

Jean-Noël Rouzaud

List of Publications by Year in descending order

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105
papers

9,926
citations

34016

52
h-index

34900

98
g-index

105
all docs

105
docs citations

105
times ranked

10075
citing authors

#	ARTICLE	IF	CITATIONS
1	Raman spectra of carbonaceous material in metasediments: a new geothermometer. <i>Journal of Metamorphic Geology</i> , 2002, 20, 859-871.	1.6	934
2	On the characterization of disordered and heterogeneous carbonaceous materials by Raman spectroscopy. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2003, 59, 2267-2276.	2.0	724
3	Comparison of quantification methods to measure fire-derived (black/elemental) carbon in soils and sediments using reference materials from soil, water, sediment and the atmosphere. <i>Global Biogeochemical Cycles</i> , 2007, 21, .	1.9	483
4	Carbon aerogels, cryogels and xerogels: Influence of the drying method on the textural properties of porous carbon materials. <i>Carbon</i> , 2005, 43, 2481-2494.	5.4	396
5	Raman microspectroscopy characterization of carbon blacks: Spectral analysis and structural information. <i>Carbon</i> , 2015, 84, 479-490.	5.4	386
6	Evaluation of a protocol for the quantification of black carbon in sediments. <i>Global Biogeochemical Cycles</i> , 2001, 15, 881-890.	1.9	341
7	Graphitization in a high-pressure, low-temperature metamorphic gradient: a Raman microspectroscopy and HRTEM study. <i>Contributions To Mineralogy and Petrology</i> , 2002, 143, 19-31.	1.2	287
8	Structure, microtexture, and optical properties of anthracene and saccharose-based carbons. <i>Carbon</i> , 1989, 27, 517-529.	5.4	228
9	Carbon films: Structure and microtexture (optical and electron microscopy, Raman spectroscopy). <i>Thin Solid Films</i> , 1983, 105, 75-96.	0.8	213
10	Early Neanderthal constructions deep in Bruniquel Cave in southwestern France. <i>Nature</i> , 2016, 534, 111-114.	13.7	210
11	Structural Modeling of Porous Carbons: A Constrained Reverse Monte Carlo Method. <i>Langmuir</i> , 2003, 19, 8565-8582.	1.6	208
12	Surface functionality and porosity of activated carbons obtained from chemical activation of wood. <i>Carbon</i> , 2000, 38, 669-674.	5.4	193
13	Comparative XRD, Raman, and TEM Study on Graphitization of PBO-Derived Carbon Fibers. <i>Journal of Physical Chemistry C</i> , 2012, 116, 257-268.	1.5	183
14	Maturation grade of coals as revealed by Raman spectroscopy: Progress and problems. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2005, 61, 2368-2377.	2.0	176
15	Mechanisms of graphite formation from kerogen: experimental evidence. <i>International Journal of Coal Geology</i> , 1995, 28, 1-36.	1.9	175
16	Evolution of Barnett Shale organic carbon structure and nanostructure with increasing maturation. <i>Organic Geochemistry</i> , 2014, 71, 7-16.	0.9	170
17	Characterizing various types of defects in nuclear graphite using Raman scattering: Heat treatment, ion irradiation and polishing. <i>Carbon</i> , 2015, 95, 364-373.	5.4	167
18	Extreme Deuterium Excesses in Ultracarbonaceous Micrometeorites from Central Antarctic Snow. <i>Science</i> , 2010, 328, 742-745.	6.0	160

