Virginia A Davis

List of Publications by Year
in descending order

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68 papers	4,232 citations	236612 25 h-index	143772 57 g-index
81 all docs	81 docs citations	81 times ranked	5231 citing authors

#	Article	IF	Citations
1	Macroscopic, Neat, Single-Walled Carbon Nanotube Fibers. Science, 2004, 305, 1447-1450.	6.0	785
2	True solutions of single-walled carbon nanotubes for assembly into macroscopic materials. Nature Nanotechnology, 2009, 4, 830-834.	15.6	486
3	Phase Behavior and Rheology of SWNTs in Superacids. Macromolecules, 2004, 37, 154-160.	2.2	337
4	Rheology and Phase Behavior of Lyotropic Cellulose Nanocrystal Suspensions. Macromolecules, 2011, 44, 8990-8998.	2.2	317
5	3D Printing of Additive-Free 2D Ti₃C₂T_{<i>x</i>} (MXene) Ink for Fabrication of Micro-Supercapacitors with Ultra-High Energy Densities. ACS Nano, 2020, 14, 640-650.	7.3	285
6	Dissolution of Pristine Single Walled Carbon Nanotubes in Superacids by Direct Protonation. Journal of Physical Chemistry B, 2004, 108, 8794-8798.	1.2	262
7	Strong Antimicrobial Coatings: Single-Walled Carbon Nanotubes Armored with Biopolymers. Nano Letters, 2008, 8, 1896-1901.	4.5	189
8	Single wall carbon nanotube fibers extruded from super-acid suspensions: Preferred orientation, electrical, and thermal transport. Journal of Applied Physics, 2004, 95, 649-655.	1.1	174
9	Enhanced stability of enzyme organophosphate hydrolase interfaced on the carbon nanotubes. Colloids and Surfaces B: Biointerfaces, 2010, 77, 69-74.	2.5	127
10	Isotropicâˆ'Nematic Phase Transition of Single-Walled Carbon Nanotubes in Strong Acids. Journal of the American Chemical Society, 2006, 128, 591-595.	6.6	122
11	Amorphous-State Characterization of Efavirenzâ€"Polymer Hot-Melt Extrusion Systems for Dissolution Enhancement. Journal of Pharmaceutical Sciences, 2012, 101, 3456-3464.	1.6	103
12	Transparent and Homogenous Cellulose Nanocrystal/Lignin UV-Protection Films. ACS Omega, 2018, 3, 10679-10691.	1.6	96
13	Simple Length Determination of Single-Walled Carbon Nanotubes by Viscosity Measurements in Dilute Suspensions. Macromolecules, 2007, 40, 4043-4047.	2.2	75
14	Dispersion and Rheology of Multiwalled Carbon Nanotubes in Unsaturated Polyester Resin. Macromolecules, 2013, 46, 1642-1650.	2.2	67
15	Methylene Green Electrodeposited on SWNTs-Based â€œBuckyâ€•Papers for NADH and l-Malate Oxidation. ACS Applied Materials & Interfaces, 2011, 3, 2402-2409.	4.0	66
16	Cholesteric and Nematic Liquid Crystalline Phase Behavior of Double-Stranded DNA Stabilized Single-Walled Carbon Nanotube Dispersions. ACS Nano, 2011, 5, 1450-1458.	7.3	57
17	Lysozyme Dispersed Single-Walled Carbon Nanotubes: Interaction and Activity. Journal of Physical Chemistry C, 2012, 116, 10341-10348.	1.5	56
18	Effects of liquid crystalline and shear alignment on the optical properties of cellulose nanocrystal films. Cellulose, 2017, 24, 705-716.	2.4	51

