacecraft. Monthly Notices of the Royal Astronomical Society, 2017, 469, S312-S320. | 4.4 | 12 |
| 42 | Geomorphological and spectrophotometric analysis of Seth's circular niches on comet 67P/Churyumovâ€“Gerasimenko using OSIRIS images. Monthly Notices of the Royal Astronomical Society, 2017, 469, S238-S251. | 4.4 | 8 |
| 43 | Evidence of sub-surface energy storage in comet 67P from the outburst of 2016 July 03. Monthly Notices of the Royal Astronomical Society, 2017, 469, s606-s625. | 4.4 | 45 |
| 44 | The pebbles/boulders size distributions on Sais: Rosettaâ€™s final landing site on comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2017, 469, S636-S645. | 4.4 | 40 |
| 45 | A three-dimensional modelling of the layered structure of comet 67P/Churyumov-Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2017, 469, S741-S754. | 4.4 | 22 |
| 46 | The global meter-level shape model of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2017, 607, L1. | 5.1 | 107 |
| 47 | Long-term survival of surface water ice on comet 67P. Monthly Notices of the Royal Astronomical Society, 2017, 469, S582-S597. | 4.4 | 24 |
| 48 | Acceleration of individual, decimetre-sized aggregates in the lower coma of comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S78-S88. | 4.4 | 52 |
| 49 | Geologic mapping of the Comet 67P/Churyumovâ€“Gerasimenko's Northern hemisphere. Monthly Notices of the Royal Astronomical Society, 2016, 462, S352-S367. | 4.4 | 27 |
| 50 | The southern hemisphere of 67P/Churyumov-Gerasimenko: Analysis of the preperihelion size-frequency distribution of boulders â‰¥7 m. Astronomy and Astrophysics, 2016, 592, L2. | 5.1 | 27 |
| 51 | Sunset jets observed on comet 67P/Churyumov-Gerasimenko sustained by subsurface thermal lag. Astronomy and Astrophysics, 2016, 586, A7. | 5.1 | 55 |
| 52 | Characterization of the Abydos region through OSIRIS high-resolution images in support of CIVA measurements. Astronomy and Astrophysics, 2016, 585, L1. | 5.1 | 26 |
| 53 | Gas outflow and dust transport of comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2016, 462, S533-S546. | 4.4 | 34 |
| 54 | Summer fireworks on comet 67P. Monthly Notices of the Royal Astronomical Society, 2016, 462, S184-S194. | 4.4 | 112 |

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| 55 | Are fractured cliffs the source of cometary dust jets? Insights from OSIRIS/Rosetta at 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2016, 587, A14. | 5.1 | 102 |
| 56 | Regional surface morphology of comet 67P/Churyumov-Gerasimenko from Rosetta/OSIRIS images: The southern hemisphere. Astronomy and Astrophysics, 2016, 593, A110. | 5.1 | 86 |
| 57 | Detection of exposed H<sub>2</sub>O ice on the nucleus of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2016, 595, A102. | 5.1 | 67 |
| 58 | Aswan site on comet 67P/Churyumov-Gerasimenko: Morphology, boulder evolution, and spectrophotometry. Astronomy and Astrophysics, 2016, 592, A69. | 5.1 | 53 |
| 59 | The global shape, density and rotation of Comet 67P/Churyumov-Gerasimenko from preperihelion Rosetta/OSIRIS observations. Icarus, 2016, 277, 257-278. | 2.5 | 252 |
| 60 | EVOLUTION OF THE DUST SIZE DISTRIBUTION OF COMET 67P/CHURYUMOVâ€“GERASIMENKO FROM 2.2 au TO PERIHELION. Astrophysical Journal, 2016, 821, 19. | 4.5 | 158 |
| 61 | Attitude reconstruction of ROSETTA×³s Lander PHILAE using two-point magnetic field observations by ROMAP and RPC-MAG. Acta Astronautica, 2016, 125, 174-182. | 3.2 | 17 |
