

Katia Guerin

List of Publications by Year in descending order

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122
papers

3,098
citations

126708

33
h-index

189595

50
g-index

124
all docs

124
docs citations

124
times ranked

2608
citing authors

#	ARTICLE	IF	CITATIONS
1	Synthesis and Characterization of Highly Fluorinated Graphite Containing sp ² and sp ³ Carbon. <i>Chemistry of Materials</i> , 2004, 16, 1786-1792.	3.2	150
2	Fluorinated carbon nanofibres for high energy and high power densities primary lithium batteries. <i>Electrochemistry Communications</i> , 2007, 9, 1850-1855.	2.3	133
3	Effect of curvature on C–F bonding in fluorinated carbons: from fullerene and derivatives to graphite. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 1388-1398.	1.3	102
4	Solid-State NMR Study of the Post-Fluorination of (C _{2.5} F) _n . <i>Journal of Physical Chemistry B</i> , 2007, 111, 14143-14151.	1.2	87
5	NMR and EPR studies of room temperature highly fluorinated graphite heat-treated under fluorine atmosphere. <i>Carbon</i> , 2004, 42, 1931-1940.	5.4	83
6	EPR and Solid-State NMR Studies of Poly(dicarbon monofluoride) (C ₂ F) _n . <i>Journal of Physical Chemistry B</i> , 2006, 110, 11800-11808.	1.2	83
7	A ⁷ Li NMR study of a hard carbon for lithium-ion rechargeable batteries. <i>Solid State Ionics</i> , 2000, 127, 187-198.	1.3	76
8	Reactivity of Carbon Nanofibers with Fluorine Gas. <i>Chemistry of Materials</i> , 2007, 19, 161-172.	3.2	73
9	Solid-State NMR Study of Nanodiamonds Produced by the Detonation Technique. <i>Journal of Physical Chemistry C</i> , 2009, 113, 10371-10378.	1.5	70
10	Applicative performances of fluorinated carbons through fluorination routes: A review. <i>Journal of Fluorine Chemistry</i> , 2012, 134, 11-17.	0.9	67
11	Effect of Graphite Crystal Structure on Lithium Electrochemical Intercalation. <i>Journal of the Electrochemical Society</i> , 1999, 146, 3660-3665.	1.3	66
12	Comparative performances for primary lithium batteries of some covalent and semi-covalent graphite fluorides. <i>Journal of Power Sources</i> , 2006, 158, 1365-1372.	4.0	65
13	On the choice of graphite for lithium ion batteries. <i>Journal of Power Sources</i> , 1999, 81-82, 312-316.	4.0	62
14	On the irreversible capacities of disordered carbons in lithium-ion rechargeable batteries. <i>Electrochimica Acta</i> , 2000, 45, 1607-1615.	2.6	62
15	Pushing the theoretical limit of Li–CF _x batteries using fluorinated nanostructured carbon nanodiscs. <i>Carbon</i> , 2015, 94, 1061-1070.	5.4	57
16	Comparative Study of SWCNT Fluorination by Atomic and Molecular Fluorine. <i>Chemistry of Materials</i> , 2012, 24, 1744-1751.	3.2	56
17	Magnesium batteries: Towards a first use of graphite fluorides. <i>Journal of Power Sources</i> , 2007, 173, 592-598.	4.0	52
18	Enhanced performances in primary lithium batteries of fluorinated carbon nanofibers through static fluorination. <i>Electrochimica Acta</i> , 2013, 114, 142-151.	2.6	50

