

# Josep Maria Trigo RodrÃ-iguez

## List of Publications by Year in descending order

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133  
papers

4,748  
citations

126907

33  
h-index

102487

66  
g-index

151  
all docs

151  
docs citations

151  
times ranked

3135  
citing authors

#	ARTICLE	IF	CITATIONS
1	Comet 81P/Wild 2 Under a Microscope. <i>Science</i> , 2006, 314, 1711-1716.	12.6	848
2	Progressive aqueous alteration of CM carbonaceous chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2007, 71, 2361-2382.	3.9	421
3	Impact Features on Stardust: Implications for Comet 81P/Wild 2 Dust. <i>Science</i> , 2006, 314, 1716-1719.	12.6	286
4	The Physics of Protoplanetesimal Dust Agglomerates. I. Mechanical Properties and Relations to Primitive Bodies in the Solar System. <i>Astrophysical Journal</i> , 2006, 652, 1768-1781.	4.5	158
5	Very low strengths of interplanetary meteoroids and small asteroids. <i>Meteoritics and Planetary Science</i> , 2011, 46, 1525-1550.	1.6	145
6	Characteristics of cometary dust tracks in Stardust aerogel and laboratory calibrations. <i>Meteoritics and Planetary Science</i> , 2008, 43, 23-40.	1.6	134
7	Rubidium-Rich Asymptotic Giant Branch Stars. <i>Science</i> , 2006, 314, 1751-1754.	12.6	116
8	Chemical abundances determined from meteor spectra: I. Ratios of the main chemical elements. <i>Meteoritics and Planetary Science</i> , 2003, 38, 1283-1294.	1.6	111
9	Non-nebular origin of dark mantles around chondrules and inclusions in CM chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 1271-1290.	3.9	111
10	Comets formed in solar-nebula instabilities! An experimental and modeling attempt to relate the activity of comets to their formation process. <i>Icarus</i> , 2014, 235, 156-169.	2.5	100
11	The strength of cometary meteoroids: clues to the structure and evolution of comets. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 372, 655-660.	4.4	96
12	<i>EPOXI</i>: COMET 103P/HARTLEY 2 OBSERVATIONS FROM A WORLDWIDE CAMPAIGN. <i>Astrophysical Journal Letters</i> , 2011, 734, L1.	8.3	96
13	The key role of meteorites in the formation of relevant prebiotic molecules in a formamide/water environment. <i>Scientific Reports</i> , 2016, 6, 38888.	3.3	76
14	Detection of sporadic impact flashes on the Moon: Implications for the luminous efficiency of hypervelocity impacts and derived terrestrial impact rates. <i>Icarus</i> , 2006, 184, 319-326.	2.5	74
15	A cometary building block in a primitive asteroidal meteorite. <i>Nature Astronomy</i> , 2019, 3, 659-666.	10.1	73
16	MarcoPolo-R near earth asteroid sample return mission. <i>Experimental Astronomy</i> , 2012, 33, 645-684.	3.7	72
17	Bulbous tracks arising from hypervelocity capture in aerogel. <i>Meteoritics and Planetary Science</i> , 2008, 43, 75-86.	1.6	69
18	The Villalbeto de la Peña meteorite fall: I. Fireball energy, meteorite recovery, strewn field, and petrography. <i>Meteoritics and Planetary Science</i> , 2005, 40, 795-804.	1.6	58

