Alessandra Rotundi

List of Publications by Year
in descending order

125	4,892	147801 31	95266 68
papers	citations	h-index	g-index

130	130	130	3152
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Comet 81P/Wild 2 Under a Microscope. Science, 2006, 314, 1711-1716.	12.6	848
2	Organics Captured from Comet 81P/Wild 2 by the Stardust Spacecraft. Science, 2006, 314, 1720-1724.	12.6	519
3	Dust measurements in the coma of comet 67P/Churyumov-Gerasimenko inbound to the Sun. Science, 2015, 347, aaa3905.	12.6	310
4	Temperature Dependence of the Absorption Coefficient of Cosmic Analog Grains in the Wavelength Range 20 Microns to 2 Millimeters. Astrophysical Journal, 1998, 496, 1058-1066.	4.5	174
5	Infrared Spectroscopy of Comet 81P/Wild 2 Samples Returned by Stardust. Science, 2006, 314, 1728-1731.	12.6	163
6	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
7	Evidence for the formation of comet 67P/Churyumov-Gerasimenko through gravitational collapse of a bound clump of pebbles. Monthly Notices of the Royal Astronomical Society, 2017, 469, S755-S773.	4.4	146
8	DENSITY AND CHARGE OF PRISTINE FLUFFY PARTICLES FROM COMET 67P/CHURYUMOVâ€“GERASIMENKO. Astrophysical Journal Letters, 2015, 802, L12.	8.3	130
9	Comet 67P/Churyumovâ€“Gerasimenko preserved the pebbles that formed planetesimals. Monthly Notices of the Royal Astronomical Society, 2016, 462, S132-S137.	4.4	111
10	Synthesis of the morphological description of cometary dust at comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2019, 630, A24.	5.1	100
11	Combined microâ€Raman, microâ€infrared, and field emission scanning electron microscope analyses of comet 81P/Wild 2 particles collected by Stardust. Meteoritics and Planetary Science, 2008, 43, 367-397.	1.6	89
12	GIADA: shining a light on the monitoring of the comet dust production from the nucleus of 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A13.	5.1	87
13	The dust-to-ices ratio in comets and Kuiper belt objects. Monthly Notices of the Royal Astronomical Society, 2017, 469, S45-S49.	4.4	81
14	A New Approach to the Puzzle of the Ultraviolet Interstellar Extinction Bump. Astrophysical Journal, 1998, 507, L177-L180.	4.5	80
15	Comet 67P/Churyumov-Gerasimenko: the GIADA dust environment model of the Rosetta mission target. Astronomy and Astrophysics, 2010, 522, A63.	5.1	78
16	The Grain Impact Analyser and Dust Accumulator (GIADA) Experiment for the Rosetta Mission: Design, Performances and First Results. Space Science Reviews, 2007, 128, 803-821.	8.1	76
17	Activation of an Ultraviolet Resonance in Hydrogenated Amorphous Carbon Grains by Exposure to Ultraviolet Radiation. Astrophysical Journal, 1996, 464, L191-L194.	4.5	64
18	The 2016 Feb 19 outburst of comet 67P/CG: an ESA Rosetta multi-instrument study. Monthly Notices of the Royal Astronomical Society, 2016, 462, S220-S234.	4.4	60