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19	Electrochemical performance of low temperature fluorinated graphites used as cathode in primary lithium batteries. Carbon, 2006, 44, 2543-2548.	5.4	49
20	Protection of nuclear graphite toward fluoride molten salt by glassy carbon deposit. Journal of Nuclear Materials, 2009, 384, 292-302.	1.3	48
21	Hybrid-Type Graphite Fluoride as Cathode Material in Primary Lithium Batteries. Electrochemical and Solid-State Letters, 2004, 7, A159.	2.2	47
22	Modification of ultra-high molecular weight polyethylene by various fluorinating routes. Journal of Polymer Science Part A, 2011, 49, 3559-3573.	2.5	47
23	Fluorination of anatase TiO ₂ towards titanium oxyfluoride TiOF ₂ : a novel synthesis approach and proof of the Li-insertion mechanism. Journal of Materials Chemistry A, 2014, 2, 15308-15315.	5.2	46
24	Thermal exfoliation of fluorinated graphite. Carbon, 2014, 77, 688-704.	5.4	46
25	Tuning the discharge potential of fluorinated carbon used as electrode in primary lithium battery. Electrochimica Acta, 2012, 59, 485-491.	2.6	44
26	Carbon nanofibres fluorinated using TbF ₄ as fluorinating agent. Part I: Structural properties. Carbon, 2008, 46, 1010-1016.	5.4	41
27	Solid-state ¹⁹ F and ¹³ C NMR of room temperature fluorinated graphite and samples thermally treated under fluorine: Low-field and high-resolution studies. Journal of Solid State Chemistry, 2005, 178, 1262-1268.	1.4	40
28	Effect of graphitization on fluorination of carbon nanocones and nanodiscs. Carbon, 2009, 47, 2763-2775.	5.4	40
29	NMR and NEXAFS Study of Various Graphite Fluorides. Journal of Physical Chemistry C, 2013, 117, 13564-13572.	1.5	40
30	High energy density of primary lithium batteries working with sub-fluorinated few walled carbon nanotubes cathode. Journal of Alloys and Compounds, 2017, 726, 852-859.	2.8	38
31	Highly fluorinated graphite prepared from graphite fluoride formed using BF ₃ catalyst. Journal of Fluorine Chemistry, 2005, 126, 1078-1087.	0.9	37
32	Effect of fluorine doping on structure and CO ₂ adsorption in silicon carbide-derived carbon. Carbon, 2016, 96, 565-577.	5.4	37
33	Noncovalent Functionalization of Single-Wall Carbon Nanotubes for the Elaboration of Gas Sensor Dedicated to BTX Type Gases: The Case of Toluene. Journal of Physical Chemistry C, 2013, 117, 20217-20228.	1.5	36
34	Tribological properties of low-temperature graphite fluorides. Influence of the structure on the lubricating performances. Journal of Physics and Chemistry of Solids, 2006, 67, 1095-1099.	1.9	35
35	New synthesis methods for fluorinated carbon nanofibres and applications. Journal of Fluorine Chemistry, 2010, 131, 676-683.	0.9	34
36	Fluorinated (Nano)Carbons: CF _x Electrodes and CF _x -Based Batteries. Energy Technology, 2021, 9, 2000605.	1.8	31

