James N Culver

List of Publications by Year in descending order

85 papers	6,239 citations	53751 45 h-index	66879 78 g-index
85 all docs	85 docs citations	85 times ranked	6396 citing authors

#	ARTICLE	IF	CITATIONS
1	Biofabrication with Chitosan. Biomacromolecules, 2005, 6, 2881-2894.	2.6	667
2	Organization of Metallic Nanoparticles Using Tobacco Mosaic Virus Templates. Nano Letters, 2003, 3, 413-417.	4.5	557
3	Tin-Coated Viral Nanoforests as Sodium-Ion Battery Anodes. ACS Nano, 2013, 7, 3627-3634.	7.3	287
4	Self-Assembly of Virus-Structured High Surface Area Nanomaterials and Their Application as Battery Electrodes. Langmuir, 2008, 24, 906-912.	1.6	232
5	Virus-Enabled Silicon Anode for Lithium-Ion Batteries. ACS Nano, 2010, 4, 5366-5372.	7.3	228
6	TOBACCOMOSAICVIRUSASSEMBLY ANDDISASSEMBLY: Determinants in Pathogenicity and Resistance. Annual Review of Phytopathology, 2002, 40, 287-308.	3.5	157
7	Patterned Assembly of Genetically Modified Viral Nanotemplates via Nucleic Acid Hybridization. Nano Letters, 2005, 5, 1931-1936.	4.5	156
8	Interaction of the Tobacco Mosaic Virus Replicase Protein with the Aux/IAA Protein PAP1/IAA26 Is Associated with Disease Development. Journal of Virology, 2005, 79, 2549-2558.	1.5	143
9	Virus-Induced Disease: Altering Host Physiology One Interaction at a Time. Annual Review of Phytopathology, 2007, 45, 221-243.	3.5	140
10	A Patterned 3D Silicon Anode Fabricated by Electrodeposition on a Virus-Structured Current Collector. Advanced Functional Materials, 2011, 21, 380-387.	7.8	125
11	Improved metal cluster deposition on a genetically engineered tobacco mosaic virus template. Nanotechnology, 2005, 16, S435-S441.	1.3	123
12	Hierarchical Three-Dimensional Microbattery Electrodes Combining Bottom-Up Self-Assembly and Top-Down Micromachining. ACS Nano, 2012, 6, 6422-6432.	7.3	116
13	Molecularly imprinted polymers for tobacco mosaic virus recognition. Biomaterials, 2006, 27, 4165-4168.	5.7	111
14	Tobacco mosaic virus Induced Alterations in the Gene Expression Profile of Arabidopsis thaliana. Molecular Plant-Microbe Interactions, 2003, 16, 681-688.	1.4	104
15	<i>Tobacco Mosaic Virus</i> Replicase-Auxin/Indole Acetic Acid Protein Interactions: Reprogramming the Auxin Response Pathway To Enhance Virus Infection. Journal of Virology, 2008, 82, 2477-2485.	1.5	101
16	An Early Tobacco Mosaic Virus-Induced Oxidative Burst in Tobacco Indicates Extracellular Perception of the Virus Coat Protein. Plant Physiology, 2001, 126, 97-108.	2.3	96
17	Interaction of the <i>Tobacco Mosaic Virus</i> Replicase Protein with a NAC Domain Transcription Factor Is Associated with the Suppression of Systemic Host Defenses. Journal of Virology, 2009, 83, 9720-9730.	1.5	96
18	Biofabrication to build the biologyâ€"device interface. Biofabrication, 2010, 2, 022002.	3.7	94

