Francesca Esposito

List of Publications by Year
in descending order

79 papers	1,917 citations	304743 22 h-index	254184 43 g-index
79 all docs	79 docs citations	79 times ranked	1804 citing authors

#	Article	IF	Citations
1	Periodic Bedrock Ridges at the ExoMars 2022 Landing Site: Evidence for a Changing Wind Regime. Geophysical Research Letters, 2021, 48, e2020GL091651.	4.0	19
2	Dust devils: Characteristics of the forward motion from a Saharan survey. Aeolian Research, 2021, 50, 100678.	2.7	3
3	MicroMED: study of the relation between signal durations and grain diameters. , 2021, , .		2
4	Performance analysis of the â€œMicroMEDâ€•Optical Particle Counter in windy conditions. , 2021, , .		2
5	Topology optimization of the optical bench for the MicroMED dust analyzer. , 2021, , .		3
6	Techniques to verify the sampling system and flow characteristics of the sensor MicroMED for the ExoMars 2022 Mission. Measurement: Journal of the International Measurement Confederation, 2021, 185, 110075.	5.0	2
7	CFD analysis of the â€œMicroMEDâ€•Optical Particle Counter in various planetary environments. , 2020, , .		0
8	Development and characterization of a volume flow measurement system for low-pressure gases. Measurement: Journal of the International Measurement Confederation, 2020, 166, 108230.	5.0	1
9	Martian environmental chamber: Dust system injection. Planetary and Space Science, 2020, 190, 104971.	1.7	11
10	Resolution of the size/distance degeneracy of the dust devils signals observed with a stationary meteorological station. Aeolian Research, 2020, 44, 100594.	2.7	4
11	Megaripple Migration on Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006446.	3.6	41
12	â€œMicroMEDâ€•Optical Particle Counter: From Design to Flight Model. Sensors, 2020, 20, 611.	3.8	12
13	Autonomous Thermal Simulator for EXOMARS-MicroMED Calibration. Advances in Astronautics Science and Technology, 2020, 3, 1-15.	0.8	3
14	CFD analysis and optimization of the sensor â€œMicroMEDâ€•for the ExoMars 2020 mission. Measurement: Journal of the International Measurement Confederation, 2019, 147, 106824.	5.0	13
15	Optimization of the sensor "MicroMED" for the ExoMars 2020 mission: the Flight Model design. , 2019, , .		8
16	Qualification of MEMS differential pressure sensors in Martian-like environment. , 2019, , .		2
17	Design validation of MicroMED, a particle analyzer for ExoMars 2020. , 2019, , .		5
18	Design and CFD Analysis of the Fluid Dynamic Sampling System of the â€œMicroMEDâ€•Optical Particle Counter. Sensors, 2019, 19, 5037.	3.8	14

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19	MicroMED, design of a particle analyzer for Mars. Measurement: Journal of the International Measurement Confederation, 2018, 122, 466-472.	5.0	25
20	MarsTEM sensor simulations in Martian dust environment. Measurement: Journal of the International Measurement Confederation, 2018, 122, 453-458.	5.0	0
21	Electric properties of dust devils. Earth and Planetary Science Letters, 2018, 493, 71-81.	4.4	22
22	Optimization of the Fluid Dynamic Design of the Dust Suite-MicroMED Sensor for the ExoMars 2020 Mission. , 2018, , .		8
23	Design of a Flowrate Measurement System for Low-Pressure Gases. , 2018, , .		2
24	The DREAMS Experiment Onboard the Schiaparelli Module of the ExoMars 2016 Mission: Design, Performances and Expected Results. Space Science Reviews, 2018, 214, 1.	8.1	19
25	The DREAMS experiment flown on the ExoMars 2016 mission for the study of Martian environment during the dust storm season. Measurement: Journal of the International Measurement Confederation, 2018, 122, 484-493.	5.0	9
26	The Small Mars System. Acta Astronautica, 2017, 137, 168-181.	3.2	5
27	Signal-adapted tomography as a tool for dust devil detection. Aeolian Research, 2017, 29, 12-22.	2.7	8
28	The Close-Up Imager Onboard the ESA ExoMars Rover: Objectives, Description, Operations, and Science Validation Activities. Astrobiology, 2017, 17, 595-611.	3.0	44
29	Thermo-mechanical design of a particle analyzer for Mars. , 2017, , .		4
30	The DREAMS experiment flown on the ExoMars 2016 mission for the study of Martian environment during the dust storm season. , 2017, , .		1
31	MarsTEM sensor simulations in Martian dust environment. , 2017, , .		0
32	Particle Lifting Processes in Dust Devils. Space Sciences Series of ISSI, 2017, , 347-376.	0.0	2
33	Applications of Electrified Dust and Dust Devil Electrodynamics to Martian Atmospheric Electricity. Space Sciences Series of ISSI, 2017, , 299-345.	0.0	0
34	Field Measurements of Terrestrial and Martian Dust Devils. Space Sciences Series of ISSI, 2017, , 39-87.	0.0	1
35	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
36	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