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19	FRIPON: a worldwide network to track incoming meteoroids. <i>Astronomy and Astrophysics</i> , 2020, 644, A53.	5.1	58
20	Outburst activity in comets. <i>Astronomy and Astrophysics</i> , 2008, 485, 599-606.	5.1	57
21	Outburst activity in comets - II. A multiband photometric monitoring of comet 29P/Schwassmann-Wachmann 1. <i>Monthly Notices of the Royal Astronomical Society</i> , 2010, 409, 1682-1690.	4.4	54
22	Interplanetary Dust, Meteoroids, Meteors and Meteorites. <i>Space Science Reviews</i> , 2019, 215, 1.	8.1	49
23	The Villalbeto de la Peña meteorite fall: II. Determination of atmospheric trajectory and orbit. <i>Meteoritics and Planetary Science</i> , 2006, 41, 505-517.	1.6	48
24	Chemical abundances determined from meteor spectra - II. Evidence for enlarged sodium abundances in meteoroids. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 348, 802-810.	4.4	46
25	Multi-station Video Orbits of Minor Meteor Showers. <i>Earth, Moon and Planets</i> , 2008, 102, 133-139.	0.6	44
26	Orbit and dynamic origin of the recently recovered Annama's H5 chondrite. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 449, 2119-2127.	4.4	43
27	Accretion of Water in Carbonaceous Chondrites: Current Evidence and Implications for the Delivery of Water to Early Earth. <i>Space Science Reviews</i> , 2019, 215, 1.	8.1	41
28	Tensile strength as an indicator of the degree of primitiveness of undifferentiated bodies. <i>Planetary and Space Science</i> , 2009, 57, 243-249.	1.7	40
29	The Northern $\eta$ -Orionid meteoroid stream and possible association with the potentially hazardous asteroid 2008XM1. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 431, 2464-2470.	4.4	40
30	Robotic Systems for Meteor Observing and Moon Impact Flashes Detection in Spain. <i>Advances in Astronomy</i> , 2010, 2010, 1-5.	1.1	39
31	Asteroid 2002NY40 as a source of meteorite-dropping bolides. <i>Monthly Notices of the Royal Astronomical Society</i> , 2007, 382, 1933-1939.	4.4	37
32	The role of massive AGB stars in the early solar system composition. <i>Meteoritics and Planetary Science</i> , 2009, 44, 627-639.	1.6	35
33	Carbon-rich chondritic clast PV1 from the Plainview H-chondrite regolith breccia: Formation from H3 chondrite material by possible cometary impact. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 3419-3430.	3.9	31
34	The 2011 October Draconids outburst – II. Meteoroid chemical abundances from fireball spectroscopy. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 433, 571-580.	4.4	31
35	Novel Experimental Simulations of the Atmospheric Injection of Meteoric Metals. <i>Astrophysical Journal</i> , 2017, 836, 212.	4.5	31
36	The Development of the Spanish Fireball Network Using a New All-Sky CCD System. <i>Earth, Moon and Planets</i> , 2006, 95, 553-567.	0.6	30

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37	Observations of a very bright fireball and its likely link with comet C/1919 Q2 Metcalf. Monthly Notices of the Royal Astronomical Society, 2009, 394, 569-576.	4.4	30
38	2002 Leonid storm fluxes and related orbital elements. Icarus, 2004, 171, 219-228.	2.5	29
39	The 2006 Orionid outburst imaged by all-sky CCD cameras from Spain: meteoroid spatial fluxes and orbital elements. Monthly Notices of the Royal Astronomical Society, 2007, 380, 126-132.	4.4	29
40	The outburst of the $\eta$ Cygnids in 2007: clues about the catastrophic break up of a comet to produce an Earth-crossing meteoroid stream. Monthly Notices of the Royal Astronomical Society, 2009, 392, 367-375.	4.4	27
41	UV to far-IR reflectance spectra of carbonaceous chondrites – I. Implications for remote characterization of dark primitive asteroids targeted by sample-return missions. Monthly Notices of the Royal Astronomical Society, 2014, 437, 227-240.	4.4	26
42	On the sodium overabundance in cometary meteoroids. Advances in Space Research, 2007, 39, 517-525.	2.6	25
43	The Puerto Lıdice eucrite. Meteoritics and Planetary Science, 2009, 44, 159-174.	1.6	25
44	Mechanical properties of particles from the surface of asteroid 25143 Itokawa. Astronomy and Astrophysics, 2019, 629, A119.	5.1	25
45	Determination of Meteoroid Orbits and Spatial Fluxes by Using High-Resolution All-Sky CCD Cameras. Earth, Moon and Planets, 2008, 102, 231-240.	0.6	24
46	New methodology to determine the terminal height of a fireball. Icarus, 2015, 250, 544-552.	2.5	24
47	The 2011 October Draconids outburst – I. Orbital elements, meteoroid fluxes and 21P/Giacobiniı Zinner delivered mass to Earth. Monthly Notices of the Royal Astronomical Society, 2013, 433, 560-570.	4.4	23
48	Analysis of bright Taurid fireballs and their ability to produce meteorites. Icarus, 2014, 231, 356-364.	2.5	23
49	THE COLLISIONAL EVOLUTION OF UNDIFFERENTIATED ASTEROIDS AND THE FORMATION OF CHONDRITIC METEOROIDS. Astrophysical Journal, 2016, 824, 12.	4.5	22
50	Annama H chondriteı Mineralogy, physical properties, cosmic ray exposure, and parent body history. Meteoritics and Planetary Science, 2017, 52, 1525-1541.	1.6	22
51	The Geminid meteoroid stream as a potential meteorite dropper: a case study. Monthly Notices of the Royal Astronomical Society, 2013, 436, 2818-2823.	4.4	21
52	The Spanish fireball network. Astronomy and Geophysics, 2006, 47, 6.26-6.28.	0.2	19
53	Leonid Meteoroid Orbits Perturbed by Collisions with Interplanetary Dust. Astrophysical Journal, 2005, 621, 1146-1152.	4.5	18
54	On the Origin of the 1999 Leonid Storm as Deduced from Photographic Observations. Earth, Moon and Planets, 2002, 91, 107-119.	0.6	17