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19	Dust particle flux and size distribution in the coma of 67P/Churyumov-Gerasimenko measured in situ by the COSIMA instrument on board Rosetta. Astronomy and Astrophysics, 2016, 596, A87.	5.1	59
20	The refractory-to-ice mass ratio in comets. Monthly Notices of the Royal Astronomical Society, 2019, 482, 3326-3340.	4.4	59
21	On the Electronic Structure of Small Carbon Grains of Astrophysical Interest. Astrophysical Journal, Supplement Series, 1995, 100, 149.	7.7	55
22	Mid-IR, Far-IR, Raman micro-spectroscopy, and FESEMâ€"EDX study of IDP L2021C5: Clues to its origin. Icarus, 2011, 212, 896-910.	2.5	53
23	SIMBIO-SYS: Scientific Cameras and Spectrometer for the BepiColombo Mission. Space Science Reviews, 2020, 216, 1.	8.1	47
24	67P/C-G inner coma dust properties from 2.2 au inbound to 2.0 au outbound to the Sun. Monthly Notices of the Royal Astronomical Society, 2016, 462, S210-S219.	4.4	46
25	How comets work: nucleus erosion versus dehydration. Monthly Notices of the Royal Astronomical Society, 2020, 493, 4039-4044.	4.4	46
26	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
27	Distributed glycine in comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2019, 630, A32.	5.1	42
28	The Philae lander reveals low-strength primitive ice inside cometary boulders. Nature, 2020, 586, 697-701.	27.8	40
29	Ultraviolet Spectral Changes in Amorphous Carbon Grains Induced by Ion Irradiation. Astrophysical Journal, 1997, 481, 545-549.	4.5	37
30	Production and processing of silicates in laboratory and in space. Planetary and Space Science, 2002, 50, 829-837.	1.7	35
31	On a Sugimoto-Whitehead effect in the Mediterranean Sea: sinking and mixing of a bottom current in the Bari Canyon, southern adriatic sea. Deep-sea Research Part A, Oceanographic Research Papers, 1990, 37, 657-665.	1.5	34
32	Asymptotics for spherical particle motion in a spherically expanding flow. Icarus, 2018, 312, 121-127.	2.5	32
33	ISOCAM Imaging of Comets 65P/Gunn and 46P/Wirtanen. Icarus, 1998, 134, 35-46.	2.5	31
34	GIADA: ITS STATUS AFTER THE ROSETTA CRUISE PHASE AND ON-GROUND ACTIVITY IN SUPPORT OF THE ENCOUNTER WITH COMET 67P/CHURYUMOV-GERASIMENKO. Journal of Astronomical Instrumentation, 2014, 03, .	1.5	31
35	Performance of micro-balances for dust flux measurement. Advances in Space Research, 2002, 29, 1155-1158.	2.6	30
36	Extremophiles Survival to Simulated Space Conditions: An Astrobiology Model Study. Origins of Life and Evolution of Biospheres, 2014, 44, 231-237.	1.9	27

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37	The Castalia mission to Main Belt Comet 133P/Elst-Pizarro. Advances in Space Research, 2018, 62, 1947-1976.	2.6	27
38	Production, processing and characterization techniques for cosmic dust analogues. Meteoritics and Planetary Science, 2002, 37, 1623-1635.	1.6	26
39	GIADA: The Grain Impact Analyser and Dust Accumulator for the Rosetta space mission. Advances in Space Research, 2007, 39, 446-450.	2.6	26
40	Rotating dust particles in the coma of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A14.	5.1	26
41	The dust environment of comet 67P/Churyumovâ€“Gerasimenko: results from Monte Carlo dust tail modelling applied to a large ground-based observation data set. Monthly Notices of the Royal Astronomical Society, 2017, 469, S186-S194.	4.4	26
42	Laboratory experiments on cosmic dust analogues: the structure of small carbon grains. Planetary and Space Science, 1995, 43, 1217-1221.	1.7	25
43	Dynamics of aspherical dust grains in a cometary atmosphere: I. axially symmetric grains in a spherically symmetric atmosphere. Icarus, 2017, 282, 333-350.	2.5	25
44	Cryogenic Synthesis of Molecules of Astrobiological Interest: Catalytic Role of Cosmic Dust Analogues. Origins of Life and Evolution of Biospheres, 2007, 36, 451-457.	1.9	22
45	Two refractory Wild 2 terminal particles from a carrotâ€shaped track characterized combining <scp>MIR</scp>/<scp>FIR</scp>/Raman microspectroscopy and <scp>FE</scp>â€<scp>SEM</scp>/<scp>EDS</scp> analyses. Meteoritics and Planetary Science, 2014, 49, 550-575.	1.6	20
46	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
47	Models of Rosetta/OSIRIS 67P Dust Coma Phase Function. Astronomical Journal, 2018, 156, 237.	4.7	20
48	Summer outbursts in the coma of comet 67P/Churyumovâ€“Gerasimenko as observed by Rosettaâ€“VIRTIS. Monthly Notices of the Royal Astronomical Society, 2018, 481, 1235-1250.	4.4	20
49	GIADA microbalance measurements on board Rosetta: submicrometer- to micrometer-sized dust particle flux in the coma of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2019, 630, A25.	5.1	20
50	Macro and micro structures of pebble-made cometary nuclei reconciled by seasonal evolution. Nature Astronomy, 2022, 6, 546-553.	10.1	20
51	C60and Giant Fullerenes in Soot Condensed in Vapors with Variable C/H2Ratio. Fullerenes Nanotubes and Carbon Nanostructures, 2004, 12, 659-680.	2.1	19
52	Introducing a New Stratospheric Dust-Collecting System with Potential Use for Upper Atmospheric Microbiology Investigations. Astrobiology, 2014, 14, 694-705.	3.0	19
53	GIADA â€“ Grain Impact Analyzer and Dust Accumulator â€“ Onboard Rosetta spacecraft: Extended calibrations. Acta Astronautica, 2016, 126, 205-214.	3.2	19
54	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

