

# Silvia Villar-Rodil

## List of Publications by Year in descending order

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85  
papers

8,647  
citations

94269

37  
h-index

53109

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. <i>Langmuir</i> , 2008, 24, 10560-10564.	1.6	2,511
2	Vitamin C Is an Ideal Substitute for Hydrazine in the Reduction of Graphene Oxide Suspensions. <i>Journal of Physical Chemistry C</i> , 2010, 114, 6426-6432.	1.5	1,230
3	Atomic Force and Scanning Tunneling Microscopy Imaging of Graphene Nanosheets Derived from Graphite Oxide. <i>Langmuir</i> , 2009, 25, 5957-5968.	1.6	631
4	High-throughput production of pristine graphene in an aqueous dispersion assisted by non-ionic surfactants. <i>Carbon</i> , 2011, 49, 1653-1662.	5.4	461
5	Preparation of graphene dispersions and graphene-polymer composites in organic media. <i>Journal of Materials Chemistry</i> , 2009, 19, 3591.	6.7	293
6	Towards full repair of defects in reduced graphene oxide films by two-step graphitization. <i>Nano Research</i> , 2013, 6, 216-233.	5.8	199
7	Environmentally friendly approaches toward the mass production of processable graphene from graphite oxide. <i>Journal of Materials Chemistry</i> , 2011, 21, 298-306.	6.7	173
8	UV light exposure of aqueous graphene oxide suspensions to promote their direct reduction, formation of graphene-metal nanoparticle hybrids and dye degradation. <i>Carbon</i> , 2012, 50, 1014-1024.	5.4	171
9	Kinetic Isotope Effect for H <sub>2</sub> and D <sub>2</sub> Quantum Molecular Sieving in Adsorption/Desorption on Porous Carbon Materials. <i>Journal of Physical Chemistry B</i> , 2006, 110, 9947-9955.	1.2	139
10	Chemically Exfoliated MoS <sub>2</sub> Nanosheets as an Efficient Catalyst for Reduction Reactions in the Aqueous Phase. <i>ACS Applied Materials &amp; Interfaces</i> , 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. <i>Nanoscale</i> , 2016, 8, 15389-15413.	2.8	122
12	Production of aqueous dispersions of inorganic graphene analogues by exfoliation and stabilization with non-ionic surfactants. <i>RSC Advances</i> , 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. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 10293-10307.	4.0	101
14	Nomex-derived activated carbon fibers as electrode materials in carbon based supercapacitors. <i>Journal of Power Sources</i> , 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. <i>Carbon</i> , 2012, 50, 3184-3194.	5.4	97
16	From graphene oxide to pristine graphene: revealing the inner workings of the full structural restoration. <i>Nanoscale</i> , 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. <i>ACS Applied Materials &amp; Interfaces</i> , 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. <i>Nanoscale</i> , 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. <i>Chemistry of Materials</i> , 2001, 13, 4297-4304.	3.2	83
20	Nitrogen in aramid-based activated carbon fibers by TPD, XPS and XANES. <i>Carbon</i> , 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. <i>Carbon</i> , 2015, 94, 729-739.	5.4	83
22	Activated Carbon Materials of Uniform Porosity from Polyaramid Fibers. <i>Chemistry of Materials</i> , 2005, 17, 5893-5908.	3.2	82
23	Studies on pyrolysis of Nomex polyaramid fibers. <i>Journal of Analytical and Applied Pyrolysis</i> , 2001, 58-59, 105-115.	2.6	80
24	Chemical and microscopic analysis of graphene prepared by different reduction degrees of graphene oxide. <i>Journal of Alloys and Compounds</i> , 2012, 536, S532-S537.	2.8	74
25	Impact of Covalent Functionalization on the Aqueous Processability, Catalytic Activity, and Biocompatibility of Chemically Exfoliated MoS <sub>2</sub> Nanosheets. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 27974-27986.	4.0	73
26	A quantitative analysis of the dispersion behavior of reduced graphene oxide in solvents. <i>Carbon</i> , 2014, 75, 390-400.	5.4	66
27	Studies on the Thermal Degradation of Poly (p-phenylene benzobisoxazole). <i>Chemistry of Materials</i> , 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. <i>Journal of Alloys and Compounds</i> , 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. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 24032-24045.	4.0	57
30	Determining the thickness of chemically modified graphenes by scanning probe microscopy. <i>Carbon</i> , 2010, 48, 2657-2660.	5.4	46
31	Carbon molecular sieve cloths prepared by chemical vapour deposition of methane for separation of gas mixtures. <i>Microporous and Mesoporous Materials</i> , 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. <i>Carbon</i> , 2017, 115, 625-628.	5.4	43
33	Aqueous Cathodic Exfoliation Strategy toward Solution-Processable and Phase-Preserved MoS <sub>2</sub> Nanosheets for Energy Storage and Catalytic Applications. <i>ACS Applied Materials &amp; Interfaces</i> , 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. <i>Carbon</i> , 2013, 63, 30-44.	5.4	42
35	N <sub>2</sub> Physisorption on Carbon Nanotubes: A Computer Simulation and Experimental Results. <i>Journal of Physical Chemistry B</i> , 2003, 107, 8905-8916.	1.2	41
36	Porous Texture Evolution in Nomex-Derived Activated Carbon Fibers. <i>Journal of Colloid and Interface Science</i> , 2002, 252, 169-176.	5.0	39