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55	The Effect of Aqueous Alteration and Metamorphism in the Survival of Presolar Silicate Grains in Chondrites. Publications of the Astronomical Society of Australia, 2009, 26, 289-296.	3.4	17
56	Accurate 3D fireball trajectory and orbit calculation using the 3D- <code>firetoc</code> automatic Python code. Monthly Notices of the Royal Astronomical Society, 2021, 504, 4829-4840.	4.4	17
57	On the activity of the $\hat{1}^3$ -Ursae Minorids meteoroid stream in 2010 and 2011. Monthly Notices of the Royal Astronomical Society, 2013, 431, 1678-1685.	4.4	16
58	Nanoindenting the Chelyabinsk Meteorite to Learn about Impact Deflection Effects in asteroids. Astrophysical Journal, 2017, 835, 157.	4.5	16
59	The 90-day oscillations of Jupiter's Great Red Spot revisited. Planetary and Space Science, 2000, 48, 331-339.	1.7	15
60	Verification of the Flow Regimes Based on High-fidelity Observations of Bright Meteors. Astrophysical Journal, 2018, 863, 174.	4.5	14
61	SPECTROSCOPY OF A GEMINID FIREBALL: ITS SIMILARITY TO COMETARY METEORIODS AND THE NATURE OF ITS PARENT BODY. Earth, Moon and Planets, 2006, 95, 375-387.	0.6	13
62	Petrographic and geochemical evidence for multiphase formation of carbonates in the Martian orthopyroxenite Allan Hills 84001. Meteoritics and Planetary Science, 2017, 52, 1030-1047.	1.6	13
63	Orbits and emission spectra from the 2014 Camelopardalids. Monthly Notices of the Royal Astronomical Society, 2014, 445, 3309-3314.	4.4	12
64	Analysis of two superbolides with a cometary origin observed over the Iberian Peninsula. Icarus, 2014, 233, 27-35.	2.5	12
65	Trajectory, orbit, and spectroscopic analysis of a bright fireball observed over Spain on April 13, 2013. Astronomy and Astrophysics, 2014, 569, A104.	5.1	11
66	Physically based alternative to the PE criterion for meteoroids. Monthly Notices of the Royal Astronomical Society, 2020, 494, 316-324.	4.4	11
67	Learning about comets from the study of mass distributions and fluxes of meteoroid streams. Monthly Notices of the Royal Astronomical Society, 2022, 512, 2277-2289.	4.4	11
68	Luminous efficiency based on FRIPON meteors and limitations of ablation models. Astronomy and Astrophysics, 2021, 650, A159.	5.1	11
69	Study of Fischer's "Tropsch-type reactions on chondritic meteorites. Astronomy and Astrophysics, 2021, 650, A160.	5.1	11
70	Optical observations of meteoric dust in the middle atmosphere during Leonid activity in recent years 2001-2003 over India. Geophysical Research Letters, 2005, 32, .	4.0	10
71	Near-Earth object 2012XJ112 as a source of bright bolides of achondritic nature. Monthly Notices of the Royal Astronomical Society, 2014, 439, 3704-3711.	4.4	10
72	A plausible link between the asteroid 21 Lutetia and <code>CH</code> carbonaceous chondrites. Meteoritics and Planetary Science, 2016, 51, 1795-1812.	1.6	10