| 62 | Spectrophotometry of the Khonsu region on the comet 67P/Churyumovâ€“Gerasimenko using OSIRIS instrument images. Monthly Notices of the Royal Astronomical Society, 2016, 462, S274-S286. | 4.4 | 20 |
| 63 | Physical properties and dynamical relation of the circular depressions on comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2016, 591, A132. | 5.1 | 22 |
| 64 | Decimetre-scaled spectrophotometric properties of the nucleus of comet 67P/Churyumovâ€“Gerasimenko from OSIRIS observations. Monthly Notices of the Royal Astronomical Society, 2016, 462, S287-S303. | 4.4 | 26 |
| 65 | Rosettaâ€™s comet 67P/Churyumov-Gerasimenko sheds its dusty mantle to reveal its icy nature. Science, 2016, 354, 1566-1570. | 12.6 | 97 |
| 66 | CHANGES IN THE PHYSICAL ENVIRONMENT OF THE INNER COMA OF 67P/CHURYUMOVâ€“GERASIMENKO WITH DECREASING HELIOCENTRIC DISTANCE. Astronomical Journal, 2016, 152, 130. | 4.7 | 36 |
| 67 | The Agilkia boulders/pebbles sizeâ€“frequency distributions: OSIRIS and ROLIS joint observations of 67P surface. Monthly Notices of the Royal Astronomical Society, 2016, 462, S242-S252. | 4.4 | 15 |
| 68 | Geomorphological mapping of comet 67P/Churyumovâ€“Gerasimenkoâ€™s Southern hemisphere. Monthly Notices of the Royal Astronomical Society, 2016, 462, S573-S592. | 4.4 | 23 |
| 69 | Variegation of comet 67P/Churyumov-Gerasimenko in regions showing activity. Astronomy and Astrophysics, 2016, 586, A80. | 5.1 | 43 |
| 70 | Scientific assessment of the quality of OSIRIS images. Astronomy and Astrophysics, 2015, 583, A46. | 5.1 | 67 |
| 71 | Characterization of OSIRIS NAC filters for the interpretation of multispectral data of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A45. | 5.1 | 8 |
| 72 | Shape model, reference system definition, and cartographic mapping standards for comet 67P/Churyumov-Gerasimenko â€“ Stereo-photogrammetric analysis of Rosetta/OSIRIS image data. Astronomy and Astrophysics, 2015, 583, A33. | 5.1 | 188 |

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| 73 | OSIRIS observations of meter-sized exposures of H<sub>2</sub>O ice at the surface of 67P/Churyumov-Gerasimenko and interpretation using laboratory experiments. Astronomy and Astrophysics, 2015, 583, A25. | 5.1 | 97 |
| 74 | Redistribution of particles across the nucleus of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A17. | 5.1 | 149 |
| 75 | Insolation, erosion, and morphology of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A34. | 5.1 | 173 |
| 76 | Morphology and dynamics of the jets of comet 67P/Churyumov-Gerasimenko: Early-phase development. Astronomy and Astrophysics, 2015, 583, A11. | 5.1 | 33 |
| 77 | Spectrophotometric properties of the nucleus of comet 67P/Churyumov-Gerasimenko from the OSIRIS instrument onboard the ROSETTA spacecraft. Astronomy and Astrophysics, 2015, 583, A30. | 5.1 | 188 |
| 78 | Regional surface morphology of comet 67P/Churyumov-Gerasimenko from Rosetta/OSIRIS images. Astronomy and Astrophysics, 2015, 583, A26. | 5.1 | 153 |
| 79 | Geomorphology of the Imhotep region on comet 67P/Churyumov-Gerasimenko from OSIRIS observations. Astronomy and Astrophysics, 2015, 583, A35. | 5.1 | 59 |
| 80 | Size-frequency distribution of boulders â‰¥7 m on comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A37. | 5.1 | 108 |
| 81 | Geomorphology and spectrophotometry of Philaeâ€™s landing site on comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A41. | 5.1 | 41 |
| 82 | Temporal morphological changes in the Imhotep region of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A36. | 5.1 | 60 |
