Silvia Villar-Rodil

List of Publications by Year
in descending order

85 papers	8,647 citations	94381 37 h-index	53190 85 g-index
86 all docs	86 docs citations	86 times ranked	12451 citing authors

#	Article	IF	Citations
1	Graphene Oxide Dispersions in Organic Solvents. Langmuir, 2008, 24, 10560-10564.	1.6	2,511
2	Vitamin C Is an Ideal Substitute for Hydrazine in the Reduction of Graphene Oxide Suspensions. Journal of Physical Chemistry C, 2010, 114, 6426-6432.	1.5	1,230
3	Atomic Force and Scanning Tunneling Microscopy Imaging of Graphene Nanosheets Derived from Graphite Oxide. Langmuir, 2009, 25, 5957-5968.	1.6	631
4	High-throughput production of pristine graphene in an aqueous dispersion assisted by non-ionic surfactants. Carbon, 2011, 49, 1653-1662.	5.4	461
5	Preparation of graphene dispersions and graphene-polymer composites in organic media. Journal of Materials Chemistry, 2009, 19, 3591.	6.7	293
6	Towards full repair of defects in reduced graphene oxide films by two-step graphitization. Nano Research, 2013, 6, 216-233.	5.8	199
7	Environmentally friendly approaches toward the mass production of processable graphene from graphite oxide. Journal of Materials Chemistry, 2011, 21, 298-306.	6.7	173
8	UV light exposure of aqueous graphene oxide suspensions to promote their direct reduction, formation of grapheneâ€“metal nanoparticle hybrids and dye degradation. Carbon, 2012, 50, 1014-1024.	5.4	171
9	Kinetic Isotope Effect for H2and D2Quantum Molecular Sieving in Adsorption/Desorption on Porous Carbon Materials. Journal of Physical Chemistry B, 2006, 110, 9947-9955.	1.2	139
10	Chemically Exfoliated MoS₂ Nanosheets as an Efficient Catalyst for Reduction Reactions in the Aqueous Phase. ACS Applied Materials & Interfaces, 2014, 6, 21702-21710.	4.0	126
11	Biomolecule-assisted exfoliation and dispersion of graphene and other two-dimensional materials: a review of recent progress and applications. Nanoscale, 2016, 8, 15389-15413.	2.8	122
12	Production of aqueous dispersions of inorganic graphene analogues by exfoliation and stabilization with non-ionic surfactants. RSC Advances, 2014, 4, 14115-14127.	1.7	101
13	Achieving Extremely Concentrated Aqueous Dispersions of Graphene Flakes and Catalytically Efficient Graphene-Metal Nanoparticle Hybrids with Flavin Mononucleotide as a High-Performance Stabilizer. ACS Applied Materials & Interfaces, 2015, 7, 10293-10307.	4.0	101
14	Nomex-derived activated carbon fibers as electrode materials in carbon based supercapacitors. Journal of Power Sources, 2006, 153, 419-423.	4.0	98
15	Investigating the influence of surfactants on the stabilization of aqueous reduced graphene oxide dispersions and the characteristics of their composite films. Carbon, 2012, 50, 3184-3194.	5.4	97
16	From graphene oxide to pristine graphene: revealing the inner workings of the full structural restoration. Nanoscale, 2015, 7, 2374-2390.	2.8	95
17	Electrochemical Exfoliation of Graphite in Aqueous Sodium Halide Electrolytes toward Low Oxygen Content Graphene for Energy and Environmental Applications. ACS Applied Materials & Interfaces, 2017, 9, 24085-24099.	4.0	92
18	Electrolytic exfoliation of graphite in water with multifunctional electrolytes: en route towards high quality, oxide-free graphene flakes. Nanoscale, 2016, 8, 2982-2998.	2.8	84