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37	Direct fluorination of poly(p-phenylene). <i>Polymer</i> , 2005, 46, 6736-6745.	1.8	30
38	All-organic device with integrated chemical filter dedicated to the selective measurement of NO ₂ in air. <i>Organic Electronics</i> , 2010, 11, 1223-1229.	1.4	30
39	Solid State NMR study of nanodiamond surface chemistry. <i>Solid State Nuclear Magnetic Resonance</i> , 2011, 40, 144-154.	1.5	30
40	One-shot versus stepwise gas-phase synthesis of iron trifluoride: investigation of pure molecular F ₂ fluorination of chloride precursors. <i>CrystEngComm</i> , 2013, 15, 3664.	1.3	29
41	Electrochemical discharge mechanism of fluorinated graphite used as electrode in primary lithium batteries. <i>Journal of Physics and Chemistry of Solids</i> , 2006, 67, 1173-1177.	1.9	28
42	Tribological Properties of Fluorinated Carbon Nanofibres. <i>Tribology Letters</i> , 2009, 34, 49-59.	1.2	27
43	First Insight into Fluorinated Pt/Carbon Aerogels as More Corrosion-Resistant Electrocatalysts for Proton Exchange Membrane Fuel Cell Cathodes. <i>Electrocatalysis</i> , 2015, 6, 521-533.	1.5	27
44	Activity and Durability of Platinum-Based Electrocatalysts Supported on Bare or Fluorinated Nanostructured Carbon Substrates. <i>Journal of the Electrochemical Society</i> , 2018, 165, F3346-F3358.	1.3	27
45	Carbon nanofibres fluorinated using TbF ₄ as fluorinating agent. Part II: Adsorption and electrochemical properties. <i>Carbon</i> , 2008, 46, 1017-1024.	5.4	26
46	The synthesis of multilayer graphene materials by the fluorination of carbon nanodiscs/nanocones. <i>Carbon</i> , 2012, 50, 3897-3908.	5.4	26
47	Fluorination of silicon carbide thin films using pure F ₂ gas or XeF ₂ . <i>Thin Solid Films</i> , 2010, 518, 6746-6751.	0.8	25
48	Fluorination of single walled carbon nanotubes at low temperature: Towards the reversible fluorine storage into carbon nanotubes. <i>Journal of Fluorine Chemistry</i> , 2011, 132, 1072-1078.	0.9	25
49	The synthesis of microporous carbon by the fluorination of titanium carbide. <i>Carbon</i> , 2011, 49, 2998-3009.	5.4	22
50	Insights on the reactivity of ordered porous carbons exposed to different fluorinating agents and conditions. <i>Carbon</i> , 2015, 84, 567-583.	5.4	22
51	Tuning fluorine and oxygen distribution in graphite oxifluorides for enhanced performances in primary lithium battery. <i>Carbon</i> , 2019, 141, 6-15.	5.4	22
52	Solid state NMR studies of covalent graphite fluorides (CF) _n and (C ₂ F) _n . <i>Journal of Physics and Chemistry of Solids</i> , 2006, 67, 1100-1105.	1.9	21
53	Tribological properties of fluorinated nanocarbons with different shape factors. <i>Journal of Fluorine Chemistry</i> , 2012, 144, 10-16.	0.9	21
54	Chemical and electrochemical intercalation of lithium into boronated carbons. <i>Carbon</i> , 1999, 37, 1961-1964.	5.4	19

