Alessandra Rotundi

List of Publications by Year
in descending order

125 papers	4,892 citations	147801 31 h-index	95266 68 g-index
130 all docs	130 docs citations	130 times ranked	3152 citing authors

#	Article	IF	Citations
1	AMBITION â€“ comet nucleus cryogenic sample return. Experimental Astronomy, 2022, 54, 1077-1128.	3.7	4
2	Macro and micro structures of pebble-made cometary nuclei reconciled by seasonal evolution. Nature Astronomy, 2022, 6, 546-553.	10.1	20
3	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
4	A New Orbiting Deployable System for Small Satellite Observations for Ecology and Earth Observation. Remote Sensing, 2022, 14, 2066.	4.0	2
5	A GPU Algorithm for Outliers Detection in TESS Light Curves. Lecture Notes in Computer Science, 2021, , 420-432.	1.3	5
6	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
7	A roadmap for a European extraterrestrial sample curation facility â€“ the EURO CARES project. , 2021, , 249-268.		8
8	Dust From the Solar System and Beyond. , 2021, , 185-193.		0
9	Collection of samples. , 2021, , 271-296.		1
10	Optical tweezers in a dusty universe. European Physical Journal Plus, 2021, 136, 1.	2.6	5
11	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
12	The Gaia-ASAS-SN Classical Cepheid Sample. I. Sample Selection. Astrophysical Journal, 2021, 914, 127.	4.5	3
13	On the similarity of dust flows in the inner coma of comets. Icarus, 2021, 364, 114476.	2.5	7
14	A KALMAN FILTER SINGLE POINT POSITIONING FOR MARITIME APPLICATIONS USING A SMARTPHONE. Geographia Technica, 2021, , 15-29.	0.4	5
15	COMPARISON OF DIFFERENT PAN-SHARPENING METHODS APPLIED TO IKONOS IMAGERY. Geographia Technica, 2021, , 198-210.	0.4	2
16	Cosmic dust investigation by optical tweezers for space exploration. , 2021, , .		0
17	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
18	Zero-pressure balloons trajectory prediction: Duster flight simulations. Advances in Space Research, 2020, 66, 1876-1886.	2.6	0

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19	The Philae lander reveals low-strength primitive ice inside cometary boulders. Nature, 2020, 586, 697-701.	27.8	40
20	CO-driven activity constrains the origin of comets. Astronomy and Astrophysics, 2020, 636, L3.	5.1	12
21	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
22	Xâ€ray computed tomography: Morphological and porosity characterization of giant Antarctic micrometeorites. Meteoritics and Planetary Science, 2020, 55, 1581-1599.	1.6	14
23	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
24	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
25	SIMBIO-SYS: Scientific Cameras and Spectrometer for the BepiColombo Mission. Space Science Reviews, 2020, 216, 1.	8.1	47
26	How comets work: nucleus erosion versus dehydration. Monthly Notices of the Royal Astronomical Society, 2020, 493, 4039-4044.	4.4	46
27	How Comets Work. Astrophysical Journal Letters, 2019, 879, L8.	8.3	18
28	EURO-CARES - A European Sample Curation Facility for Sample Return Missions. , 2019, , .		0
29	Synthesis of the morphological description of cometary dust at comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2019, 630, A24.	5.1	100
30	Distributed glycine in comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2019, 630, A32.	5.1	42
31	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
32	The refractory-to-ice mass ratio in comets. Monthly Notices of the Royal Astronomical Society, 2019, 482, 3326-3340.	4.4	59
33	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
34	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
35	Asymptotics for spherical particle motion in a spherically expanding flow. Icarus, 2018, 312, 121-127.	2.5	32
36	The Castalia mission to Main Belt Comet 133P/Elst-Pizarro. Advances in Space Research, 2018, 62, 1947-1976.	2.6	27