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19	Atomic Force Microscopy and Infrared Spectroscopy Studies of the Thermal Degradation of Nomex Aramid Fibers. Chemistry of Materials, 2001, 13, 4297-4304.	3.2	83
20	Nitrogen in aramid-based activated carbon fibers by TPD, XPS and XANES. Carbon, 2006, 44, 2452-2462.	5.4	83
21	High quality, low oxygen content and biocompatible graphene nanosheets obtained by anodic exfoliation of different graphite types. Carbon, 2015, 94, 729-739.	5.4	83
22	Activated Carbon Materials of Uniform Porosity from Polyaramid Fibers. Chemistry of Materials, 2005, 17, 5893-5908.	3.2	82
23	Studies on pyrolysis of Nomex polyaramid fibers. Journal of Analytical and Applied Pyrolysis, 2001, 58-59, 105-115.	2.6	80
24	Chemical and microscopic analysis of graphene prepared by different reduction degrees of graphene oxide. Journal of Alloys and Compounds, 2012, 536, S532-S537.	2.8	74
25	Impact of Covalent Functionalization on the Aqueous Processability, Catalytic Activity, and Biocompatibility of Chemically Exfoliated MoS₂ Nanosheets. ACS Applied Materials & Interfaces, 2016, 8, 27974-27986.	4.0	73
26	A quantitative analysis of the dispersion behavior of reduced graphene oxide in solvents. Carbon, 2014, 75, 390-400.	5.4	66
27	Studies on the Thermal Degradation of Poly (p-phenylene benzobisoxazole). Chemistry of Materials, 2003, 15, 4052-4059.	3.2	63
28	Oxidized graphitic carbon nitride nanosheets as an effective adsorbent for organic dyes and tetracycline for water remediation. Journal of Alloys and Compounds, 2019, 809, 151783.	2.8	60
29	Investigating the Dispersion Behavior in Solvents, Biocompatibility, and Use as Support for Highly Efficient Metal Catalysts of Exfoliated Graphitic Carbon Nitride. ACS Applied Materials & Interfaces, 2015, 7, 24032-24045.	4.0	57
30	Determining the thickness of chemically modified graphenes by scanning probe microscopy. Carbon, 2010, 48, 2657-2660.	5.4	46
31	Carbon molecular sieve cloths prepared by chemical vapour deposition of methane for separation of gas mixtures. Microporous and Mesoporous Materials, 2005, 77, 109-118.	2.2	43
32	A simple strategy to improve the yield of graphene nanosheets in the anodic exfoliation of graphite foil. Carbon, 2017, 115, 625-628.	5.4	43
33	Aqueous Cathodic Exfoliation Strategy toward Solution-Processable and Phase-Preserved MoS₂ Nanosheets for Energy Storage and Catalytic Applications. ACS Applied Materials & Interfaces, 2019, 11, 36991-37003.	4.0	43
34	Identifying efficient natural bioreductants for the preparation of graphene and graphene-metal nanoparticle hybrids with enhanced catalytic activity from graphite oxide. Carbon, 2013, 63, 30-44.	5.4	42
35	N2Physisorption on Carbon Nanotubes:Â Computer Simulation and Experimental Results. Journal of Physical Chemistry B, 2003, 107, 8905-8916.	1.2	41
36	Porous Texture Evolution in Nomex-Derived Activated Carbon Fibers. Journal of Colloid and Interface Science, 2002, 252, 169-176.	5.0	39