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19	New experimental constraints on the composition and structure of tholins. <i>Icarus</i> , 2008, 198, 218-231.	1.1	144
20	Carbon nanoparticles from laser pyrolysis. <i>Carbon</i> , 2002, 40, 2775-2789.	5.4	133
21	Natural graphitization of anthracite: Experimental considerations. <i>Carbon</i> , 1995, 33, 679-691.	5.4	127
22	Influence of the atmosphere in the chemical activation of wood by phosphoric acid. <i>Carbon</i> , 1998, 36, 306-309.	5.4	125
23	Chemical structure and sources of the macromolecular, resistant, organic fraction isolated from a forest soil (Lacadae, south-west France). <i>Organic Geochemistry</i> , 2000, 31, 813-827.	0.9	122
24	Transmission electron microscopy studies on carbon materials prepared by mechanical milling. <i>Carbon</i> , 1999, 37, 1941-1959.	5.4	113
25	Precursor and metamorphic condition effects on Raman spectra of poorly ordered carbonaceous matter in chondrites and coals. <i>Earth and Planetary Science Letters</i> , 2009, 287, 185-193.	1.8	113
26	Experimental study of the microtextural and structural transformations of carbonaceous materials under pressure and temperature. <i>European Journal of Mineralogy</i> , 2004, 15, 937-951.	0.4	112
27	Correlation of the irreversible lithium capacity with the active surface area of modified carbons. <i>Carbon</i> , 2005, 43, 2160-2167.	5.4	112
28	The first in situ ⁷ Li nuclear magnetic resonance study of lithium insertion in hard-carbon anode materials for Li-ion batteries. <i>Journal of Chemical Physics</i> , 2003, 118, 6038-6045.	1.2	111
29	High temperature iron-based catalysts for hydrogen and nanostructured carbon production by methane decomposition. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 7832-7843.	3.8	111
30	Quantitative high-resolution transmission electron microscopy: a promising tool for carbon materials characterization. <i>Fuel Processing Technology</i> , 2002, 77-78, 229-235.	3.7	103
31	The effect of temperature on soot properties in premixed methane flames. <i>Combustion and Flame</i> , 2010, 157, 1959-1965.	2.8	93
32	In Situ ⁷ Li-Nuclear Magnetic Resonance Observation of Reversible Lithium Insertion into Disordered Carbons. <i>Electrochemical and Solid-State Letters</i> , 2003, 6, A225.	2.2	88
33	Molecular evidence for life in the 3.5-billion year old Warrawoona chert. <i>Earth and Planetary Science Letters</i> , 2008, 272, 476-480.	1.8	86
34	Nanodiamond nucleation below 2273K at 15GPa from carbons with different structural organizations. <i>Carbon</i> , 2007, 45, 636-648.	5.4	83
35	How to obtain a reliable structural characterization of polished graphitized carbons by Raman microspectroscopy. <i>Journal of Raman Spectroscopy</i> , 2012, 43, 207-211.	1.2	83
36	Probing structures of soot formed in premixed flames of methane, ethylene and benzene. <i>Proceedings of the Combustion Institute</i> , 2013, 34, 1885-1892.	2.4	80