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55	How Comets Work. Astrophysical Journal Letters, 2019, 879, L8.	8.3	18
56	Isotopic and textural analysis of giant unmelted micrometeorites â€“ identification of new material from intensely altered 16O-poor water-rich asteroids. Earth and Planetary Science Letters, 2020, 546, 116444.	4.4	18
57	MEDUSA: The ExoMars experiment for in-situ monitoring of dust and water vapour. Planetary and Space Science, 2009, 57, 1043-1049.	1.7	17
58	The grain detection system for the GIADA instrument: design and expected performances. Advances in Space Research, 2002, 29, 1165-1169.	2.6	16
59	Infrared micro-spectroscopy of the martian meteorite Zagami: Extraction of individual mineral phase spectra. Icarus, 2006, 182, 68-79.	2.5	16
60	Single minerals, carbon- and ice-coated single minerals for calibration of GIADA onboard ROSETTA to comet 67P/Churyumovâ€“Gerasimenko. Planetary and Space Science, 2014, 101, 53-64.	1.7	16
61	Organic Matter in Cosmic Dust. Elements, 2016, 12, 185-189.	0.5	16
62	In Situ Collection of Refractory Dust in the Upper Stratosphere: The DUSTER Facility. Space Science Reviews, 2012, 169, 159-180.	8.1	15
63	Meteoric CaO and carbon smoke particles collected in the upper stratosphere from an unanticipated source. Tellus, Series B: Chemical and Physical Meteorology, 2013, 65, 20174.	1.6	15
64	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
65	Sea State Monitoring by Ship Motion Measurements Onboard a Research Ship in the Antarctic Waters. Journal of Marine Science and Engineering, 2021, 9, 64.	2.6	15
66	Refractory comet dust analogues by laser bombardment and arc discharge production: a reference frame for â€œdusty experimentsâ€•on-board ROSETTA. Planetary and Space Science, 2000, 48, 371-384.	1.7	14
67	Triple Fâ€”a comet nucleus sample return mission. Experimental Astronomy, 2009, 23, 809-847.	3.7	14
68	Xâ€ray computed tomography: Morphological and porosity characterization of giant Antarctic micrometeorites. Meteoritics and Planetary Science, 2020, 55, 1581-1599.	1.6	14
69	Dynamics of non-spherical dust in the coma of 67P/Churyumovâ€“ Gerasimenko constrained by GIADA and ROSINA data. Monthly Notices of the Royal Astronomical Society, 2017, 469, S774-S786.	4.4	13
70	Ground-Based Photometry of Asteroid 951 Gaspra. Icarus, 1993, 101, 213-222.	2.5	12
71	Cometary coma dust size distribution from in situ IR spectra. Monthly Notices of the Royal Astronomical Society, 2017, 469, S598-S605.	4.4	12
72	CO-driven activity constrains the origin of comets. Astronomy and Astrophysics, 2020, 636, L3.	5.1	12

