Juan J Vilatela

List of Publications by Year
in descending order

78 papers	3,048 citations	136740 32 h-index	168136 53 g-index
80 all docs	80 docs citations	80 times ranked	3700 citing authors

#	Article	IF	Citations
1	A Model for the Strength of Yarn-like Carbon Nanotube Fibers. ACS Nano, 2011, 5, 1921-1927.	7.3	162
2	Nanocarbon Composites and Hybrids in Sustainability: A Review. ChemSusChem, 2012, 5, 456-478.	3.6	157
3	Yarnâ€Like Carbon Nanotube Fibers. Advanced Materials, 2010, 22, 4959-4963.	11.1	142
4	Oxygen vacancies and interfaces enhancing photocatalytic hydrogen production in mesoporous CNT/TiO2 hybrids. Applied Catalysis B: Environmental, 2015, 179, 574-582.	10.8	117
5	Interlaminar toughening in structural carbon fiber/epoxy composites interleaved with carbon nanotube veils. Composites Part A: Applied Science and Manufacturing, 2019, 124, 105477.	3.8	117
6	Strong Carbon Nanotube Fibers by Drawing Inspiration from Polymer Fiber Spinning. ACS Nano, 2015, 9, 7392-7398.	7.3	115
7	Controlling Carbon Nanotube Type in Macroscopic Fibers Synthesized by the Direct Spinning Process. Chemistry of Materials, 2014, 26, 3550-3557.	3.2	113
8	A perspective on high-performance CNT fibres for structural composites. Carbon, 2019, 150, 191-215.	5.4	90
9	Liquid Infiltration into Carbon Nanotube Fibers: Effect on Structure and Electrical Properties. ACS Nano, 2013, 7, 8412-8422.	7.3	86
10	Energy storage in structural composites by introducing CNT fiber/polymer electrolyte interleaves. Scientific Reports, 2018, 8, 3407.	1.6	83
11	Macroscopic fibres of CNTs as electrodes for multifunctional electric double layer capacitors: from quantum capacitance to device performance. Nanoscale, 2016, 8, 3620-3628.	2.8	75
12	Strong Dependence of Mechanical Properties on Fiber Diameter for Polymerâˆ'Nanotube Composite Fibers: Differentiating Defect from Orientation Effects. ACS Nano, 2010, 4, 6989-6997.	7.3	73
13	Interfacial charge transfer in functionalized multi-walled carbon nanotube@TiO₂ nanofibres. Nanoscale, 2017, 9, 7911-7921.	2.8	71
14	The Effect of Nanotube Content and Orientation on the Mechanical Properties of Polymer-Nanotube Composite Fibers: Separating Intrinsic Reinforcement from Orientational Effects. Advanced Functional Materials, 2011, 21, 364-371.	7.8	70
15	The hierarchical structure and properties of multifunctional carbon nanotube fibre composites. Carbon, 2012, 50, 1227-1234.	5.4	68
16	Thermoset curing through Joule heating of nanocarbons for composite manufacture, repair and soldering. Carbon, 2013, 63, 523-529.	5.4	68
17	Lignin Doped Carbon Nanotube Yarns for Improved Thermoelectric Efficiency. Advanced Sustainable Systems, 2020, 4, 2000147.	2.7	67
18	Largeâ€Area, Allâ€Solid, and Flexible Electric Double Layer Capacitors Based on CNT Fiber Electrodes and Polymer Electrolytes. Advanced Materials Technologies, 2017, 2, 1600290.	3.0	66