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37	Atom transfer radical polymerization (ATRP) initiated by aryl diazonium salts: a new route for surface modification of multiwalled carbon nanotubes by tethered polymer chains. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2006, 287, 217-221.	2.3	78
38	Transmission Electron Microscopy of CONCORDIA UltraCarbonaceous Antarctic MicroMeteorites (UCAMMs): Mineralogical properties. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 76, 68-82.	1.6	78
39	Implications of in situ calcification for photosynthesis in a ~3.3Ga-old microbial biofilm from the Barberton greenstone belt, South Africa. <i>Earth and Planetary Science Letters</i> , 2011, 310, 468-479.	1.8	75
40	A Raman " HRTEM study of the carbonization of wood: A new Raman-based paleothermometer dedicated to archaeometry. <i>Carbon</i> , 2016, 102, 319-329.	5.4	74
41	Carbon nanotubes produced by aerosol pyrolysis: growth mechanisms and post-annealing effects. <i>Diamond and Related Materials</i> , 2004, 13, 1266-1269.	1.8	68
42	Origin of insoluble organic matter in type 1 and 2 chondrites: New clues, new questions. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 136, 80-99.	1.6	68
43	On the optically biaxial character and heterogeneity of anthracites. <i>International Journal of Coal Geology</i> , 2000, 44, 227-250.	1.9	65
44	A new approach to characterize the nanostructure of activated carbons from mathematical morphology applied to high resolution transmission electron microscopy images. <i>Carbon</i> , 2013, 52, 239-258.	5.4	65
45	The first in situ ⁷ Li NMR study of the reversible lithium insertion mechanism in disorganised carbons. <i>Journal of Physics and Chemistry of Solids</i> , 2004, 65, 245-251.	1.9	64
46	Structural and electrochemical characterisation of nitrogen enriched carbons produced by the co-pyrolysis of coal-tar pitch with polyacrylonitrile. <i>Electrochimica Acta</i> , 2004, 49, 423-432.	2.6	64
47	Graphitization of carbons synthesized in a confined geometry. <i>Carbon</i> , 2006, 44, 3348-3352.	5.4	63
48	Volcaniclastic habitats for early life on Earth and Mars: A case study from ~4.35Ga-old rocks from the Pilbara, Australia. <i>Planetary and Space Science</i> , 2011, 59, 1093-1106.	0.9	63
49	Influence of surface fibre properties and textural organization of a pyrocarbon interphase on the interfacial shear stress of SiC/SiC minicomposites reinforced with Hi-Nicalon S and Tyranno SA3 fibres. <i>Journal of the European Ceramic Society</i> , 2014, 34, 179-188.	2.8	63
50	Graphitization of Korean anthracites as studied by transmission electron microscopy and X-ray diffraction. <i>International Journal of Coal Geology</i> , 1987, 8, 375-393.	1.9	59
51	Graphitization at low temperatures (600-1200°C) in the presence of iron implications in planetology. <i>Carbon</i> , 2014, 66, 178-190.	5.4	57
52	Carbons at the heart of questions on energy and environment: A nanostructural approach. <i>Comptes Rendus - Geoscience</i> , 2015, 347, 124-133.	0.4	54
53	Nanostructure characterization of carbide-derived carbons by morphological analysis of transmission electron microscopy images combined with physisorption and Raman spectroscopy. <i>Carbon</i> , 2016, 105, 314-322.	5.4	53
54	Abundance and composition of the refractory organic fraction of an ancient, tropical soil (Pointe) Tj ETQq0 0 0 rgBT /Overlock_10 Tf 50	0.9	52