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37	Preliminary design of the inlet duct of a dust analyzer for Mars. , 2016, , .		3
38	The ExoMars DREAMS scientific data archive. , 2016, , .		1
39	Duneâ€like dynamic of Martian Aeolian large ripples. Geophysical Research Letters, 2016, 43, 8384-8389.	4.0	51
40	The role of the atmospheric electric field in the dustâ€lifting process. Geophysical Research Letters, 2016, 43, 5501-5508.	4.0	74
41	Field Measurements of Terrestrial and Martian Dust Devils. Space Science Reviews, 2016, 203, 39-87.	8.1	39
42	Particle Lifting Processes in Dust Devils. Space Science Reviews, 2016, 203, 347-376.	8.1	51
43	Applications of Electrified Dust and Dust Devil Electrodynamics to Martian Atmospheric Electricity. Space Science Reviews, 2016, 203, 299-345.	8.1	72
44	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
45	Evidence for different episodes of aeolian construction and a new type of wind streak in the 2016 ExoMars landing ellipse in Meridiani Planum, Mars. Journal of Geophysical Research E: Planets, 2015, 120, 760-774.	3.6	18
46	Dust measurements in the coma of comet 67P/Churyumov-Gerasimenko inbound to the Sun. Science, 2015, 347, aaa3905.	12.6	310
47	DENSITY AND CHARGE OF PRISTINE FLUFFY PARTICLES FROM COMET 67P/CHURYUMOVâ€“GERASIMENKO. Astrophysical Journal Letters, 2015, 802, L12.	8.3	130
48	MarsTEM field test in Mars analog environment. , 2015, , .		0
49	Albedo Feature. , 2015, , 30-52.		0
50	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
51	Albedo Feature. , 2014, , 1-26.		0
52	The electrical ground support equipment for the ExoMars 2016 DREAMS scientific instrument. , 2014, , .		0
53	Data handling equipment for payload sub-systems. , 2014, , .		0
54	The EGSE for the DREAMS payload onboard the ExoMars 2016 space mission. , 2014, , .		0

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55	Characterization of a pumping system in Martian-like environment. , 2014, , .		4
56	MarsTEM: The temperature sensor of the DREAMS package onboard Exomars2016. , 2014, , .		3
57	The DREAMS experiment on the ExoMars 2016 mission for the study of Martian environment during the dust storm season. , 2014, , .		13
58	Low power proximity electronics for dust analysers based on light scattering. Proceedings of SPIE, 2012, , .	0.8	2
59	SARIM PLUSâ€"sample return of comet 67P/CG and of interstellar matter. Experimental Astronomy, 2012, 33, 723-751.	3.7	3
60	Comet 67P/Churyumov-Gerasimenko: the GIADA dust environment model of the Rosetta mission target. Astronomy and Astrophysics, 2010, 522, A63.	5.1	78
61	Stray light compensation for dust analysers based on light scattering. , 2010, , .		0
62	Sample return of interstellar matter (SARIM). Experimental Astronomy, 2009, 23, 303-328.	3.7	13
63	Triple Fâ€"a comet nucleus sample return mission. Experimental Astronomy, 2009, 23, 809-847.	3.7	14
64	MEDUSA: The ExoMars experiment for in-situ monitoring of dust and water vapour. Planetary and Space Science, 2009, 57, 1043-1049.	1.7	17
65	The Grain Impact Analyser and Dust Accumulator (GIADA) Experiment for the Rosetta Mission: Design, Performances and Current Results. , 2009, , 1-18.		0
66	The proximity electronics of the optical system for the Medusa experiment. Proceedings of SPIE, 2008, , .	0.8	0
67	Estimated optical constants of gypsum in the regions of weak absorptions: Application of scattering theories and comparisons to independent measurements. Journal of Geophysical Research, 2007, 112, .	3.3	37
68	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
69	Albedo and photometric study of Mars with the Planetary Fourier Spectrometer on-board the Mars Express mission. Icarus, 2007, 186, 527-546.	2.5	22
70	GIADA: The Grain Impact Analyser and Dust Accumulator for the Rosetta space mission. Advances in Space Research, 2007, 39, 446-450.	2.6	26
71	The planetary fourier spectrometer (PFS) onboard the European Venus Express mission. Planetary and Space Science, 2006, 54, 1298-1314.	1.7	39
72	The Planetary Fourier Spectrometer (PFS) onboard the European Mars Express mission. Planetary and Space Science, 2005, 53, 963-974.	1.7	151

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73	The MAGO experiment for dust environment monitoring on the Martian surface. Advances in Space Research, 2004, 33, 2252-2257.	2.6	6
74	The Giada Experiment for the Rosetta Mission. Astrophysics and Space Science Library, 2004, , 271-280.	2.7	7
75	Physical aspect of an â€œimpact sensorâ€•for the detection of cometary dust momentum onboard the â€œRosettaâ€•space mission. Advances in Space Research, 2002, 29, 1159-1163.	2.6	24
76	Infrared reflectance spectroscopy of Martian analogues. Journal of Geophysical Research, 2000, 105, 17643-17654.	3.3	13
77	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
78	Simulation of the Martian spectral radiance in the presence of atmospheric dust. Physics and Chemistry of the Earth, Part C: Solar, Terrestrial and Planetary Science, 1999, 24, 615-617.	0.2	3
79	IR Reflectance Spectroscopy of Martian Analogues. , 1999, , 305-310.		0