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55	Fluorinated exfoliated graphite as cathode materials for enhanced performances in primary lithium battery. <i>Electrochimica Acta</i> , 2017, 227, 18-23.	2.6	19
56	Magnetic properties of mixed graphite containing both hexagonal and rhombohedral forms. <i>European Physical Journal B</i> , 2000, 13, 235-243.	0.6	18
57	Solid-state NMR and EPR study of fluorinated carbon nanofibers. <i>Journal of Solid State Chemistry</i> , 2008, 181, 1915-1924.	1.4	18
58	Room temperature graphite fluorination process using chlorine as catalyst. <i>Journal of Physics and Chemistry of Solids</i> , 2006, 67, 1157-1161.	1.9	17
59	An innovative gas sensor system designed from a sensitive organic semiconductor downstream a nanocarbonaceous chemical filter for the selective detection of NO ₂ in an environmental context. <i>Sensors and Actuators B: Chemical</i> , 2012, 173, 659-667.	4.0	17
60	The effect of nanostructure on the thermal properties of fluorinated carbon nanofibres. <i>Carbon</i> , 2011, 49, 4801-4811.	5.4	16
61	Utilization of graphitized and fluorinated carbon as platinum nanoparticles supports for application in proton exchange membrane fuel cell cathodes. <i>Journal of Power Sources</i> , 2018, 404, 28-38.	4.0	16
62	High energy primary lithium battery using oxidized sub-fluorinated graphite fluorides. <i>Journal of Fluorine Chemistry</i> , 2019, 227, 109369.	0.9	16
63	Heteronuclear dipolar recoupling using Hartmannâ€“Hahn cross polarization: A probe for ¹⁹ Fâ€“ ¹³ C distance determination of fluorinated carbon materials. <i>Solid State Nuclear Magnetic Resonance</i> , 2007, 31, 131-140.	1.5	15
64	Fluorinated nanocarbons using fluorinating agent: Strategies of fluorination and applications. <i>European Physical Journal B</i> , 2010, 75, 133-139.	0.6	15
65	Friction Properties of Fluorinated Carbon Nanodiscs and Nanocones. <i>Tribology Letters</i> , 2011, 41, 353-362.	1.2	15
66	Carbon in lithium-ion and post-lithium-ion batteries: Recent features. <i>Synthetic Metals</i> , 2021, 280, 116864.	2.1	15
67	Tribological Properties of Room Temperature Fluorinated Graphite Heat-Treated Under Fluorine Atmosphere. <i>Tribology Letters</i> , 2010, 37, 31-41.	1.2	14
68	Structure control at the nanoscale in fluorinated graphitized carbon blacks through the fluorination route. <i>Journal of Fluorine Chemistry</i> , 2014, 168, 163-172.	0.9	14
69	Evidence for a nanosize effect on the structural and high performance electrochemical properties of V ₂ O ₅ obtained via fluorine chemistry. <i>Electrochimica Acta</i> , 2017, 245, 350-360.	2.6	13
70	Tin dioxide coated carbon materials as an alternative catalyst support for PEMFCs: Impacts of the intrinsic carbon properties and the synthesis parameters on the coating characteristics. <i>Microporous and Mesoporous Materials</i> , 2018, 271, 1-15.	2.2	13
71	Physical and chemical characterizations of nanometric indigo layers as efficient ozone filter for gas sensor devices. <i>Thin Solid Films</i> , 2011, 520, 971-977.	0.8	12
72	Activity and Durability of Platinum-Based Electrocatalysts with Tin Oxideâ€“Coated Carbon Aerogel Materials as Catalyst Supports. <i>Electrocatalysis</i> , 2019, 10, 156-172.	1.5	12

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73	On the Electrochemical Intercalation of Lithium into Graphitizable Carbons. <i>Molecular Crystals and Liquid Crystals</i> , 1998, 310, 389-396.	0.3	11
74	Fluorine-intercalated graphite for lithium batteries. , 2005, , 369-395.		11
75	Direct Fluorination of Carbon Nanocones and Nanodiscs. <i>Journal of Nanoscience and Nanotechnology</i> , 2009, 9, 4496-4501.	0.9	11
76	An innovative gas sensor system designed from a sensitive organic semiconductor downstream a nanocarbonaceous chemical filter for selective detection of NO ₂ in an environmental context. Part II: Interpretations of O ₃ /nanocarbons and NO ₂ /nanocarbons interactions. <i>Sensors and Actuators B: Chemical</i> , 2012, 173, 652-658.	4.0	11
77	Atomic Layer Fluorination of the Li ₄ Ti ₅ O ₁₂ Surface: A Multiprobing Survey. <i>ACS Applied Energy Materials</i> , 2019, 2, 6681-6692.	2.5	11
78	Dual C F bonding in fluorinated exfoliated graphite. <i>Journal of Fluorine Chemistry</i> , 2015, 174, 36-41.	0.9	10
79	On the Choice of Carbon Materials at the Negative Electrode of Li-ion Batteries: Graphite vs. Hard Carbons. <i>Molecular Crystals and Liquid Crystals</i> , 2000, 340, 493-498.	0.3	9
80	Direct fluorination of various poly(p-phenylene): Effects of the polymer synthesis and thermal post-treatment. <i>Polymer</i> , 2007, 48, 3961-3973.	1.8	9
81	Indigo molecules adsorbed on carbonaceous nanomaterials as chemical filter for the selective detection of NO ₂ in the environment. <i>Journal of Colloid and Interface Science</i> , 2013, 407, 39-46.	5.0	9
82	Comparative Electrochemical Study of Low Temperature Fluorinated Graphites used as Cathode in Primary Lithium Batteries. <i>ECS Transactions</i> , 2006, 3, 153-163.	0.3	8
83	A carbonaceous chemical filter for the selective detection of NO ₂ in the environment. <i>Carbon</i> , 2013, 52, 17-29.	5.4	8
84	Rhombohedral iron trifluoride with a hierarchized macroporous/mesoporous texture from gaseous fluorination of iron disilicide. <i>Materials Chemistry and Physics</i> , 2016, 173, 355-363.	2.0	8
85	Unravelling lithiation mechanisms of iron trifluoride by <i>operando</i> X-ray absorption spectroscopy and MCR-ALS chemometric tools. <i>New Journal of Chemistry</i> , 2020, 44, 10153-10164.	1.4	8
86	Relationship between tin environment of SnO ₂ nanoparticles and their electrochemical behaviour in a lithium ion battery. <i>Materials Chemistry and Physics</i> , 2021, 257, 123461.	2.0	8
87	Improved selectivity towards NO ₂ of phthalocyanine-based chemosensors by means of original indigo/nanocarbons hybrid material. <i>Talanta</i> , 2014, 127, 100-107.	2.9	7
88	Surface atomic layer fluorination of Li ₄ Ti ₅ O ₁₂ : Investigation of the surface electrode reactivity and the outgassing behavior in LiBs. <i>Applied Surface Science</i> , 2020, 527, 146834.	3.1	7
89	The Use of Nanocarbons as Chemical Filters for the Selective Detection of Nitrogen Dioxide and Ozone. <i>Journal of Nanoscience and Nanotechnology</i> , 2010, 10, 5653-5661.	0.9	6
90	Friction Properties of Fluorinated Graphitized Carbon Blacks. <i>Tribology Letters</i> , 2014, 56, 259-271.	1.2	6