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55	A better understanding of the irreversible lithium insertion mechanisms in disordered carbons. <i>Journal of Physics and Chemistry of Solids</i> , 2004, 65, 211-217.	1.9	47
56	The Raman-Derived Carbonization Continuum: A Tool to Select the Best Preserved Molecular Structures in Archean Kerogens. <i>Astrobiology</i> , 2016, 16, 407-417.	1.5	46
57	Dynamic weakening and amorphization in serpentinite during laboratory earthquakes. <i>Geology</i> , 2016, 44, 607-610.	2.0	45
58	Wet Chemical Method for Making Graphene-like Films from Carbon Black. <i>ACS Applied Materials & Interfaces</i> , 2012, 4, 4491-4498.	4.0	44
59	Structures, origin and evolution of various carbon phases in the ureilite Northwest Africa 4742 compared with laboratory-shocked graphite. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 4167-4185.	1.6	43
60	Contribution of transmission electron microscopy to the study of the coal carbonization processes. <i>Fuel Processing Technology</i> , 1990, 24, 55-69.	3.7	42
61	High resolution TEM of chondritic carbonaceous matter: Metamorphic evolution and heterogeneity. <i>Meteoritics and Planetary Science</i> , 2012, 47, 345-362.	0.7	42
62	Different mechanisms of coke microtexture formation during coking coal carbonization. <i>Fuel</i> , 1994, 73, 795-809.	3.4	39
63	HRTEM study of activated carbons prepared by alkali hydroxide activation of anthracite. <i>Carbon</i> , 2004, 42, 1305-1310.	5.4	36
64	Size discontinuity between interstellar and chondritic aromatic structures: A high-resolution transmission electron microscopy study. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 3911-3917.	1.6	36
65	Application of Fourier self-deconvolution to the FT-i.r. characterization of coals and their N-methyl 2-pyrrolidinone extraction products. <i>Fuel</i> , 1995, 74, 217-225.	3.4	35
66	Raman microspectrometry of accumulated non-graphitized solid bitumens. <i>Journal of Raman Spectroscopy</i> , 1997, 28, 717-724.	1.2	35
67	Characterization of graphite implanted with chlorine ions using combined Raman microspectrometry and transmission electron microscopy on thin sections prepared by focused ion beam. <i>Carbon</i> , 2010, 48, 1244-1251.	5.4	35
68	Coke properties and their microtexture Part I: Microtextural analysis: A guide for cokemaking. <i>Fuel Processing Technology</i> , 1988, 20, 143-154.	3.7	33
69	Calculation of reflectance values for two models of texture of carbon materials. <i>International Journal of Coal Geology</i> , 1999, 38, 333-348.	1.9	33
70	Structure, composition, and location of organic matter in the enstatite chondrite Sahara 97096 (EH3). <i>Meteoritics and Planetary Science</i> , 2012, 47, 8-29.	0.7	33
71	Graphitization of highly porous carbons derived from poly(p-phenylene benzobisoxazole). <i>Carbon</i> , 2012, 50, 2929-2940.	5.4	33
72	Graphitization of high rank coals – the role of shear strain: experimental considerations. <i>Organic Geochemistry</i> , 1991, 17, 585-596.	0.9	32

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73	A small angle X-ray scattering study on the porosity of anthracites. <i>Carbon</i> , 2000, 38, 1391-1400.	5.4	31
74	Improved Molecular Models for Porous Carbons. <i>Studies in Surface Science and Catalysis</i> , 2001, 132, 647-652.	1.5	30
75	Influence of the Pyrolysis Conditions on the Nature of Lithium Inserted in Hard Carbons. <i>Journal of Physical Chemistry A</i> , 2001, 105, 5794-5800.	1.1	30
76	Multiple generations of carbonaceous material deposited in Apex chert by basin-scale pervasive hydrothermal fluid flow. <i>Gondwana Research</i> , 2014, 25, 284-289.	3.0	27
77	Organic geochemistry of precambrian shales and schists (Bohemian massif, Central Europe). <i>Organic Geochemistry</i> , 1990, 16, 865-872.	0.9	26
78	Influence of anthracite pretreatment in the preparation of activated carbons. <i>Fuel</i> , 1998, 77, 495-502.	3.4	25
79	Optical properties of synthetic carbon nanoparticles as model of cosmic dust. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2001, 57, 797-814.	2.0	25
80	Black carbon yields and types in forest and cultivated sandy soils (Landes de Gascogne, France) as determined with different methods: Influence of change in land use. <i>Organic Geochemistry</i> , 2006, 37, 1185-1189.	0.9	23
81	Nanostructured coatings of metal containing diamond-like carbon films deposited by femtosecond pulsed laser ablation. <i>Surface and Coatings Technology</i> , 2006, 200, 6272-6278.	2.2	23
82	Multiscale organisation of organic matter associated with gold and uranium minerals in the Witwatersrand basin, South Africa. <i>International Journal of Coal Geology</i> , 2009, 78, 77-88.	1.9	23
83	High-Resolution Transmission Electron Microscopy Studies of Graphite Materials Prepared by High-Temperature Treatment of Unburned Carbon Concentrates from Combustion Fly Ashes. <i>Energy & Fuels</i> , 2009, 23, 942-950.	2.5	23
84	Coke properties and their microtexture. Part III: First results about relationship between microtexture and reactivity of some cokes. <i>Fuel Processing Technology</i> , 1988, 20, 163-175.	3.7	22
85	Molecular study of insoluble organic matter in Kainsaz CO ₃ carbonaceous chondrite: Comparison with CI and CM IOM. <i>Meteoritics and Planetary Science</i> , 2008, 43, 1099-1111.	0.7	22
86	Complementary X-ray scattering and high resolution imaging of nanostructure development in thermally treated PBO fibers. <i>Carbon</i> , 2011, 49, 2960-2970.	5.4	20
87	Influence of the inherent metal species on the graphitization of methane-based carbon nanofibers. <i>Carbon</i> , 2012, 50, 5387-5394.	5.4	19
88	Effect of boron incorporation on the structure and electrical properties of diamond-like carbon films deposited by femtosecond and nanosecond pulsed laser ablation. <i>Thin Solid Films</i> , 2009, 518, 1470-1474.	0.8	18
89	Temperatures reached by the roof structure of Notre-Dame de Paris in the fire of April 15th 2019 determined by Raman paleothermometry. , 2020, 352, 7-18.		16
90	Coking properties of perhydrous low-rank vitrains. Influence of pyrolysis conditions. <i>Journal of Analytical and Applied Pyrolysis</i> , 2003, 67, 263-276.	2.6	15