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37	GIADA performance during Rosetta mission scientific operations at comet 67P. Advances in Space Research, 2018, 62, 1987-1997.	2.6	5
38	Models of Rosetta/OSIRIS 67P Dust Coma Phase Function. Astronomical Journal, 2018, 156, 237.	4.7	20
39	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
40	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
41	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
42	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
43	Cometary coma dust size distribution from in situ IR spectra. Monthly Notices of the Royal Astronomical Society, 2017, 469, S598-S605.	4.4	12
44	A fiery birth of aluminosilica analogs of refractory dust in the upper stratosphere. Advances in Space Research, 2017, 60, 2091-2098.	2.6	1
45	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
46	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
47	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
48	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
49	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
50	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
51	Organic Matter in Cosmic Dust. Elements, 2016, 12, 185-189.	0.5	16
52	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
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	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

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55	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
56	Comet 67P/Churyumovâ€“Gerasimenko preserved the pebbles that formed planetesimals. Monthly Notices of the Royal Astronomical Society, 2016, 462, S132-S137.	4.4	111
57	Laboratory analyses of meteoric debris in the upper stratosphere from settling bolide dust clouds. Icarus, 2016, 266, 217-234.	2.5	8
58	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
59	Rotating dust particles in the coma of comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 2015, 583, A14.	5.1	26
60	Dust measurements in the coma of comet 67P/Churyumov-Gerasimenko inbound to the Sun. Science, 2015, 347, aaa3905.	12.6	310
61	DENSITY AND CHARGE OF PRISTINE FLUFFY PARTICLES FROM COMET 67P/CHURYUMOVâ€“GERASIMENKO. Astrophysical Journal Letters, 2015, 802, L12.	8.3	130
62	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
63	Extremophiles Survival to Simulated Space Conditions: An Astrobiology Model Study. Origins of Life and Evolution of Biospheres, 2014, 44, 231-237.	1.9	27
64	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
65	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
66	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
67	Introducing a New Stratospheric Dust-Collecting System with Potential Use for Upper Atmospheric Microbiology Investigations. Astrobiology, 2014, 14, 694-705.	3.0	19
68	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
69	In Situ Collection of Refractory Dust in the Upper Stratosphere: The DUSTER Facility. Space Science Reviews, 2012, 169, 159-180.	8.1	15
70	SARIM PLUSâ€"sample return of comet 67P/CG and of interstellar matter. Experimental Astronomy, 2012, 33, 723-751.	3.7	3
71	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
72	Raman Microspectroscopy Performed on Extraterrestrial Particles. Spectroscopy Letters, 2011, 44, 549-553.	1.0	5

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73	Comet 67P/Churyumov-Gerasimenko: the GIADA dust environment model of the Rosetta mission target. Astronomy and Astrophysics, 2010, 522, A63.	5.1	78
74	Sample Return Missions from Minor Bodies: Achievements, Future Plan and Observational Support. Earth, Moon and Planets, 2009, 105, 273-282.	0.6	3
75	Triple Fâ€"a comet nucleus sample return mission. Experimental Astronomy, 2009, 23, 809-847.	3.7	14
76	MEDUSA: The ExoMars experiment for in-situ monitoring of dust and water vapour. Planetary and Space Science, 2009, 57, 1043-1049.	1.7	17
77	The Grain Impact Analyser and Dust Accumulator (GIADA) Experiment for the Rosetta Mission: Design, Performances and Current Results. , 2009, , 1-18.		0
78	Carbon in Meteoroids: Wild 2 Dust Analyses, IDPs and Cometary Dust Analogues. Earth, Moon and Planets, 2008, 102, 473-483.	0.6	8
79	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
80	Carbon in Meteoroids: Wild 2 Dust Analyses, IDPs and Cometary Dust Analogues. , 2008, , 473-483.		0
81	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
82	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
83	GIADA: The Grain Impact Analyser and Dust Accumulator for the Rosetta space mission. Advances in Space Research, 2007, 39, 446-450.	2.6	26
84	Comet 81P/Wild 2 Under a Microscope. Science, 2006, 314, 1711-1716.	12.6	848
85	Infrared Spectroscopy of Comet 81P/Wild 2 Samples Returned by Stardust. Science, 2006, 314, 1728-1731.	12.6	163
86	Organics Captured from Comet 81P/Wild 2 by the Stardust Spacecraft. Science, 2006, 314, 1720-1724.	12.6	519
87	Infrared micro-spectroscopy of the martian meteorite Zagami: Extraction of individual mineral phase spectra. Icarus, 2006, 182, 68-79.	2.5	16
88	Natural C60 and Large Fullerenes: A Matter of Detection and Astrophysical Implications. , 2006, , 71-94.		2
89	Natural Carbynes, Including Chaoite, on Earth, in Meteorites, Comets, Circumstellar and Interstellar Dust. , 2005, , 339-370.		1
90	C60and Giant Fullerenes in Soot Condensed in Vapors with Variable C/H2Ratio. Fullerenes Nanotubes and Carbon Nanostructures, 2004, 12, 659-680.	2.1	19