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91	Advances in tailoring the water content in porous carbon aerogels using RT-pulsed fluorination. <i>Journal of Fluorine Chemistry</i> , 2020, 238, 109633.	0.9	6
92	Fluorination of poly(p-phenylene) using TbF ₄ as fluorinating agent. <i>Journal of Fluorine Chemistry</i> , 2007, 128, 1402-1409.	0.9	5
93	Synthesis of carbon@silica core-shell nanofibers from a dispersion of fluorinated carbon nanofibers in solvated polysiloxane. <i>Carbon</i> , 2013, 55, 23-33.	5.4	5
94	Nature of C-F Bonds in Fluorinated Carbons. , 2017, , 215-243.		5
95	Surface Layer Fluorination of TiO ₂ Electrodes for Electrode Protection LiBs: Fading the Reactivity of the Negative Electrode/Electrolyte Interface. <i>Journal of the Electrochemical Society</i> , 2019, 166, A1905-A1914.	1.3	5
96	Synthesis of Nb ₂ O ₅ Nanoplates and their Conversion into NbO ₂ F Nanoparticles by Controlled Fluorination with Molecular Fluorine. <i>European Journal of Inorganic Chemistry</i> , 2019, 2019, 230-236.	1.0	5
97	Influence upon cycling of oxygen amount in tin-based compound used as negative electrode in lithium-ion battery. <i>Synthetic Metals</i> , 2020, 267, 116477.	2.1	5
98	Enhanced concentration of dispersed carbon nanofibres in organic solvents through their functionalization by fluorination. <i>Journal of Colloid and Interface Science</i> , 2013, 400, 11-17.	5.0	4
99	Fluorination-Induced Changes in Hydrophobicity of Silicon Carbide-Derived Nanoporous Carbon. <i>Journal of Physical Chemistry C</i> , 2016, 120, 18595-18606.	1.5	4
100	Electrochemical kinetics of Li insertion in nanosized high performance V ₂ O ₅ obtained via fluorine chemistry. <i>Electrochimica Acta</i> , 2017, 253, 472-478.	2.6	4
101	Copper-iron ternary metal fluorides from multi-metallic template fluorination and their first use as cathode in solid state Li-batteries. <i>Journal of Solid State Chemistry</i> , 2022, 310, 123031.	1.4	4
102	New Nano-C-F Compounds for Nonrechargeable Lithium Batteries. , 2015, , 261-287.		3
103	Fluorinated Nanocarbons for Lubrication. , 2017, , 325-360.		3
104	Effect of fluorination on the stability of carbon nanofibres in organic solvents. <i>Comptes Rendus Chimie</i> , 2018, 21, 791-799.	0.2	3
105	Synthesis of NiF ₂ and NiF ₂ ·4H ₂ O Nanoparticles by Microemulsion and Their Self-Assembly. <i>Langmuir</i> , 2020, 36, 8461-8475.	1.6	3
106	Functionalized Carbon Nanotubes-Based Gas Sensors for Pollutants Detection: Investigation on the Use of a Double Transduction Mode. <i>Key Engineering Materials</i> , 2014, 605, 75-78.	0.4	2
107	High Performances of Oxyfluoride Electrode Used in Lithium Ion Battery. <i>E3S Web of Conferences</i> , 2017, 16, 17007.	0.2	2
108	Understanding of the nanosize effect on the structure and electrochemistry of V ₂ O ₅ obtained via fluorine chemistry. <i>Materials Today: Proceedings</i> , 2018, 5, 22850-22858.	0.9	2

