Frans J M Rietmeijer

List of Publications by Year
in descending order

70 papers	3,300 citations	236925 25 h-index	144013 57 g-index
70 all docs	70 docs citations	70 times ranked	1856 citing authors

#	Article	IF	Citations
1	Comet 81P/Wild 2 Under a Microscope. Science, 2006, 314, 1711-1716.	12.6	848
2	Mineralogy and Petrology of Comet 81P/Wild 2 Nucleus Samples. Science, 2006, 314, 1735-1739.	12.6	589
3	Elemental Compositions of Comet 81P/Wild 2 Samples Collected by Stardust. Science, 2006, 314, 1731-1735.	12.6	200
4	Comparing Wild 2 particles to chondrites and IDPs. Meteoritics and Planetary Science, 2008, 43, 261-272.	1.6	136
5	Metastable Eutectic Condensation in a Mgâ€Feâ€SiOâ€H2â€O2Vapor: Analogs to Circumstellar Dust. Astrophysical Journal, 1999, 527, 395-404.	4.5	132
6	Mineralogy of chondritic interplanetary dust particles. Reviews of Geophysics, 1987, 25, 1527-1553.	23.0	128
7	Condensation processes in astrophysical environments: The composition and structure of cometary grains. Meteoritics and Planetary Science, 2002, 37, 1579-1590.	1.6	84
8	Poorly graphitized carbon as a new cosmothermometer for primitive extraterrestrial materials. Nature, 1985, 315, 733-736.	27.8	76
9	Interrelationships among meteoric metals, meteors, interplanetary dust, micrometeorites, and meteorites. Meteoritics and Planetary Science, 2000, 35, 1025-1041.	1.6	76
10	A TEM study of thermally modified comet 81P/Wild 2 dust particles by interactions with the aerogel matrix during the Stardust capture process. Meteoritics and Planetary Science, 2008, 43, 97-120.	1.6	73
11	Chapter 2. INTERPLANETARY DUST PARTICLES. , 1998, , 29-124.		64
12	A model for diagenesis in proto-planetary bodies. Nature, 1985, 313, 293-294.	27.8	62
13	The bacterial metallome: composition and stability with specific reference to the anaerobic bacterium Desulfovibrio desulfuricans. BioMetals, 2007, 20, 291-302.	4.1	56
14	Laboratory studies of silicate smokes: Analog studies of circumstellar materials. Journal of Geophysical Research, 2000, 105, 10387-10396.	3.3	53
15	Origin and formation of iron silicide phases in the aerogel of the Stardust mission. Meteoritics and Planetary Science, 2008, 43, 121-134.	1.6	45
16	Metastable eutectic, gas to solid, condensation in the FeOâ€“Fe2O3â€“SiO2 system. Physical Chemistry Chemical Physics, 1999, 1, 1511-1516.	2.8	40
17	Gas-to-solid condensation in a Mgâ€“SiOâ€“H2â€“O2 vapor: metastable eutectics in the MgOâ€“SiO2 phase diagram. Physical Chemistry Chemical Physics, 2002, 4, 546-551.	2.8	40
18	Laboratory hydration of condensed magnesiosilica smokes with implications for hydrated silicates in IDPs and comets. Meteoritics and Planetary Science, 2004, 39, 723-746.	1.6	37