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19	Plant virus directed fabrication of nanoscale materials and devices. Virology, 2015, 479-480, 200-212.	1.1	89
20	Point Mutations in the Coat Protein Gene of Tobacco Mosaic Virus Induce Hypersensitivity inNicotiana sylvestris. Molecular Plant-Microbe Interactions, 1989, 2, 209.	1.4	88
21	Biotemplated hierarchical surfaces and the role of dual length scales on the repellency of impacting droplets. Applied Physics Letters, 2012, 100, .	1.5	87
22	Carboxylate Interactions Involved in the Disassembly of Tobacco Mosaic Tobamovirus. Virology, 1996, 225, 11-20.	1.1	86
23	Tobacco mosaic virus coat protein: An elicitor of the hypersensitive reaction but not required for the development of mosaic symptoms in Nicotiana sylvestris. Virology, 1989, 173, 755-758.	1.1	84
24	Structure-function Relationship Between Tobacco Mosaic Virus Coat Protein and Hypersensitivity in Nicotiana sylvestris. Journal of Molecular Biology, 1994, 242, 130-138.	2.0	83
25	Tobacco Mosaic Virus Elicitor Coat Protein Genes Produce a Hypersensitive Phenotype in Transgenic<i>Nicotiana sylvestris</i>Plants. Molecular Plant-Microbe Interactions, 1991, 4, 458.	1.4	82
26	Site-directed mutagenesis confirms the involvement of carboxylate groups in the disassembly of tobacco mosaic virus. Virology, 1995, 206, 724-730.	1.1	78
27	Identification and Functional Analysis of an Interaction between Domains of the 126/183-kDa Replicase-Associated Proteins of Tobacco Mosaic Virus. Virology, 2001, 282, 320-328.	1.1	78
28	The Tobacco mosaic virus Replicase Protein Disrupts the Localization and Function of Interacting Aux/IAA Proteins. Molecular Plant-Microbe Interactions, 2006, 19, 864-873.	1.4	77
29	Characterization of silica-coated tobacco mosaic virus. Journal of Colloid and Interface Science, 2006, 298, 706-712.	5.0	77
30	Deposition of Platinum Clusters on Surface-Modified Tobacco Mosaic Virus. Journal of Nanoscience and Nanotechnology, 2006, 6, 974-981.	0.9	75
31	The impact of phytohormones on virus infection and disease. Current Opinion in Virology, 2016, 17, 25-31.	2.6	75
32	Biological Templates for Antireflective Current Collectors for Photoelectrochemical Cell Applications. Nano Letters, 2012, 12, 6005-6011.	4.5	74
33	Oligomerization and Activity of the Helicase Domain of the Tobacco Mosaic Virus 126- and 183-Kilodalton Replicase Proteins. Journal of Virology, 2003, 77, 3549-3556.	1.5	71
34	Nanostructured nickel electrodes using the<i>Tobacco mosaic virus</i>for microbattery applications. Journal of Micromechanics and Microengineering, 2008, 18, 104003.	1.5	71
35	Biotemplated Aqueous-Phase Palladium Crystallization in the Absence of External Reducing Agents. Nano Letters, 2010, 10, 3863-3867.	4.5	70
36	Architecturing Hierarchical Function Layers on Self-Assembled Viral Templates as 3D Nano-Array Electrodes for Integrated Li-Ion Microbatteries. Nano Letters, 2013, 13, 293-300.	4.5	68