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73	Extinction signatures of amorphous carbon grains from the vacuum UV to the far-IR. Planetary and Space Science, 1995, 43, 1263-1269.	1.7	11
74	Photometry of the Oort Cloud comet C/2009 P1 (Garradd): Pre-perihelion observations at 5.7 and 2.5AU. Planetary and Space Science, 2016, 132, 23-31.	1.7	9
75	Laboratory simulation of carbon compounds expected in different astrophysical environments. Advances in Space Research, 1997, 20, 1617-1627.	2.6	8
76	Carbon in Meteoroids: Wild 2 Dust Analyses, IDPs and Cometary Dust Analogues. Earth, Moon and Planets, 2008, 102, 473-483.	0.6	8
77	Laboratory analyses of meteoric debris in the upper stratosphere from settling bolide dust clouds. Icarus, 2016, 266, 217-234.	2.5	8
78	The SSDC contribution to the improvement of knowledge by means of 3D data projections of minor bodies. Advances in Space Research, 2018, 62, 2306-2316.	2.6	8
79	67P/Churyumovâ€"Gerasimenko active areas before perihelion identified by GIADA and VIRTIS data fusion. Monthly Notices of the Royal Astronomical Society, 2019, 483, 2165-2176.	4.4	8
80	Combining IR and Xâ€ray microtomography data sets: Application to Itokawa particles and to Paris meteorite. Meteoritics and Planetary Science, 2020, 55, 1645-1664.	1.6	8
81	A roadmap for a European extraterrestrial sample curation facility â€" the EURO CARES project. , 2021, , 249-268.		8
82	On the similarity of dust flows in the inner coma of comets. Icarus, 2021, 364, 114476.	2.5	7
83	The Giada Experiment for the Rosetta Mission. Astrophysics and Space Science Library, 2004, , 271-280.	2.7	7
84	Analysis of cosmic materials: Results on carbon and silicate laboratory analogues. Advances in Space Research, 1999, 23, 1243-1252.	2.6	6
85	The MAGO experiment for dust environment monitoring on the Martian surface. Advances in Space Research, 2004, 33, 2252-2257.	2.6	6
86	The backscattering ratio of comet 67P/Churyumov-Gerasimenko dust coma as seen by OSIRIS onboard Rosetta. Monthly Notices of the Royal Astronomical Society, 0, , .	4.4	6
87	VRI imaging of comet 46P/Wirtanen. Planetary and Space Science, 1999, 47, 765-772.	1.7	5
88	Raman Microspectroscopy Performed on Extraterrestrial Particles. Spectroscopy Letters, 2011, 44, 549-553.	1.0	5
89	Simulated measurements of 67P/Churyumovâ€"Gerasimenko dust coma at 3 AU by the Rosetta GIADA instrument using the GIPSI tool. Astronomy and Computing, 2014, 5, 57-69.	1.7	5
90	GIADA performance during Rosetta mission scientific operations at comet 67P. Advances in Space Research, 2018, 62, 1987-1997.	2.6	5