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19	Viscoelasticity and Shear Stability of Single-Walled Carbon Nanotube/Unsaturated Polyester Resin Dispersions. Macromolecules, 2009, 42, 6624-6632.	2.2	48
20	Renewable Nanocomposite Layer-by-Layer Assembled Catalytic Interfaces for Biosensing Applications. Langmuir, 2010, 26, 19114-19119.	1.6	41
21	Liquid crystalline assembly of nanocylinders. Journal of Materials Research, 2011, 26, 140-153.	1.2	40
22	Lyotropic Liquid Crystalline Self-Assembly in Dispersions of Silver Nanowires and Nanoparticles. Langmuir, 2010, 26, 11176-11183.	1.6	39
23	Photonic Properties and Applications of Cellulose Nanocrystal Films with Planar Anchoring. ACS Applied Nano Materials, 2018, 1, 2175-2183.	2.4	38
24	New insights into the flow and microstructural relaxation behavior of biphasic cellulose nanocrystal dispersions from RheoSANS. Soft Matter, 2017, 13, 8451-8462.	1.2	30
25	Dispersion State and Fiber Toughness: Antibacterial Lysozymeâ€Single Walled Carbon Nanotubes. Advanced Functional Materials, 2013, 23, 6082-6090.	7.8	26
26	Liquid Crystalline Phase Behavior of Silica Nanorods in Dimethyl Sulfoxide and Water. Langmuir, 2014, 30, 4806-4813.	1.6	24
27	Rheology and Shear-Induced Textures of Silver Nanowire Lyotropic Liquid Crystals. Journal of Nanomaterials, 2015, 2015, 1-9.	1.5	22
28	Am I an engineer yet? Perceptions of engineering and identity among first year students. European Journal of Engineering Education, 2020, 45, 214-231.	1.5	22
29	Rotational and translational diffusivities of germanium nanowires. Rheologica Acta, 2009, 48, 589-596.	1.1	18
30	A novel nano-nonwoven fabric with three-dimensionally dispersed nanofibers: entrapment of carbon nanofibers within nonwovens using the wet-lay process. Nanotechnology, 2012, 23, 185601.	1.3	16
31	Influence of initial mixing methods on meltâ€extruded singleâ€walled carbon nanotubeâ€“polypropylene nanocomposites. Polymer Engineering and Science, 2010, 50, 1831-1842.	1.5	14
32	Microelectromechanical Systems from Aligned Cellulose Nanocrystal Films. ACS Applied Materials & Interfaces, 2018, 10, 24116-24123.	4.0	13
33	Free-Standing Films from Aqueous Dispersions of Lysozyme, Single-Walled Carbon Nanotubes, and Polyvinyl Alcohol. ACS Macro Letters, 2014, 3, 77-79.	2.3	11
34	Single-Walled Carbon Nanotube Dispersion in Tryptic Soy Broth. ACS Macro Letters, 2017, 6, 1228-1231.	2.3	11
35	Orientation Relaxation Dynamics in Cellulose Nanocrystal Dispersions in the Chiral Liquid Crystalline Phase. Langmuir, 2018, 34, 13274-13282.	1.6	11
36	Electrochemical properties of interface formed by interlaced layers of DNA- and lysozyme-coated single-walled carbon nanotubes. Electrochemistry Communications, 2009, 11, 1401-1404.	2.3	10