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37	Preparation of silica stabilized Tobacco mosaic virus templates for the production of metal and layered nanoparticles. Journal of Colloid and Interface Science, 2009, 332, 402-407.	5.0	64
38	Optimization of Virus Imprinting Methods To Improve Selectivity and Reduce Nonspecific Binding. Biomacromolecules, 2007, 8, 3893-3899.	2.6	63
39	<i>Tobacco mosaic virus</i>: A biological building block for micro/nano/bio systems. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, .	0.9	62
40	TMV Microarrays:Â Hybridization-Based Assembly of DNA-Programmed Viral Nanotemplates. Langmuir, 2007, 23, 2663-2667.	1.6	59
41	A Nuclear Localization Signal and a Membrane Association Domain Contribute to the Cellular Localization of the Tobacco Mosaic Virus 126-kDa Replicase Protein. Virology, 2002, 301, 81-89.	1.1	58
42	Tobacco mosaic virus-directed reprogramming of auxin/indole acetic acid protein transcriptional responses enhances virus phloem loading. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E2740-9.	3.3	55
43	Susceptibility and Symptom Development in Arabidopsis thaliana to Tobacco mosaic virus Is Influenced by Virus Cell-to-Cell Movement. Molecular Plant-Microbe Interactions, 2000, 13, 1139-1144.	1.4	53
44	Structure of ribgrass mosaic virus at 2.9 Ã¥ resolution evolution and taxonomy of tobamoviruses 1 1Edited by I. A. Wilson. Journal of Molecular Biology, 1997, 269, 769-779.	2.0	51
45	Quantitative study of Au(III) and Pd(II) ion biosorption on genetically engineered Tobacco mosaic virus. Journal of Colloid and Interface Science, 2010, 342, 455-461.	5.0	51
46	An electrochemical sensor for selective TNT sensing based on Tobacco mosaic virus-like particle binding agents. Chemical Communications, 2014, 50, 12977-12980.	2.2	46
47	High rate performance of virus enabled 3D n-type Si anodes for lithium-ion batteries. Electrochimica Acta, 2011, 56, 5210-5213.	2.6	45
48	Carboxylate-Directed In Vivo Assembly of Virus-like Nanorods and Tubes for the Display of Functional Peptides and Residues. Biomacromolecules, 2013, 14, 3123-3129.	2.6	44
49	DNA binding specificity of ATAF2, a NAC domain transcription factor targeted for degradation by Tobacco mosaic virus. BMC Plant Biology, 2012, 12, 157.	1.6	41
50	Comparison of Tobamovirus Coat Protein Structural Features That Affect Elicitor Activity in Pepper, Eggplant, and Tobacco. Molecular Plant-Microbe Interactions, 1999, 12, 247-251.	1.4	39
51	3D tin anodes prepared by electrodeposition on a virus scaffold. Journal of Power Sources, 2012, 211, 129-132.	4.0	37
52	Structural and Functional Conservation of the Tobamovirus Coat Protein Elicitor Active Site. Molecular Plant-Microbe Interactions, 1997, 10, 597-604.	1.4	35
53	Effect of CuCl2 concentration on the aggregation and mineralization of Tobacco mosaic virus biotemplate. Journal of Colloid and Interface Science, 2006, 297, 554-560.	5.0	35
54	Capillary Microfluidics-Assembled Virus-like Particle Bionanoreceptor Interfaces for Label-Free Biosensing. ACS Applied Materials & Interfaces, 2017, 9, 8471-8479.	4.0	33