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73	Detection and measurement of micrometeoroids with LISA Pathfinder. <i>Astronomy and Astrophysics</i> , 2016, 586, A107.	5.1	10
74	Puerto Lıpcie eucrite fall: Strewn field, physical description, probable fireball trajectory, and orbit. <i>Meteoritics and Planetary Science</i> , 2009, 44, 175-186.	1.6	9
75	Orbit and emission spectroscopy of ±-Capricornid fireballs. <i>Icarus</i> , 2014, 239, 273-280.	2.5	9
76	Evaluation of NEA deflection techniques. A fuzzy Multi-Criteria Decision Making analysis for planetary defense. <i>Acta Astronautica</i> , 2020, 176, 383-397.	3.2	9
77	Leonids 2006 observations of the tail of trails: Where is the comet fluff?. <i>Icarus</i> , 2008, 196, 171-183.	2.5	8
78	Bright fireballs associated with the potentially hazardous asteroid 2007LQ19. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 443, 1643-1650.	4.4	8
79	Analysis of the September ı-Perseid outburst in 2013. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 480, 2501-2507.	4.4	8
80	Dynamic Sources of Contemporary Hazard from Meteoroids and Small Asteroids. <i>Thirty Years of Astronomical Discovery With UKIRT</i> , 2017, , 11-32.	0.3	8
81	Asteroid Mining: Mineral Resources in Undifferentiated Bodies from the Chemical Composition of Carbonaceous Chondrites. <i>Thirty Years of Astronomical Discovery With UKIRT</i> , 2017, , 73-101.	0.3	8
82	The Cali meteorite fall: A new H/L ordinary chondrite. <i>Meteoritics and Planetary Science</i> , 2009, 44, 211-220.	1.6	7
83	Observations of the Quadrantid meteor shower from 2008 to 2012: Orbits and emission spectra. <i>Icarus</i> , 2016, 275, 193-202.	2.5	7
84	Interaction of organic compounds with chondritic silicate surfaces. Atomistic insights from quantum chemical periodic simulations. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 18217-18231.	2.8	7
85	Synthesis and characterisation of analogues for interplanetary dust and meteoric smoke particles. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2017, 162, 178-191.	1.6	7
86	New observations on high pressure phases in a shock melt vein in the Villalbeto de la Pea meteorite: Insights into the shock behavior of diopside. <i>Meteoritics and Planetary Science</i> , 2019, 54, 2845-2863.	1.6	7
87	Comparing the reflectivity of ungrouped carbonaceous chondrites with those of short-period comets like 2P/Encke. <i>Astronomy and Astrophysics</i> , 2020, 641, A58.	5.1	7
88	Using fireball networks to track more frequent reentries: Falcon 9 upper-stage orbit determination from video recordings. <i>Astrodynamics</i> , 2021, 5, 347-358.	2.4	7
89	Aqueous alteration in chondritic asteroids and comets from the study of carbonaceous chondrites. , 2015, , .		6
90	Orbital Elements of 2004 Perseid Meteoroids Perturbed by Jupiter. <i>Earth, Moon and Planets</i> , 2006, 97, 269-278.	0.6	5

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91	Analysis of a superbolide from a damocloid observed over Spain on 2012 July 13. Monthly Notices of the Royal Astronomical Society, 2013, 436, 3656-3662.	4.4	5
92	Spectroscopy and orbital analysis of bright bolides observed over the Iberian Peninsula from 2010 to 2012. Monthly Notices of the Royal Astronomical Society, 2013, 435, 2023-2032.	4.4	5
93	Assessment and Mitigation of Asteroid Impact Hazards. Thirty Years of Astronomical Discovery With UKIRT, 2017, , .	0.3	5
94	Luminous efficiency of meteors derived from ablation model after assessment of its range of validity. Astronomy and Astrophysics, 2021, 652, A84.	5.1	5
95	Implication of Impacts in the Young Earth Sun Paradox and the Evolution of Earth's Atmosphere. Thirty Years of Astronomical Discovery With UKIRT, 2013, , 85-97.	0.3	5
96	Chelyabinsk Meteorite as a Proxy for Studying the Properties of Potentially Hazardous Asteroids and Impact Deflection Strategies. Thirty Years of Astronomical Discovery With UKIRT, 2017, , 219-241.	0.3	5
97	Orbit, emission spectrum, and photometric analysis of two flickering sporadic fireballs. Astronomy and Astrophysics, 2013, 555, A149.	5.1	5
98	The flux of meteoroids over time: meteor emission spectroscopy and the delivery of volatiles and chondritic materials to Earth. , 0, , .		5
99	Multi-instrumental observations of the 2014 Ursid meteor outburst. Monthly Notices of the Royal Astronomical Society, 2017, 468, 2206-2213.	4.4	4
100	Nitrogen in Solar System Minor Bodies: Delivery Pathways to Primeval Earth. Thirty Years of Astronomical Discovery With UKIRT, 2013, , 9-22.	0.3	4
101	Natural Hazard Associated to Shock Waves of Meter-Sized Meteoroids. Thirty Years of Astronomical Discovery With UKIRT, 2017, , 199-218.	0.3	4
102	March 1, 2005 Daylight Fireball Over Galicia (NW of Spain) and Minho (N. Portugal). Earth, Moon and Planets, 2008, 102, 537-542.	0.6	3
103	A very sensitive all-sky CCD camera for continuous recording of the night sky. Proceedings of SPIE, 2008, , .	0.8	3
104	The Tajikistan superbolide of July 23, 2008. I. Trajectory, orbit, and preliminary fall data. Meteoritics and Planetary Science, 2013, 48, 2469-2479.	1.6	3
105	The Ardán L6 ordinary chondrite: A long-hidden Spanish meteorite fall. Meteoritics and Planetary Science, 2014, 49, 1475-1484.	1.6	3
106	A Numerical Approach to Study Ablation of Large Bolides: Application to Chelyabinsk. Advances in Astronomy, 2021, 2021, 1-13.	1.1	3
107	Determination of Meteoroid Orbits and Spatial Fluxes by Using High-Resolution All-Sky CCD Cameras. , 2008, , 231-240.		3
108	Chemical Abundances of Cometary Meteoroids from Meteor Spectroscopy. Cellular Origin and Life in Extreme Habitats, 2004, , 201-204.	0.3	3