#	Article	IF	Citations
19	Metastable eutectic gas to solid condensation in the Al2O3â€“SiO2 system. Journal of Chemical Physics, 1999, 110, 4554-4558.	3.0	31
20	Layer silicates in a chondritic porous interplanetary dust particle. Journal of Geophysical Research, 1985, 90, 149-155.	3.3	29
21	Dynamic pyrometamorphism during atmospheric entry of large (Ëœ10 micron) pyrrhotite fragments from cluster IDPs. Meteoritics and Planetary Science, 2004, 39, 1869-1887.	1.6	28
22	Shower Meteoroids: Constraints From Interplanetary Dust Particles And Leonid Meteors. Earth, Moon and Planets, 2000, 88, 35-58.	0.6	27
23	A cometary aggregate interplanetary dust particle as an analog for comet Wild 2 grain chemistry preserved in silicaâ€rich Stardust glass. Meteoritics and Planetary Science, 2009, 44, 1589-1609.	1.6	27
24	The ultrafine mineralogy of a molten interplanetary dust particle as an example of the quench regime of atmospheric entry heating. Meteoritics and Planetary Science, 1996, 31, 237-242.	1.6	26
25	CMâ€like interplanetary dust particles in lower stratosphere during 1989 October and 1991 June/July. Meteoritics and Planetary Science, 1996, 31, 278-288.	1.6	25
26	Metastable non-stoichiometric diopside and Mg-wollastonite; an occurrence in an interplanetary dust particle. American Mineralogist, 1999, 84, 1883-1894.	1.9	25
27	Bismuth oxide nanoparticles in the stratosphere. Journal of Geophysical Research, 1997, 102, 6621-6627.	3.3	20
28	Title is missing!. Earth, Moon and Planets, 1998, 80, 73-112.	0.6	20
29	THE IRRADIATION-INDUCED OLIVINE TO AMORPHOUS PYROXENE TRANSFORMATION PRESERVED IN AN INTERPLANETARY DUST PARTICLE. Astrophysical Journal, 2009, 705, 791-797.	4.5	20
30	Sodium Tails of Comets: N[CLC]a[/CLC]/O and N[CLC]a[/CLC]/S[CLC]i[/CLC] Abundances in Interplanetary Dust Particles. Astrophysical Journal, 1999, 514, L125-L127.	4.5	20
31	C60and Giant Fullerenes in Soot Condensed in Vapors with Variable C/H2Ratio. Fullerenes Nanotubes and Carbon Nanostructures, 2004, 12, 659-680.	2.1	19
32	Deep metastable eutectic condensation in Al-Fe-SiO-H2-O2 vapors: Implications for natural Fe-aluminosilicates. American Mineralogist, 2006, 91, 1688-1698.	1.9	17
33	Chemical identification of comet 81P/Wild 2 dust after interacting with molten silica aerogel. Meteoritics and Planetary Science, 2009, 44, 1121-1132.	1.6	17
34	Stardust glass: Indigenous and modified comet Wild 2 particles. Meteoritics and Planetary Science, 2009, 44, 1707-1715.	1.6	15
35	Interstellar and Interplanetary Grains. Astrophysics and Space Science Library, 1999, , 143-182.	2.7	15
36	Postâ€entry and volcanic contaminant abundances of zinc, copper, selenium, germanium and gallium in stratospheric micrometeorites. Meteoritics, 1995, 30, 33-41.	1.4	12

#	Article	IF	Citations
37	Metastable eutectic equilibrium brought down to Earth. Eos, 2000, 81, 409.	0.1	12
38	Cellular precipitates of iron oxide in olivine in a stratospheric interplanetary dust particle. Mineralogical Magazine, 1996, 60, 877-885.	1.4	12
39	Nonequilibrium iron oxide formation in some low-mass post-asymptotic giant branch stars. Astrophysical Journal, 1992, 400, L39.	4.5	11
40	INTERPLANETARY DUST AND CARBONACEOUS METEORITES: CONSTRAINTS ON POROSITY, MINERALOGY AND CHEMISTRY OF METEORS FROM RUBBLE-PILE PLANETESIMALS. Earth, Moon and Planets, 2006, 95, 321-338.	0.6	10
41	Grain Sizes of Ejected Comet Dust. Condensed Dust Analogs, Interplanetary Dust Particles and Meteors. Astrophysics and Space Science Library, 2004, , 97-110.	2.7	10
42	Melting, ablation, and vapor phase condensation during atmospheric passage of the Bjurbole meteorite. Journal of Geophysical Research, 1984, 89, B597.	3.3	8
43	Carbon in Meteoroids: Wild 2 Dust Analyses, IDPs and Cometary Dust Analogues. Earth, Moon and Planets, 2008, 102, 473-483.	0.6	8
44	Dust formation and evolution in a Ca-Fe-SiO-H2-O2vapour phase condensation experiment and astronomical implications. Monthly Notices of the Royal Astronomical Society, 2009, 396, 402-408.	4.4	8
45	PETROLOGIC CONSTRAINTS ON AMORPHOUS AND CRYSTALLINE MAGNESIUM SILICATES: DUST FORMATION AND EVOLUTION IN SELECTED HERBIG Ae/Be SYSTEMS. Astrophysical Journal, 2013, 771, 34.	4.5	8
46	Sulfides and oxides in comets. Astrophysical Journal, 1988, 331, L137.	4.5	7
47	Understanding the mechanisms of formation of nanophase compounds from Stardust: Combined experimental and observational approach. Meteoritics and Planetary Science, 2011, 46, 1082-1096.	1.6	6
48	The formation of Mg,Feâ€silicates by reactions between amorphous magnesiosilica smoke particles and metallic iron nanograins with implications for comet silicate origins. Meteoritics and Planetary Science, 2013, 48, 1823-1840.	1.6	6
49	Collected Extraterrestrial Materials: Constraints on Meteor and Fireball Compositions. , 2000, , 325-350.		6
50	Interplanetary Dust and Carbonaceous Meteorites: Constraints on Porosity, Mineralogy and Chemistry of Meteors from Rubble-Pile Planetesimals. , 2005, , 321-338.		5
51	A potentially new type of nonchondritic interplanetary dust particle with hematite, organic carbon, amorphous Na,Caâ€aluminosilicate, and FeOâ€spheres. Meteoritics and Planetary Science, 2012, 47, 248-261.	1.6	5
52	The smallest comet 81P/Wild 2 dust dances around the <scp>CI</scp> composition. Meteoritics and Planetary Science, 2015, 50, 1767-1789.	1.6	5
53	Leonid MAC Workshop 1999, April 12â€“15. Meteoritics and Planetary Science, 1999, 34, 495-495.	1.6	4
54	Laboratory simulation of Mg-rich ferromagnesiosilica dust: The first building blocks of comet dust. Advances in Space Research, 2007, 39, 351-357.	2.6	4