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19	Tough Electrodes: Carbon Nanotube Fibers as the Ultimate Current Collectors/Active Material for Energy Management Devices. Chemistry of Materials, 2015, 27, 6901-6917.	3.2	63
20	Interfacial crystallization of isotactic polypropylene surrounding macroscopic carbon nanotube and graphene fibers. Polymer, 2016, 91, 136-145.	1.8	53
21	Manganese dioxide decoration of macroscopic carbon nanotube fibers: From high-performance liquid-based to all-solid-state supercapacitors. Journal of Power Sources, 2017, 372, 64-73.	4.0	53
22	Gas-Phase Functionalization of Macroscopic Carbon Nanotube Fiber Assemblies: Reaction Control, Electrochemical Properties, and Use for Flexible Supercapacitors. ACS Applied Materials & Interfaces, 2018, 10, 5760-5770.	4.0	53
23	Interconnected metal oxide CNT fibre hybrid networks for current collector-free asymmetric capacitive deionization. Journal of Materials Chemistry A, 2018, 6, 10898-10908.	5.2	53
24	Controlled electrochemical functionalization of CNT fibers: Structure-chemistry relations and application in current collector-free all-solid supercapacitors. Carbon, 2019, 142, 599-609.	5.4	52
25	Tensile properties of carbon nanotube fibres described by the fibrillar crystallite model. Carbon, 2018, 133, 44-52.	5.4	45
26	High rate hybrid MnO₂@CNT fabric anodes for Li-ion batteries: properties and a lithium storage mechanism study by <i>in situ</i> synchrotron X-ray scattering. Journal of Materials Chemistry A, 2019, 7, 26596-26606.	5.2	43
27	CNT fibres as dual counter-electrode/current-collector in highly efficient and stable dye-sensitized solar cells. Carbon, 2019, 141, 488-496.	5.4	43
28	Highly responsive UV-photodetectors based on single electrospun TiO₂ nanofibres. Journal of Materials Chemistry C, 2016, 4, 10707-10714.	2.7	41
29	Direct spinning of carbon nanotube fibres from liquid feedstock. International Journal of Material Forming, 2008, 1, 59-62.	0.9	40
30	Large area photoelectrodes based on hybrids of CNT fibres and ALD-grown TiO₂. Journal of Materials Chemistry A, 2017, 5, 24695-24706.	5.2	36
31	Ultrahigh strength, modulus, and conductivity of graphitic fibers by macromolecular coalescence. Science Advances, 2022, 8, eabn0939.	4.7	34
32	A Composite Fabrication Sensor Based on Electrochemical Doping of Carbon Nanotube Yarns. Advanced Functional Materials, 2016, 26, 7139-7147.	7.8	32
33	Tuning the Mechanical Properties of Composites from Elastomeric to Rigid Thermoplastic by Controlled Addition of Carbon Nanotubes. Small, 2011, 7, 1579-1586.	5.2	31
34	Doping of Self-Standing CNT Fibers: Promising Flexible Air-Cathodes for High-Energy-Density Structural Znâ€"Air Batteries. ACS Applied Energy Materials, 2018, 1, 2434-2439.	2.5	31
35	Threading through Macrocycles Enhances the Performance of Carbon Nanotubes as Polymer Fillers. ACS Nano, 2016, 10, 8012-8018.	7.3	30
36	Group 16 elements control the synthesis of continuous fibers of carbon nanotubes. Carbon, 2016, 101, 458-464.	5.4	30

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37	Structural studies on carbon nanotube fibres by synchrotron radiation microdiffraction and microfluorescence. Journal of Applied Crystallography, 2009, 42, 1122-1128.	1.9	28
38	Interfacially-grafted single-walled carbon nanotube / poly (vinyl alcohol) composite fibers. Carbon, 2019, 146, 162-171.	5.4	28
39	Carbon nanotube synthesis and spinning as macroscopic fibers assisted by the ceramic reactor tube. Scientific Reports, 2019, 9, 9239.	1.6	28
40	Inherent predominance of high chiral angle metallic carbon nanotubes in continuous fibers grown from a molten catalyst. Nanoscale, 2016, 8, 4236-4244.	2.8	26
41	Pore structure and electrochemical properties of CNT-based electrodes studied by <i>in situ</i> small/wide angle X-ray scattering. Journal of Materials Chemistry A, 2019, 7, 5305-5314.	5.2	23
42	Carbon nanotube bundles self-assembled in double helix microstructures. Carbon, 2012, 50, 3688-3693.	5.4	22
43	Real time monitoring of click chemistry self-healing in polymer composites. Journal of Materials Chemistry A, 2014, 2, 3881.	5.2	21
44	Electric Field-Modulated Non-ohmic Behavior of Carbon Nanotube Fibers in Polar Liquids. ACS Nano, 2014, 8, 8497-8504.	7.3	21
45	Transparent and flexible high-power supercapacitors based on carbon nanotube fibre aerogels. Nanoscale, 2020, 12, 16980-16986.	2.8	21
46	A hybrid molecular photoanode for efficient light-induced water oxidation. Sustainable Energy and Fuels, 2018, 2, 1979-1985.	2.5	20
47	Understanding cooperative loading in carbon nanotube fibres through in-situ structural studies during stretching. Carbon, 2020, 156, 430-437.	5.4	18
48	Simultaneous improvements in conversion and properties of molecularly controlled CNT fibres. Carbon, 2021, 179, 417-424.	5.4	18
49	A Route to High-Toughness Battery Electrodes. ACS Applied Energy Materials, 2019, 2, 5889-5899.	2.5	17
50	Interfacial studies in CNT fibre/TiO2 photoelectrodes for efficient H2 production. Applied Catalysis B: Environmental, 2020, 268, 118613.	10.8	16
51	Surface Chemistry Analysis of Carbon Nanotube Fibers by Xâ€Ray Photoelectron Spectroscopy. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800187.	0.8	15
52	Damage-tolerant, laminated structural supercapacitor composites enabled by integration of carbon nanotube fibres. Multifunctional Materials, 2020, 3, 015001.	2.4	15
53	Low-energy consumption, free-form capacitive deionization through nanostructured networks. Carbon, 2021, 176, 390-399.	5.4	15
54	Macroscopic yarns of FeCl3-intercalated collapsed carbon nanotubes with high doping and stability. Carbon, 2021, 173, 311-321.	5.4	14