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37	Nitrogen doped mesoporous carbon aerogels and implications for electrocatalytic oxygen reduction reactions. Microporous and Mesoporous Materials, 2016, 230, 135-144.	2.2	39
38	Consequences of Nitrogen Doping and Oxygen Enrichment on Titanium Local Order and Photocatalytic Performance of TiO₂ Anatase. Journal of Physical Chemistry C, 2017, 121, 6770-6780.	1.5	39
39	Global and Local Oxidation Behavior of Reduced Graphene Oxide. Journal of Physical Chemistry C, 2011, 115, 7956-7966.	1.5	36
40	Effect of Phosphoric Acid on Chemical Transformations during Nomex Pyrolysis. Chemistry of Materials, 2004, 16, 2639-2647.	3.2	34
41	Aqueous Exfoliation of Transition Metal Dichalcogenides Assisted by DNA/RNA Nucleotides: Catalytically Active and Biocompatible Nanosheets Stabilized by Acidâ€“Base Interactions. ACS Applied Materials & Interfaces, 2017, 9, 2835-2845.	4.0	33
42	High Performance Na-O₂ Batteries and Printed Microsupercapacitors Based on Water-Processable, Biomolecule-Assisted Anodic Graphene. ACS Applied Materials & Interfaces, 2020, 12, 494-506.	4.0	32
43	Developing green photochemical approaches towards the synthesis of carbon nanofiber- and graphene-supported silver nanoparticles and their use in the catalytic reduction of 4-nitrophenol. RSC Advances, 2013, 3, 18323.	1.7	31
44	Macrophage inflammatory and metabolic responses to graphene-based nanomaterials differing in size and functionalization. Colloids and Surfaces B: Biointerfaces, 2020, 186, 110709.	2.5	30
45	Fibrous Carbon Molecular Sieves by Chemical Vapor Deposition of Benzene. Gas Separation Ability. Chemistry of Materials, 2002, 14, 4328-4333.	3.2	29
46	Highly efficient silver-assisted reduction of graphene oxide dispersions at room temperature: mechanism, and catalytic and electrochemical performance of the resulting hybrids. Journal of Materials Chemistry A, 2014, 2, 7295-7305.	5.2	29
47	High quality, low-oxidized graphene via anodic exfoliation with table salt as an efficient oxidation-preventing co-electrolyte for water/oil remediation and capacitive energy storage applications. Applied Materials Today, 2018, 11, 246-254.	2.3	28
48	Characterization of aramid based activated carbon fibres by adsorption and immersion techniques. Carbon, 2002, 40, 1376-1380.	5.4	27
49	Surface Characterization of PBO Fibers. Macromolecules, 2003, 36, 8662-8672.	2.2	26
50	Nanoporous carbon fibres by pyrolysis of nomex polyaramid fibres. Journal of Thermal Analysis and Calorimetry, 2005, 79, 529-532.	2.0	26
51	Title is missing!. Magyar AprÃ³vad KÃ¶zlemÃ©nyek, 2002, 70, 37-43.	1.4	24
52	Efficient Pt electrocatalysts supported onto flavin mononucleotideâ€“exfoliated pristine graphene for the methanol oxidation reaction. Electrochimica Acta, 2017, 231, 386-395.	2.6	21
53	Thermal decomposition of poly(p-phenylene benzobisoxazole) fibres: monitoring the chemical and nanostructural changes by Raman spectroscopy and scanning probe microscopy. Polymer Degradation and Stability, 2004, 86, 263-268.	2.7	20
54	Effect of some precursor characteristics on the porous texture of activated carbon fibres prepared from Nomex aramid fibres. Microporous and Mesoporous Materials, 2000, 41, 319-321.	2.2	18

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55	Carbon Molecular Sieves for Air Separation from Nomex Aramid Fibers. Journal of Colloid and Interface Science, 2002, 254, 414-416.	5.0	16
56	Real-Time Monitoring of Polymer Swelling on the Nanometer Scale by Atomic Force Microscopy. Langmuir, 2006, 22, 4728-4733.	1.6	16
57	Preparation, characterization and fundamental studies on graphenes by liquid-phase processing of graphite. Journal of Alloys and Compounds, 2012, 536, S450-S455.	2.8	16
58	Flavin mononucleotide-exfoliated graphene flakes as electrodes for the electrochemical determination of uric acid in the presence of ascorbic acid. Journal of Electroanalytical Chemistry, 2016, 783, 41-48.	1.9	16
59	Chemical and structural modifications of carbon nanofibers with different degrees of graphitic order following oxygen plasma treatments. Materials Chemistry and Physics, 2013, 138, 615-622.	2.0	15
60	Activation of two-dimensional MoS2 nanosheets by wet-chemical sulfur vacancy engineering for the catalytic reduction of nitroarenes and organic dyes. Applied Materials Today, 2020, 20, 100678.	2.3	15
61	Grafting of adipic anhydride to carbon nanotubes through a Diels-Alder cycloaddition/oxidation cascade reaction. Carbon, 2016, 98, 421-431.	5.4	14
62	An aqueous cathodic delamination route towards high quality graphene flakes for oil sorption and electrochemical charge storage applications. Chemical Engineering Journal, 2019, 372, 1226-1239.	6.6	14
63	The use of microcalorimetry to assess the size exclusion properties of carbon molecular sieves. Thermochimica Acta, 2004, 420, 141-144.	1.2	13
64	Formation of crystalline inclusion compounds of poly (vinyl chloride) of different stereoregularity with Î3-cyclodextrin. Journal of Polymer Science Part A, 2007, 45, 2503-2513.	2.5	13
65	Thermoresponsive biodegradable HEMAâ€"Lactateâ€"Dextran-co-NIPA cryogels for controlled release of simvastatin. Artificial Cells, Nanomedicine and Biotechnology, 2015, 43, 40-49.	1.9	13
66	Following changes in the porous texture of Nomex-derived activated carbon fibres with the molecular probe technique. Microporous and Mesoporous Materials, 2003, 64, 11-19.	2.2	11
67	A scanning tunnelling microscopy insight into the preparation of carbon molecular sieves by chemical vapour deposition. Journal of Materials Chemistry, 2003, 13, 1513-1516.	6.7	11
68	Diffusion of molecular hydrogen in carbon aerogel. Carbon, 2016, 98, 572-581.	5.4	11
69	Electrochemical Synthesis and Characterization of Flavin Mononucleotideâ€Exfoliated Pristine Graphene/Polypyrrole Composites. ChemElectroChem, 2017, 4, 1487-1497.	1.7	11
70	Molecular Functionalization of 2H-Phase MoS₂ Nanosheets via an Electrolytic Route for Enhanced Catalytic Performance. ACS Applied Materials & Interfaces, 2021, 13, 33157-33171.	4.0	11
71	Boosting the Performance of Graphene Cathodes in Naâ€"O₂ Batteries by Exploiting the Multifunctional Character of Small Biomolecules. Small, 2021, 17, e2005034.	5.2	10
72	Discovery of effective solvents for platelet-type graphite nanofibers. Carbon, 2013, 53, 222-230.	5.4	9