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109	Optimized Electrode/Electrolyte Interface of MWCNT/SnO ₂ Composite through Gas Solid Fluorination. ACS Applied Materials & Interfaces, 2021, 13, 28150-28163.	4.0	2
110	A ⁷ Li NMR Study of a Hard Carbon as a Function of Temperature and Lithiation State. Molecular Crystals and Liquid Crystals, 2000, 340, 467-472.	0.3	1
111	The Influence of Sacrificial Carbonaceous Supports on the Synthesis of Anhydrous NiF ₂ Nanoparticles. ChemistrySelect, 2016, 1, 5172-5181.	0.7	1
112	Proton Exchange Membrane Fuel Cell With Enhanced Durability Using Fluorinated Carbon As Electrocatalyst. E3S Web of Conferences, 2017, 16, 17001.	0.2	1
113	Tin-based materials: the future of anode materials for lithium ion battery?. , 2019, , .		1
114	Atomic Layer Fluorination of 5V Class Positive Electrode Material LiCoPO ₄ for Enhanced Electrochemical Performance. Batteries and Supercaps, 2020, 3, 1051-1058.	2.4	1
115	Micro-texturing by femtosecond laser ablation of a carbonaceous anode for production of fluorine by electrolysis. Journal of Fluorine Chemistry, 2021, 244, 109746.	0.9	1
116	Analytical Transmission Electron Microscopy Investigation of the Fluorination Process of Carbon Nanoparticles.. Microscopy and Microanalysis, 2014, 20, 1794-1795.	0.2	0
117	New Indigo/Nanocarbons Hybrid Material as Chemical Filter for the Enhancement of Gas Sensor Selectivity towards Nitrogen Dioxide. Key Engineering Materials, 2014, 605, 135-138.	0.4	0
118	FIB, TEM and AFM Quantitative Investigation of Nanostructure and Nanoscale Friction Properties of Single Partially Fluorinated Carbon Nanofibres. Microscopy and Microanalysis, 2014, 20, 1784-1785.	0.2	0
119	Fluorinated 0D, 1D, and 2D Nanocarbons. , 2016, , 237-266.		0
120	Rhombohedral Iron Trifluoride with a Hierarchized Macroporous/Mesoporous Texture from Gaseous Fluorination of Iron Disilicide. E3S Web of Conferences, 2017, 16, 08001.	0.2	0
121	Advanced Carbon Fluorides For Primary Lithium Batteries. E3S Web of Conferences, 2017, 16, 17002.	0.2	0
122	Multi-Metallic Template Fluorination Mmtf for the Preparation of Ternary Metal Fluoride and Their First Use As Cathodes in Solid State Lithium Batteries. ECS Meeting Abstracts, 2021, MA2021-01, 2070-2070.	0.0	0