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91	Structural and adsorption properties of carbons synthesized within taeniolite matrices. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 493-497.	1.7	10
92	Evaluation of Raman spectroscopy to detect fullerenes in geological materials. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2005, 61, 2364-2367.	2.0	10
93	Toward an experimental synthesis of the chondritic insoluble organic matter. Meteoritics and Planetary Science, 2015, 50, 1408-1422.	0.7	10
94	Ultrasonic treatment of glassy carbon for nanoparticle preparation. Ultrasonics Sonochemistry, 2017, 35, 615-622.	3.8	9
95	Search for early traces of fire in the Caune de l'Arago at Tautavel (Eastern Pyrenees, France), combining magnetic susceptibility measurements, microscopic observations, and Raman analysis. Comptes Rendus - Geoscience, 2021, 353, 247-264.	0.4	8
96	Influence of the oxidation of coals of different rank on coke microtexture and other relevant properties. Fuel, 1994, 73, 810-815.	3.4	7
97	Nanostructure evolution in heat-treated porous carbons derived from PBO polymer. Journal of Alloys and Compounds, 2012, 536, S464-S468.	2.8	7
98	Microtextural study of cokes from hydrolysis of coals. Fuel, 1995, 74, 201-207.	3.4	6
99	Mechanism of Lithium Insertion in Different Kinds of Carbons. Molecular Crystals and Liquid Crystals, 1998, 310, 359-364.	0.3	5
100	Silica encapsulation of luminescent silicon nanoparticles: stable and biocompatible nanohybrids. Journal of Nanoparticle Research, 2012, 14, 1.	0.8	5
101	Influence of Pyrolysis Conditions on the Performance of Hard Carbons as Anodes for Lithium Batteries. Molecular Crystals and Liquid Crystals, 2000, 340, 431-436.	0.3	4
102	HIGH RESOLUTION TRANSMISSION ELECTRON MICROSCOPY IMAGE ANALYSIS OF DISORDERED CARBONS USED FOR ELECTROCHEMICAL STORAGE OF ENERGY. , 2006, , 411-424.		1
103	The color of refractory organic carbon. Bulletin - Societe Geologique De France, 2018, 189, 9.	0.9	1
104	A Comparative Study of Silicate-Oxide Nanocomposites. Molecular Crystals and Liquid Crystals, 1998, 311, 295-301.	0.3	0
105	Traces of fire in a 560,000-year-old occupation soil at Caune de l'Arago: response to the article by Professor Henry de Lumley. Comptes Rendus - Geoscience, 2022, 354, 47-50.	0.4	0