| 83 | Large-scale dust jets in the coma of 67P/Churyumov-Gerasimenko as seen by the OSIRIS instrument onboard Rosetta. Astronomy and Astrophysics, 2015, 583, A9. | 5.1 | 39 |
| 84 | The stratification of regolith on celestial objects. Icarus, 2015, 257, 33-46. | 2.5 | 27 |
| 85 | Fractures on comet 67P/Churyumovâ€Gerasimenko observed by Rosetta/OSIRIS. Geophysical Research Letters, 2015, 42, 5170-5178. | 4.0 | 71 |
| 86 | Orbital elements of the material surrounding comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A16. | 5.1 | 23 |
| 87 | Dust measurements in the coma of comet 67P/Churyumov-Gerasimenko inbound to the Sun. Science, 2015, 347, aaa3905. | 12.6 | 310 |
| 88 | On the nucleus structure and activity of comet 67P/Churyumov-Gerasimenko. Science, 2015, 347, aaa1044. | 12.6 | 366 |
| 89 | The morphological diversity of comet 67P/Churyumov-Gerasimenko. Science, 2015, 347, aaa0440. | 12.6 | 259 |
| 90 | The landing(s) of Philae and inferences about comet surface mechanical properties. Science, 2015, 349, aaa9816. | 12.6 | 212 |

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| 91 | Large heterogeneities in comet 67P as revealed by active pits from sinkhole collapse. Nature, 2015, 523, 63-66. | 27.8 | 158 |
| 92 | The nonmagnetic nucleus of comet 67P/Churyumov-Gerasimenko. Science, 2015, 349, aaa5102. | 12.6 | 52 |
| 93 | Two independent and primitive envelopes of the bilobate nucleus of comet 67P. Nature, 2015, 526, 402-405. | 27.8 | 141 |
| 94 | The rotation state of 67P/Churyumov-Gerasimenko from approach observations with the OSIRIS cameras on Rosetta. Astronomy and Astrophysics, 2014, 569, L2. | 5.1 | 81 |
| 95 | Experiments on the consolidation of chondrites and the formation of dense rims around chondrules. Icarus, 2013, 225, 558-569. | 2.5 | 31 |
| 96 | Free collisions in a microgravity many-particle experiment. III. The collision behavior of sub-millimeter-sized dust aggregates. Icarus, 2013, 225, 75-85. | 2.5 | 60 |
| 97 | Collision of a chondrule with matrix: Relation between static strength of matrix and impact pressure. Icarus, 2013, 226, 111-118. | 2.5 | 7 |
| 98 | Energy dissipation in head-on collisions of spheres. Journal Physics D: Applied Physics, 2013, 46, 435303. | 2.8 | 74 |
| 99 | Free collisions in a microgravity many-particle experiment. I. Dust aggregate sticking at low velocities. Icarus, 2012, 218, 688-700. | 2.5 | 110 |
| 100 | Free collisions in a microgravity many-particle experiment â€“ II: The collision dynamics of dust-coated chondrules. Icarus, 2012, 218, 701-706. | 2.5 | 33 |
| 101 | LOW-VELOCITY COLLISIONS OF CENTIMETER-SIZED DUST AGGREGATES. Astrophysical Journal, 2011, 736, 34. | 4.5 | 95 |
| 102 | Thermal metamorphoses of cosmic dust aggregates: Experiments by furnace, electrical gas discharge, and radiative heating. Earth, Planets and Space, 2010, 62, 53-56. | 2.5 | 6 |
| 103 | THE PHYSICS OF PROTOPLANETESIMAL DUST AGGLOMERATES. V. MULTIPLE IMPACTS OF DUSTY AGGLOMERATES AT VELOCITIES ABOVE THE FRAGMENTATION THRESHOLD. Astrophysical Journal, 2010, 725, 1242-1251. | 4.5 | 47 |
| 104 | THE PHYSICS OF PROTOPLANETESIMAL DUST AGGLOMERATES. III. COMPACTION IN MULTIPLE COLLISIONS. Astrophysical Journal, 2009, 696, 2036-2043. | 4.5 | 115 |
| 105 | THE PHYSICS OF PROTOPLANETESIMAL DUST AGGLOMERATES. IV. TOWARD A DYNAMICAL COLLISION MODEL. Astrophysical Journal, 2009, 701, 130-141. | 4.5 | 96 |
| 106 | Exposing metal and silicate charges to electrical discharges: Did chondrules form by nebular lightning?. Icarus, 2008, 195, 504-510. | 2.5 | 20 |