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37	Viscoelasticity of Single-Walled Carbon Nanotubes in Unsaturated Polyester Resin: Effects of Purity and Chirality Distribution. Macromolecules, 2015, 48, 8641-8650.	2.2	9
38	Effects of Polymer Additives and Dispersion State on the Mechanical Properties of Cellulose Nanocrystal Films. Macromolecular Materials and Engineering, 2017, 302, 1600351.	1.7	9
39	Comparison of Attachment and Antibacterial Activity of Covalent and Noncovalent Lysozyme-Functionalized Single-Walled Carbon Nanotubes. ACS Omega, 2020, 5, 2254-2259.	1.6	9
40	Substrate properties as controlling parameters in attached algal cultivation. Applied Microbiology and Biotechnology, 2021, 105, 1823-1835.	1.7	9
41	Rheology of lyotropic cholesteric liquid crystal forming single-wall carbon nanotube dispersions stabilized by double-stranded DNA. Rheologica Acta, 2016, 55, 717-725.	1.1	8
42	Dispersant Effects on Single-Walled Carbon Nanotube Antibacterial Activity. Molecules, 2022, 27, 1606.	1.7	7
43	<i>In Situ</i> polymerization functionalization of singleâ€walled carbon nanotubes with polystyrene. Journal of Polymer Science Part A, 2013, 51, 3716-3725.	2.5	6
44	Solution-Based Fabrication of Carbon Nanotube Bumps for Flip-Chip Interconnects. IEEE Nanotechnology Magazine, 2014, 13, 1118-1126.	1.1	6
45	Heat Treatment of Buckypaper for Use in Volatile Organic Compounds Sampling. Journal of Nanomaterials, 2016, 2016, 1-6.	1.5	6
46	The Effects of Size and Shape Dispersity on the Phase Behavior of Nanomesogen Lyotropic Liquid Crystals. Crystals, 2020, 10, 715.	1.0	6
47	Chiral Structure Formation during Casting of Cellulose Nanocrystalline Films. Langmuir, 2020, 36, 4975-4984.	1.6	6
48	Correlations between rheological behavior and intrinsic properties of nanofibrillated cellulose from wood and soybean hulls with varying lignin content. BioResources, 2021, 16, 4831-4845.	0.5	6
49	Direct and discriminative detection of organophosphate neurotoxins for food and agriculture products. , 2012, , .		5
50	Concentration of lysozyme/single-walled carbon nanotube dispersions. Colloids and Surfaces B: Biointerfaces, 2016, 139, 237-243.	2.5	5
51	Phase Behavior of Acetylated Cellulose Nanocrystals and Origins of the Cross-Hatch Birefringent Texture. Biomacromolecules, 2018, 19, 3435-3444.	2.6	4
52	Effects of Non-covalent Functionalization and Initial Mixing Methods on SWNT/PP and SWNT/EVOH Composites. ACS Omega, 2021, 6, 10618-10628.	1.6	4
53	Thermal properties of polypropylene nanocomposites: Effects of carbon nanomaterials and processing. Polymer Engineering and Science, 2011, 51, 460-473.	1.5	3
54	Carbon Nanofiber Synthesis within 3-Dimensional Sintered Nickel Microfibrous Matrices: Optimization of Synthesis Conditions. Journal of Nanotechnology, 2012, 2012, 1-14.	1.5	3

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55	Microstructure and electrochemical properties of high performance graphene/manganese oxide hybrid electrodes. RSC Advances, 2021, 11, 31608-31620.	1.7	3
56	Getting Everyone to the Fair: Supporting Teachers in Broadening Participation in Science and Engineering Fairs. Journal of Science Education and Technology, 2021, 30, 658-677.	2.4	3
57	Additive Manufacturing of Viscoelastic Polyacrylamide Substrates for Mechanosensing Studies. ACS Omega, 2022, 7, 24384-24395.	1.6	2
58	Surface plasmon resonance properties of DC magnetron sputtered Ag nanoislands on ITOâ€glass and In 2 O 3 â€PET substrates. Electronics Letters, 2014, 50, 623-624.	0.5	1
59	Macroscopic Fibers of Single-Walled Carbon Nanotubes. , 2005, , .		1
60	NUE: The Freshman Experience and Nanotechnology Solutions to Engineering Grand Challenges. , 0, , .		1
61	The Effect of Melt Extrusion Process Parameters on Rotaryâ€Evaporated Poly(propylene) Nanocomposites. Macromolecular Materials and Engineering, 2012, 297, 864-874.	1.7	0
62	Rheological and Curing Properties of Unsaturated Polyester Resin Nanocomposites. , 2019, , 471-488.		0
63	(Invited) Multifunctional Materials from Dispersions of Single-Walled Carbon Nanotubes and Biomolecules. ECS Meeting Abstracts, 2017, , .	0.0	0
64	Promoting Engineering Persistence Among Women through Alignment of Occupational Values and Perceptions of the Field. , 0, , .		0
65	Getting Everyone to the Fair: Who Participates in and Benefits from Science and Engineering Fairs (Evaluation). , 0, , .		0
66	Nanotechnology Solutions to Engineering Grand Challenges. , 0, , .		0
67	Challenges and Benefits of Introducing a Science and Engineering Fair in High-Needs Schools (Work in) Tj ETQq1 1 0.784314 rgBT /Ov		0
68	Natural Nanotechnology: Examples of Creating a Culture of Outreach with Accessible and Adaptable Modules. , 0, , .		0