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91	A GPU Algorithm for Outliers Detection in TESS Light Curves. Lecture Notes in Computer Science, 2021, , 420-432.	1.3	5
92	Optical tweezers in a dusty universe. European Physical Journal Plus, 2021, 136, 1.	2.6	5
93	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
94	Simulation of the dust flux on the ROSETTA probe during the orbiting phase around comet 46P/Wirtanen. Astronomy and Astrophysics, 1997, 126, 183-195.	2.1	5
95	A KALMAN FILTER SINGLE POINT POSITIONING FOR MARITIME APPLICATIONS USING A SMARTPHONE. Geographia Technica, 2021, , 15-29.	0.4	5
96	Photoelectric Photometry of Ten Small and Fast Spinning Asteroids. Icarus, 1994, 109, 210-218.	2.5	4
97	Rotational Properties of Small Asteroids: Photoelectric Observations of 16 Asteroids. Icarus, 1994, 109, 267-273.	2.5	4
98	Characterization of Cosmic Materials in the Laboratory. Space Science Reviews, 1999, 90, 341-354.	8.1	4
99	AMBITION â€“ comet nucleus cryogenic sample return. Experimental Astronomy, 2022, 54, 1077-1128.	3.7	4
100	Dynamics of irregularly shaped cometary particles subjected to outflowing gas and solar radiative forces and torques. Monthly Notices of the Royal Astronomical Society, 2022, 510, 5142-5153.	4.4	4
101	DFAâ€"The dust flux analyzer for the Rosetta Orbiter. Advances in Space Research, 1998, 21, 1557-1566.	2.6	3
102	Carbonaceous grain processing in space and in the laboratory. Advances in Space Research, 1999, 24, 439-442.	2.6	3
103	Sample Return Missions from Minor Bodies: Achievements, Future Plan and Observational Support. Earth, Moon and Planets, 2009, 105, 273-282.	0.6	3
104	SARIM PLUSâ€"sample return of comet 67P/CG and of interstellar matter. Experimental Astronomy, 2012, 33, 723-751.	3.7	3
105	The Gaia-ASAS-SN Classical Cepheid Sample. I. Sample Selection. Astrophysical Journal, 2021, 914, 127.	4.5	3
106	Cosmic Dust and Laboratory Simulation: Wishes, Results and Open Problems. , 1999, , 203-228.		3
107	Natural C60 and Large Fullerenes: A Matter of Detection and Astrophysical Implications. , 2006, , 71-94.		2
108	COMPARISON OF DIFFERENT PAN-SHARPENING METHODS APPLIED TO IKONOS IMAGERY. Geographia Technica, 2021, , 198-210.	0.4	2

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109	A New Orbiting Deployable System for Small Satellite Observations for Ecology and Earth Observation. Remote Sensing, 2022, 14, 2066.	4.0	2
110	A fiery birth of aluminosilica analogs of refractory dust in the upper stratosphere. Advances in Space Research, 2017, 60, 2091-2098.	2.6	1
111	Collection of samples. , 2021, , 271-296.		1
112	Natural Carbynes, Including Chaoite, on Earth, in Meteorites, Comets, Circumstellar and Interstellar Dust. , 2005, , 339-370.		1
113	Matrix Isolation of Amorphous Carbon Grains in Boron-Oxide Glass. , 1999, , 273-279.		1
114	Characterization of Cosmic Materials in the Laboratory. , 1999, , 341-354.		1
115	Comet P/grigg-Skjellerup: Ground-based observations after the encounter with the Giotto spacecraft. Il Nuovo Cimento Della SocietÃ Italiana Di Fisica C, 1993, 16, 769-773.	0.2	0
116	Dehydrogenation study of cosmic-dust analogue grains. Il Nuovo Cimento Della SocietÃ Italiana Di Fisica C, 1993, 16, 613-617.	0.2	0
117	Interstellar extinction: a parametrical study by using laboratory data. Il Nuovo Cimento Della SocietÃ Italiana Di Fisica C, 1993, 16, 635-641.	0.2	0
118	Interstellar-dust properties as deduced from FIR and millimetric observations. Il Nuovo Cimento Della SocietÃ Italiana Di Fisica C, 1993, 16, 643-649.	0.2	0
119	Infrared reflectance spectra of Martian analogues. Physics and Chemistry of the Earth, Part C: Solar, Terrestrial and Planetary Science, 1999, 24, 609-613.	0.2	0
120	EURO-CARES - A European Sample Curation Facility for Sample Return Missions. , 2019, , .		0
121	Zero-pressure balloons trajectory prediction: Duster flight simulations. Advances in Space Research, 2020, 66, 1876-1886.	2.6	0
122	Dust From the Solar System and Beyond. , 2021, , 185-193.		0
123	The Grain Impact Analyser and Dust Accumulator (GIADA) Experiment for the Rosetta Mission: Design, Performances and Current Results. , 2009, , 1-18.		0
124	Cosmic dust investigation by optical tweezers for space exploration. , 2021, , .		0
125	Carbon in Meteoroids: Wild 2 Dust Analyses, IDPs and Cometary Dust Analogues. , 2008, , 473-483.		0