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55	Selective deposition of nanostructured ruthenium oxide using Tobacco mosaic virus for micro-supercapacitors in solid Nafion electrolyte. Journal of Power Sources, 2015, 293, 649-656.	4.0	32
56	Accessing biology's toolbox for the mesoscale biofabrication of soft matter. Soft Matter, 2013, 9, 6019.	1.2	30
57	Formation of Au/Pd Alloy Nanoparticles on TMV. Journal of Nanomaterials, 2010, 2010, 1-6.	1.5	29
58	Helicase ATPase activity of the Tobacco mosaic virus 126-kDa protein modulates replicase complex assembly. Virology, 2010, 402, 292-302.	1.1	28
59	Viral Hacks of the Plant Vasculature: The Role of Phloem Alterations in Systemic Virus Infection. Annual Review of Virology, 2020, 7, 351-370.	3.0	26
60	Intersubunit Interactions Allowing a Carboxylate Mutant Coat Protein to Inhibit Tobamovirus Disassembly. Virology, 1998, 244, 13-19.	1.1	23
61	Tobamovirus Coat Proteins: Elicitors of the Hypersensitive Response in Solanum melongena (Eggplant). Molecular Plant-Microbe Interactions, 1997, 10, 776-778.	1.4	22
62	Tobacco Mosaic Virus as a Versatile Platform for Molecular Assembly and Device Fabrication. Biotechnology Journal, 2018, 13, e1800147.	1.8	22
63	Real-time monitoring of macromolecular biosensing probe self-assembly and on-chip ELISA using impedimetric microsensors. Biosensors and Bioelectronics, 2016, 81, 401-407.	5.3	21
64	Highly Efficient Genome Editing in Plant Protoplasts by Ribonucleoprotein Delivery of CRISPR-Cas12a Nucleases. Frontiers in Genome Editing, 2022, 4, 780238.	2.7	21
65	Biophysical characterization of a designed TMV coat protein mutant, R46G, that elicits a moderate hypersensitivity response in<i>nicotiana sylvestris</i>. Protein Science, 1999, 8, 261-270.	3.1	19
66	Tobacco mosaic virus infection disproportionately impacts phloem associated translatomes in Arabidopsis thaliana and Nicotiana benthamiana. Virology, 2017, 510, 76-89.	1.1	17
67	Translatome Profiling of Plum Pox Virusâ€“Infected Leaves in European Plum Reveals Temporal and Spatial Coordination of Defense Responses in Phloem Tissues. Molecular Plant-Microbe Interactions, 2020, 33, 66-77.	1.4	17
68	Surface functionalized silica as a toolkit for studying aqueous phase palladium adsorption and mineralization on thiol moiety in the absence of external reducing agents. Journal of Colloid and Interface Science, 2011, 356, 31-36.	5.0	16
69	SAXS characterization of genetically engineered tobacco mosaic virus nanorods coated with palladium in the absence of external reducing agents. Journal of Colloid and Interface Science, 2013, 392, 213-218.	5.0	16
70	Association of the Tobacco mosaic virus 126kDa replication protein with a GDI protein affects host susceptibility. Virology, 2011, 414, 110-118.	1.1	15
71	Virus-Assembled Flexible Electrode-Electrolyte Interfaces for Enhanced Polymer-Based Battery Applications. Journal of Nanomaterials, 2012, 2012, 1-6.	1.5	11
72	Biofabrication of Tobacco mosaic virus-nanoscaffolded supercapacitors via temporal capillary microfluidics. Nanotechnology, 2017, 28, 265301.	1.3	11

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73	Identification of phloem-associated translatome alterations during leaf development in Prunus domestica L.. Horticulture Research, 2019, 6, 16.	2.9	10
74	Coagulation of tobacco mosaic virus in alcoholâ€"waterâ€"LiCl solutions. Journal of Colloid and Interface Science, 2008, 324, 92-98.	5.0	9
75	Localized Three-Dimensional Functionalization of Bionanoreceptors on High-Density Micropillar Arrays via Electrowetting. Langmuir, 2018, 34, 1725-1732.	1.6	8
76	Dynamic changes impact the plum pox virus population structure during leaf and bud development. Virology, 2020, 548, 192-199.	1.1	7
77	Fabrication of Tobacco Mosaic Virus-Like Nanorods for Peptide Display. Methods in Molecular Biology, 2018, 1776, 51-60.	0.4	5
78	Transglutaminase-mediated assembly of multi-enzyme pathway onto TMV brush surfaces for synthesis of bacterial autoinducer-2. Biofabrication, 2020, 12, 045017.	3.7	4
79	Reprogramming Virus Coat Protein Carboxylate Interactions for the Patterned Assembly of Hierarchical Nanorods. Biomacromolecules, 2021, 22, 2515-2523.	2.6	2
80	Virus directed assembly of receptor peptides for explosive sensing. , 2010, , .		1
81	Chitosan-mediated Patterned Viral Nanotemplate Assembly onto Inorganic Substrates through Nucleic Acid Hybridization. , 2006, , .		0
82	Block copolymer nanotemplating of tobacco mosaic and tobacco necrosis viruses. Acta Biomaterialia, 2009, 5, 893-902.	4.1	0
83	3D-EBP: A programmable 3D bionanoreceptor assembly. , 2017, , .		0
84	A Scalable 3-D Printed Biological Assembly Technology. , 2019, , .		0
85	Bionanoscaffolds-Enabled Non-Wetting Surfaces for Antibiofouling Applications. , 2019, , .		0