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91	The MAGO experiment for dust environment monitoring on the Martian surface. Advances in Space Research, 2004, 33, 2252-2257.	2.6	6
92	The Giada Experiment for the Rosetta Mission. Astrophysics and Space Science Library, 2004, , 271-280.	2.7	7
93	Production, processing and characterization techniques for cosmic dust analogues. Meteoritics and Planetary Science, 2002, 37, 1623-1635.	1.6	26
94	Performance of micro-balances for dust flux measurement. Advances in Space Research, 2002, 29, 1155-1158.	2.6	30
95	The grain detection system for the GIADA instrument: design and expected performances. Advances in Space Research, 2002, 29, 1165-1169.	2.6	16
96	Production and processing of silicates in laboratory and in space. Planetary and Space Science, 2002, 50, 829-837.	1.7	35
97	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
98	VRI imaging of comet 46P/Wirtanen. Planetary and Space Science, 1999, 47, 765-772.	1.7	5
99	Analysis of cosmic materials: Results on carbon and silicate laboratory analogues. Advances in Space Research, 1999, 23, 1243-1252.	2.6	6
100	Carbonaceous grain processing in space and in the laboratory. Advances in Space Research, 1999, 24, 439-442.	2.6	3
101	Characterization of Cosmic Materials in the Laboratory. Space Science Reviews, 1999, 90, 341-354.	8.1	4
102	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
103	Matrix Isolation of Amorphous Carbon Grains in Boron-Oxide Glass. , 1999, , 273-279.		1
104	Characterization of Cosmic Materials in the Laboratory. , 1999, , 341-354.		1
105	Cosmic Dust and Laboratory Simulation: Wishes, Results and Open Problems. , 1999, , 203-228.		3
106	DFAâ€"The dust flux analyzer for the Rosetta Orbiter. Advances in Space Research, 1998, 21, 1557-1566.	2.6	3
107	ISOCAM Imaging of Comets 65P/Gunn and 46P/Wirtanen. Icarus, 1998, 134, 35-46.	2.5	31
108	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

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109	A New Approach to the Puzzle of the Ultraviolet Interstellar Extinction Bump. Astrophysical Journal, 1998, 507, L177-L180.	4.5	80
110	Ultraviolet Spectral Changes in Amorphous Carbon Grains Induced by Ion Irradiation. Astrophysical Journal, 1997, 481, 545-549.	4.5	37
111	Laboratory simulation of carbon compounds expected in different astrophysical environments. Advances in Space Research, 1997, 20, 1617-1627.	2.6	8
112	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
113	Activation of an Ultraviolet Resonance in Hydrogenated Amorphous Carbon Grains by Exposure to Ultraviolet Radiation. Astrophysical Journal, 1996, 464, L191-L194.	4.5	64
114	Laboratory experiments on cosmic dust analogues: the structure of small carbon grains. Planetary and Space Science, 1995, 43, 1217-1221.	1.7	25
115	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
116	On the Electronic Structure of Small Carbon Grains of Astrophysical Interest. Astrophysical Journal, Supplement Series, 1995, 100, 149.	7.7	55
117	Photoelectric Photometry of Ten Small and Fast Spinning Asteroids. Icarus, 1994, 109, 210-218.	2.5	4
118	Rotational Properties of Small Asteroids: Photoelectric Observations of 16 Asteroids. Icarus, 1994, 109, 267-273.	2.5	4
119	Ground-Based Photometry of Asteroid 951 Gaspra. Icarus, 1993, 101, 213-222.	2.5	12
120	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
121	Dehydrogenation study of cosmic-dust analogue grains. Il Nuovo Cimento Della SocietÃ Italiana Di Fisica C, 1993, 16, 613-617.	0.2	0
122	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
123	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
124	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
125	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