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73	A Simple and Expeditious Route to Phosphate-Functionalized, Water-Processable Graphene for Capacitive Energy Storage. ACS Applied Materials & Interfaces, 2021, 13, 54860-54873.	4.0	9
74	Surface modification of high-performance polymeric fibers by an oxygen plasma. A comparative study of poly(p-phenylene terephthalamide) and poly(p-phenylene benzobisoxazole). Journal of Chromatography A, 2011, 1218, 3781-3790.	1.8	8
75	N-containing carbons from styreneâ€“divinylbenzene copolymer by urea treatment. Applied Surface Science, 2012, 258, 2410-2415.	3.1	8
76	Surface modification of high-surface area graphites by oxygen plasma treatments. Applied Surface Science, 2022, 575, 151675.	3.1	8
77	An electrochemical route to holey graphene nanosheets for charge storage applications. Carbon, 2022, 195, 57-68.	5.4	6
78	A biosupramolecular approach to graphene: Complementary nucleotide-nucleobase combinations as enhanced stabilizers towards aqueous-phase exfoliation and functional graphene-nucleotide hydrogels. Carbon, 2018, 129, 321-334.	5.4	5
79	Heteropolyacids supported on boron nitride and carbon nitride for catalytic and catalytic photo-assisted alcohol dehydration. Catalysis Today, 2021, 380, 209-222.	2.2	5
80	The solvent effect on the sidewall functionalization of multi-walled carbon nanotubes with maleic anhydride. Carbon, 2014, 78, 401-414.	5.4	4
81	MoS2 flakes stabilized with DNA/RNA nucleotides: In vitro cell response. Materials Science and Engineering C, 2019, 100, 11-22.	3.8	4
82	A direct route to activated two-dimensional cobalt oxide nanosheets for electrochemical energy storage, catalytic and environmental applications. Journal of Colloid and Interface Science, 2019, 539, 263-276.	5.0	4
83	A comparison of different carbon filaments on the nanometer and atomic scales by scanning tunneling microscopy. Materials Letters, 2007, 61, 4787-4790.	1.3	2
84	Cytotoxicity of Nucleotide-Stabilized Graphene Dispersions on Osteosarcoma and Healthy Cells: On the Way to Safe Theranostics Agents. ACS Applied Bio Materials, 2021, 4, 4384-4393.	2.3	1
85	¹³C-NMR Observed Conformations and Motions of Neat Liquid and Crystalline<i>n</i>-Hexatriacontane and as a Guest in the Narrow Channels of Its Inclusion Compound Formed with Î±-Cyclodextrin. ACS Symposium Series, 2011, , 265-277.	0.5	0