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37	Nitrogen doped mesoporous carbon aerogels and implications for electrocatalytic oxygen reduction reactions. <i>Microporous and Mesoporous Materials</i> , 2016, 230, 135-144.	2.2	39
38	Consequences of Nitrogen Doping and Oxygen Enrichment on Titanium Local Order and Photocatalytic Performance of TiO <sub>2</sub> Anatase. <i>Journal of Physical Chemistry C</i> , 2017, 121, 6770-6780.	1.5	39
39	Global and Local Oxidation Behavior of Reduced Graphene Oxide. <i>Journal of Physical Chemistry C</i> , 2011, 115, 7956-7966.	1.5	36
40	Effect of Phosphoric Acid on Chemical Transformations during Nomex Pyrolysis. <i>Chemistry of Materials</i> , 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 Acid-Base Interactions. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 2835-2845.	4.0	33
42	High Performance Na-O <sub>2</sub> Batteries and Printed Microsupercapacitors Based on Water-Processable, Biomolecule-Assisted Anodic Graphene. <i>ACS Applied Materials &amp; Interfaces</i> , 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. <i>RSC Advances</i> , 2013, 3, 18323.	1.7	31
44	Macrophage inflammatory and metabolic responses to graphene-based nanomaterials differing in size and functionalization. <i>Colloids and Surfaces B: Biointerfaces</i> , 2020, 186, 110709.	2.5	30
45	Fibrous Carbon Molecular Sieves by Chemical Vapor Deposition of Benzene. Gas Separation Ability. <i>Chemistry of Materials</i> , 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. <i>Journal of Materials Chemistry A</i> , 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. <i>Applied Materials Today</i> , 2018, 11, 246-254.	2.3	28
48	Characterization of aramid based activated carbon fibres by adsorption and immersion techniques. <i>Carbon</i> , 2002, 40, 1376-1380.	5.4	27
49	Surface Characterization of PBO Fibers. <i>Macromolecules</i> , 2003, 36, 8662-8672.	2.2	26
50	Nanoporous carbon fibres by pyrolysis of nomex polyaramid fibres. <i>Journal of Thermal Analysis and Calorimetry</i> , 2005, 79, 529-532.	2.0	26
51	Title is missing!. <i>Magyar Árvad Kémlemlenyek</i> , 2002, 70, 37-43.	1.4	24
52	Efficient Pt electrocatalysts supported onto flavin mononucleotide-exfoliated pristine graphene for the methanol oxidation reaction. <i>Electrochimica Acta</i> , 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. <i>Polymer Degradation and Stability</i> , 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. <i>Microporous and Mesoporous Materials</i> , 2000, 41, 319-321.	2.2	18

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55	Carbon Molecular Sieves for Air Separation from Nomex Aramid Fibers. <i>Journal of Colloid and Interface Science</i> , 2002, 254, 414-416.	5.0	16
56	Real-Time Monitoring of Polymer Swelling on the Nanometer Scale by Atomic Force Microscopy. <i>Langmuir</i> , 2006, 22, 4728-4733.	1.6	16
57	Preparation, characterization and fundamental studies on graphenes by liquid-phase processing of graphite. <i>Journal of Alloys and Compounds</i> , 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. <i>Journal of Electroanalytical Chemistry</i> , 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. <i>Materials Chemistry and Physics</i> , 2013, 138, 615-622.	2.0	15
60	Activation of two-dimensional MoS <sub>2</sub> nanosheets by wet-chemical sulfur vacancy engineering for the catalytic reduction of nitroarenes and organic dyes. <i>Applied Materials Today</i> , 2020, 20, 100678.	2.3	15
61	Grafting of adipic anhydride to carbon nanotubes through a Diels-Alder cycloaddition/oxidation cascade reaction. <i>Carbon</i> , 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. <i>Chemical Engineering Journal</i> , 2019, 372, 1226-1239.	6.6	14
63	The use of microcalorimetry to assess the size exclusion properties of carbon molecular sieves. <i>Thermochimica Acta</i> , 2004, 420, 141-144.	1.2	13
64	Formation of crystalline inclusion compounds of poly (vinyl chloride) of different stereoregularity with $\beta$ -cyclodextrin. <i>Journal of Polymer Science Part A</i> , 2007, 45, 2503-2513.	2.5	13
65	Thermoresponsive biodegradable HEMA- $\beta$ -Lactate- $\beta$ -Dextran-co-NIPA cryogels for controlled release of simvastatin. <i>Artificial Cells, Nanomedicine and Biotechnology</i> , 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. <i>Microporous and Mesoporous Materials</i> , 2003, 64, 11-19.	2.2	11
67	A scanning tunnelling microscopy insight into the preparation of carbon molecular sieves by chemical vapour deposition. <i>Journal of Materials Chemistry</i> , 2003, 13, 1513-1516.	6.7	11
68	Diffusion of molecular hydrogen in carbon aerogel. <i>Carbon</i> , 2016, 98, 572-581.	5.4	11
69	Electrochemical Synthesis and Characterization of Flavin Mononucleotide-Exfoliated Pristine Graphene/Polypyrrole Composites. <i>ChemElectroChem</i> , 2017, 4, 1487-1497.	1.7	11
70	Molecular Functionalization of 2H-Phase MoS <sub>2</sub> Nanosheets via an Electrolytic Route for Enhanced Catalytic Performance. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 33157-33171.	4.0	11
71	Boosting the Performance of Graphene Cathodes in Na <sup>+</sup> /O <sub>2</sub> Batteries by Exploiting the Multifunctional Character of Small Biomolecules. <i>Small</i> , 2021, 17, e2005034.	5.2	10
72	Discovery of effective solvents for platelet-type graphite nanofibers. <i>Carbon</i> , 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 styrene-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	MoS <sub>2</sub> 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	<sup>13</sup> C-NMR Observed Conformations and Motions of Neat Liquid and Crystalline n-Hexatriacontane and as a Guest in the Narrow Channels of Its Inclusion Compound Formed with $\beta$ -Cyclodextrin. ACS Symposium Series, 2011, , 265-277.	0.5	0