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55	A Spray Pyrolysis Method to Grow Carbon Nanotubes on Carbon Fibres, Steel and Ceramic Bricks. Journal of Nanoscience and Nanotechnology, 2015, 15, 2858-2864.	0.9	13
56	Highly Oriented Direct-Spun Carbon Nanotube Textiles Aligned by In Situ Radio-Frequency Fields. ACS Nano, 2022, 16, 9583-9597.	7.3	13
57	Composite Fabrics of Conformal MoS₂ Grown on CNT Fibers: Tough Battery Anodes without Metals or Binders. ACS Applied Energy Materials, 2021, 4, 5668-5676.	2.5	12
58	Eliminating Solvents and Polymers in Highâ€Performance Si Anodes by Gasâ€Phase Assembly of Nanowire Fabrics. Advanced Energy Materials, 2022, 12, .	10.2	11
59	Carbon nanotube fibers with martensite and austenite Fe residual catalyst: room temperature ferromagnetism and implications for CVD growth. Journal of Materials Chemistry C, 2017, 5, 5544-5550.	2.7	10
60	Tough sheets of nanowires produced floating in the gas phase. Materials Horizons, 2020, 7, 2978-2984.	6.4	10
61	Improved alignment and stress transfer in CNT fibre fabrics studied by in situ X-ray and Raman during wet-drawing. Carbon, 2022, 197, 368-377.	5.4	10
62	Origin of the electrocatalytic activity in carbon nanotube fiber counter-electrodes for solar-energy conversion. Nanoscale Advances, 2020, 2, 4400-4409.	2.2	9
63	Structured light using carbon nanostructures driven by Kerr nonlinearities and a magnetic field. Physical Chemistry Chemical Physics, 2022, 24, 1081-1090.	1.3	9
64	Revealing the Mechanism of Electrochemical Lithiation of Carbon Nanotube Fibers. ACS Applied Energy Materials, 2020, 3, 8695-8705.	2.5	8
65	Electrode Effects on Flexible and Robust Polypropylene Ferroelectret Devices for Fully Integrated Energy Harvesters. ACS Applied Materials & Interfaces, 2020, 12, 22815-22824.	4.0	8
66	Photoelectrocatalytic detection of NADH on n-type silicon semiconductors facilitated by carbon nanotube fibers. Electrochimica Acta, 2021, 377, 138071.	2.6	8
67	Largeâ€Area Schottky Junctions between ZnO and Carbon Nanotube Fibres. ChemPlusChem, 2018, 83, 285-293.	1.3	7
68	Enhanced Electro-Fenton Mineralization of Acid Orange 7 Using a Carbon Nanotube Fiber-Based Cathode. Frontiers in Materials, 2018, 5, .	1.2	7
69	Molecular characterization of macroscopic aerogels of single-walled carbon nanotubes. Carbon, 2019, 149, 512-518.	5.4	7
70	Controlling reaction paths for ultra-fast growth of inorganic nanowires floating in the gas phase. Nanoscale, 2021, 14, 55-64.	2.8	7
71	Identification of Collapsed Carbon Nanotubes in High-Strength Fibers Spun from Compositionally Polydisperse Aerogels. ACS Applied Nano Materials, 2021, 4, 6947-6955.	2.4	6
72	Thermoconformable, Flexible Lithiumâ€Ion Batteries. Advanced Materials Technologies, 2022, 7, .	3.0	5

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73	Stronger aramids through molecular design and nanoprocessing. Polymer Chemistry, 2020, 11, 1489-1495.	1.9	4
74	Controlled Nucleation and Growth of Carbon Nitride Films on CNT Fiber Fabric for Photoelectrochemical Applications. Advanced Sustainable Systems, 0, , 2000265.	2.7	4
75	Assessment of stress transfer in laminated structural power composites produced with mechanically-connected electric double-layer capacitors. Composites Science and Technology, 2022, 218, 109128.	3.8	3
76	Morphology, thermal, and crystallization analysis of polylactic acid in the presence of carbon nanotube fibers with tunable fiber loadings through polymer infiltration. Polymer Crystallization, 2019, 2, e10081.	0.5	2
77	Selective synthesis of double helices of carbon nanotube bundles grown on treated metallic substrates. Physica Status Solidi (B): Basic Research, 2012, 249, 2382-2385.	0.7	1
78	Multiscale Engineering of Carbon Nanotube Fibers. , 2019, , 113-147.		1