#	Article	IF	Citations
55	Understanding the comet Wild 2 mineralogy in samples from the Stardust mission. Powder Diffraction, 2008, 23, 74-80.	0.2	4
56	Nanoparticles That Are Out of This World. , 2012, , 329-360.		4
57	Natural Variations in Comet-Aggregate Meteoroid Compositions. Earth, Moon and Planets, 2008, 102, 461-471.	0.6	3
58	An igneous fragment from cluster <scp>IDP</scp> L2011#21: An analog for the source of pyrrhotite and taenite in comet 81P/Wild 2 captured in Stardust aerogel. Meteoritics and Planetary Science, 2013, 48, 1427-1439.	1.6	3
59	At the interface of silica glass and compressed silica aerogel in Stardust track 10: Comet Wild 2 is not a goldmine. Meteoritics and Planetary Science, 2016, 51, 574-583.	1.6	3
60	Recognizing Leonid Meteoroids among the Collected Stratospheric Dust. , 2000, , 505-524.		3
61	Fullerenes and Nanodiamonds in Aggregate Interplanetary Dust and Carbonaceous Meteorites. , 2006, , 123-144.		2
62	Deep metastable eutectic nanometer-scale particles in the MgOâ€“Al2O3â€“SiO2 system. Journal of Nanoparticle Research, 2011, 13, 3149-3156.	1.9	2
63	Energy dissipation at the silica glass/compressed aerogel interface: The fate of Wild 2 mineral grains and fragments smaller than ~100Ânm. Meteoritics and Planetary Science, 2016, 51, 1871-1885.	1.6	2
64	<scp>GEMS</scp>, hydrated chondritic <scp>IDP</scp>s, <scp>CI</scp>â€matrix material: Sources of water in 81P/comet Wild 2. Meteoritics and Planetary Science, 2019, 54, 259-266.	1.6	2
65	Natural C60 and Large Fullerenes: A Matter of Detection and Astrophysical Implications. , 2006, , 71-94.		2
66	And just when you thought that the Leonid meteor storm held no more surprises: The 2001 storm. Meteoritics and Planetary Science, 2002, 37, 899-900.	1.6	1
67	A Metastable Aluminosilica Compound for Aluminum and Water Transport to the Upper Mantle. International Journal of Geophysics, 2009, 2009, 1-4.	1.1	1
68	Natural Carbynes, Including Chaoite, on Earth, in Meteorites, Comets, Circumstellar and Interstellar Dust. , 2005, , 339-370.		1
69	Natural Variations in Comet-Aggregate Meteoroid Compositions. , 2007, , 461-471.		0
70	Carbon in Meteoroids: Wild 2 Dust Analyses, IDPs and Cometary Dust Analogues. , 2008, , 473-483.		0