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109	Reply to: GEMS and the devil in their details. <i>Nature Astronomy</i> , 2019, 3, 606-606.	10.1	2
110	Atomistic Simulations of Aqueous Alteration Processes of Mafic Silicates in Carbonaceous Chondrites. <i>Thirty Years of Astronomical Discovery With UKIRT</i> , 2017, , 103-127.	0.3	2
111	The Spanish Fireball Network: Popularizing Interplanetary Matter. <i>EAS Publications Series</i> , 2005, 16, 129-133.	0.3	2
112	Energy signature of ton TNT-class impacts: analysis of the 2018 December 22 fireball over Western Pyrenees. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 508, 5716-5733.	4.4	2
113	SNC Meteorites: Atmosphere Implantation Ages and the Climatic Evolution of Mars. <i>Thirty Years of Astronomical Discovery With UKIRT</i> , 2013, , 165-172.	0.3	2
114	Comets II, edited by M. C. Festou, H. U. Keller, and H. A. Weaver. <i>Meteoritics and Planetary Science</i> , 2005, 40, 1749-1750.	1.6	1
115	BOOTES-IR: a robotic nIR astronomical observatory devoted to follow-up of transient phenomena. , 2006, , .		1
116	BOOTES-IR: The extension of BOOTES towards the near-IR. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	1
117	<b>Meteor showers and their parent comets</b>, by Peter Jenniskens. <i>Meteoritics and Planetary Science</i> , 2007, 42, 471-472.	1.6	1
118	The Berduc L6 chondrite fall: Meteorite characterization, trajectory, and orbital elements. <i>Meteoritics and Planetary Science</i> , 2010, 45, 383-393.	1.6	1
119	The reflectance spectra of CV&CCK carbonaceous chondrites from the near-infrared to the visible. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 507, 651-662.	4.4	1
120	Spectroscopy of a Geminid Fireball: Its Similarity to Cometary Meteoroids and the Nature of its Parent Body. , 2005, , 375-387.		1
121	OH and O2airglow emissions during the 1998 leonid outburst and the 2002 leonid storm. <i>Earth, Moon and Planets</i> , 2003, 93, 191-201.	0.6	0
122	OH and O2 airglow emissions during the 1998 leonid outburst and the 2002 leonid storm. <i>Earth, Moon and Planets</i> , 2003, 93, 191-201.	0.6	0
123	Meteorites and the early solar system II, edited by Dante S. Lauretta and Harry Y. McSween, Jr.. <i>Meteoritics and Planetary Science</i> , 2008, 43, 989-991.	1.6	0
124	A Massive AGB Star as Source of Short-Lived Nuclei in the Early Solar System. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	0
125	The Cali Meteorite: Luminescence of a recently fallen H&L ordinary chondrite. , 2009, , .		0
126	Record of Alteration by Heavy Ices in a Cometary Clast in a Primitive Meteorite. <i>Microscopy and Microanalysis</i> , 2021, 27, 2268-2270.	0.4	0



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127	Introduction: On the Early Evolution of the Atmosphere of Terrestrial Planets: COST Action CM#0805. Thirty Years of Astronomical Discovery With UKIRT, 2013, , 1-8.	0.3	0
128	Asteroids, Comets and Meteorite-Dropping Bolides Studied from The Montsec Astronomical Observatory. Thirty Years of Astronomical Discovery With UKIRT, 2017, , 243-256.	0.3	0
129	Introducing Our New Chief Editor. Advances in Astronomy, 2020, 2020, 1-2.	1.1	0
130	Multi-station Video Orbits of Minor Meteor Showers. , 2007, , 133-139.		0
131	The Risk Associated with Short-Period Comets and Its Origin. Impact Studies, 2022, , 61-77.	0.5	0
132	The Origin and Nature of Comets. Impact Studies, 2022, , 43-60.	0.5	0
133	Meteorite Parent Bodies and Their Routes to Earth. Impact Studies, 2022, , 21-41.	0.5	0