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	Surface modification of high-surface area graphites by oxygen plasma treatments. Applied Surface Science, 2022, 575, 151675.	3.1	8
2	An electrochemical route to holey graphene nanosheets for charge storage applications. Carbon, 2022, 195, 57-68.	5.4	6
3	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
4	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
5	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
6	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
7	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
8	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
9	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
10	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
11	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
12	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
13	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
14	MoS2 flakes stabilized with DNA/RNA nucleotides: In vitro cell response. Materials Science and Engineering C, 2019, 100, 11-22.	3.8	4
15	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
16	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
17	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
18	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

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19	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
20	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
21	Electrochemical Synthesis and Characterization of Flavin Mononucleotideâ€Exfoliated Pristine Graphene/Polypyrrole Composites. ChemElectroChem, 2017, 4, 1487-1497.	1.7	11
22	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
23	Efficient Pt electrocatalysts supported onto flavin mononucleotideâ€“exfoliated pristine graphene for the methanol oxidation reaction. Electrochimica Acta, 2017, 231, 386-395.	2.6	21
24	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
25	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
26	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
27	Nitrogen doped mesoporous carbon aerogels and implications for electrocatalytic oxygen reduction reactions. Microporous and Mesoporous Materials, 2016, 230, 135-144.	2.2	39
28	Diffusion of molecular hydrogen in carbon aerogel. Carbon, 2016, 98, 572-581.	5.4	11
29	Grafting of adipic anhydride to carbon nanotubes through a Diels-Alder cycloaddition/oxidation cascade reaction. Carbon, 2016, 98, 421-431.	5.4	14
30	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
31	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
32	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
33	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
34	From graphene oxide to pristine graphene: revealing the inner workings of the full structural restoration. Nanoscale, 2015, 7, 2374-2390.	2.8	95
35	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
36	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

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37	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
38	A quantitative analysis of the dispersion behavior of reduced graphene oxide in solvents. Carbon, 2014, 75, 390-400.	5.4	66
39	The solvent effect on the sidewall functionalization of multi-walled carbon nanotubes with maleic anhydride. Carbon, 2014, 78, 401-414.	5.4	4
40	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
41	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
42	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
43	Discovery of effective solvents for platelet-type graphite nanofibers. Carbon, 2013, 53, 222-230.	5.4	9
44	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
45	Towards full repair of defects in reduced graphene oxide films by two-step graphitization. Nano Research, 2013, 6, 216-233.	5.8	199
46	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
47	N-containing carbons from styreneâ€“divinylbenzene copolymer by urea treatment. Applied Surface Science, 2012, 258, 2410-2415.	3.1	8
48	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
49	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
50	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
51	Global and Local Oxidation Behavior of Reduced Graphene Oxide. Journal of Physical Chemistry C, 2011, 115, 7956-7966.	1.5	36
52	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
53	High-throughput production of pristine graphene in an aqueous dispersion assisted by non-ionic surfactants. Carbon, 2011, 49, 1653-1662.	5.4	461
54	Environmentally friendly approaches toward the mass production of processable graphene from graphite oxide. Journal of Materials Chemistry, 2011, 21, 298-306.	6.7	173

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55	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
56	Determining the thickness of chemically modified graphenes by scanning probe microscopy. Carbon, 2010, 48, 2657-2660.	5.4	46
57	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
58	Preparation of graphene dispersions and graphene-polymer composites in organic media. Journal of Materials Chemistry, 2009, 19, 3591.	6.7	293
59	Atomic Force and Scanning Tunneling Microscopy Imaging of Graphene Nanosheets Derived from Graphite Oxide. Langmuir, 2009, 25, 5957-5968.	1.6	631
60	Graphene Oxide Dispersions in Organic Solvents. Langmuir, 2008, 24, 10560-10564.	1.6	2,511
61	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
62	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
63	Real-Time Monitoring of Polymer Swelling on the Nanometer Scale by Atomic Force Microscopy. Langmuir, 2006, 22, 4728-4733.	1.6	16
64	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
65	Nitrogen in aramid-based activated carbon fibers by TPD, XPS and XANES. Carbon, 2006, 44, 2452-2462.	5.4	83
66	Nomex-derived activated carbon fibers as electrode materials in carbon based supercapacitors. Journal of Power Sources, 2006, 153, 419-423.	4.0	98
67	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
68	Nanoporous carbon fibres by pyrolysis of nomex polyaramid fibres. Journal of Thermal Analysis and Calorimetry, 2005, 79, 529-532.	2.0	26
69	Activated Carbon Materials of Uniform Porosity from Polyaramid Fibers. Chemistry of Materials, 2005, 17, 5893-5908.	3.2	82
70	The use of microcalorimetry to assess the size exclusion properties of carbon molecular sieves. Thermochimica Acta, 2004, 420, 141-144.	1.2	13
71	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
72	Effect of Phosphoric Acid on Chemical Transformations during Nomex Pyrolysis. Chemistry of Materials, 2004, 16, 2639-2647.	3.2	34

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73	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
74	Surface Characterization of PBO Fibers. Macromolecules, 2003, 36, 8662-8672.	2.2	26
75	N2Physisorption on Carbon Nanotubes:Â Computer Simulation and Experimental Results. Journal of Physical Chemistry B, 2003, 107, 8905-8916.	1.2	41
76	Studies on the Thermal Degradation of Poly (p-phenylene benzobisoxazole). Chemistry of Materials, 2003, 15, 4052-4059.	3.2	63
77	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
78	Fibrous Carbon Molecular Sieves by Chemical Vapor Deposition of Benzene. Gas Separation Ability. Chemistry of Materials, 2002, 14, 4328-4333.	3.2	29
79	Porous Texture Evolution in Nomex-Derived Activated Carbon Fibers. Journal of Colloid and Interface Science, 2002, 252, 169-176.	5.0	39
80	Carbon Molecular Sieves for Air Separation from Nomex Aramid Fibers. Journal of Colloid and Interface Science, 2002, 254, 414-416.	5.0	16
81	Characterization of aramid based activated carbon fibres by adsorption and immersion techniques. Carbon, 2002, 40, 1376-1380.	5.4	27
82	Title is missing!. Magyar AprÃ³vad KÃ¶zlemÃ©nyek, 2002, 70, 37-43.	1.4	24
83	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
84	Studies on pyrolysis of Nomex polyaramid fibers. Journal of Analytical and Applied Pyrolysis, 2001, 58-59, 105-115.	2.6	80
85	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