

Shane A Catledge

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

78
papers

2,082
citations

24
h-index

44
g-index

84
ext. papers

2,231
ext. citations

3.3
avg, IF

4.54
L-index

#	Paper	IF	Citations
78	An electrospun triphasic nanofibrous scaffold for bone tissue engineering. <i>Biomedical Materials (Bristol)</i> , 2007 , 2, 142-50	3.5	155
77	Epitaxial diamond encapsulation of metal microprobes for high pressure experiments. <i>Applied Physics Letters</i> , 2000 , 77, 3400-3402	3.4	119
76	Nanostructured ceramics for biomedical implants. <i>Journal of Nanoscience and Nanotechnology</i> , 2002 , 2, 293-312	1.3	115
75	Encapsulation of anticancer drug by hydrogen-bonded multilayers of tannic acid. <i>Soft Matter</i> , 2014 , 10, 9237-47	3.6	99
74	Rapid dissolution of shells of weakly calcified Antarctic benthic macroorganisms indicates high vulnerability to ocean acidification. <i>Antarctic Science</i> , 2009 , 21, 449-456	1.7	99
73	Functionally graded electrospun scaffolds with tunable mechanical properties for vascular tissue regeneration. <i>Biomedical Materials (Bristol)</i> , 2007 , 2, 224-32	3.5	88
72	Mesenchymal stem cell responses to bone-mimetic electrospun matrices composed of polycaprolactone, collagen I and nanoparticulate hydroxyapatite. <i>PLoS ONE</i> , 2011 , 6, e16813	3.7	82
71	Electrical and mechanical properties of C70 fullerene and graphite under high pressures studied using designer diamond anvils. <i>Physical Review Letters</i> , 2000 , 85, 5364-7	7.4	78
70	In vitro studies on the effect of particle size on macrophage responses to nanodiamond wear debris. <i>Acta Biomaterialia</i> , 2012 , 8, 1939-47	10.8	76
69	Mechanical wear behavior of nanocrystalline and multilayer diamond coatings on temporomandibular joint implants. <i>Journal of Materials Science: Materials in Medicine</i> , 2004 , 15, 773-7	4.5	71
68	Mesenchymal stem cell interaction with ultra-smooth nanostructured diamond for wear-resistant orthopaedic implants. <i>Biomaterials</i> , 2008 , 29, 3461-8	15.6	70
67	Surface crystalline phases and nanoindentation hardness of explanted zirconia femoral heads. <i>Journal of Materials Science: Materials in Medicine</i> , 2003 , 14, 863-7	4.5	68
66	Effect of nitrogen addition on the microstructure and mechanical properties of diamond films grown using high-methane concentrations. <i>Journal of Applied Physics</i> , 1999 , 86, 698-700	2.5	65
65	Magnetic susceptibility measurements at high pressure using designer diamond anvils. <i>Review of Scientific Instruments</i> , 2003 , 74, 2467-2471	1.7	50
64	Nanoindentation hardness and adhesion investigations of vapor deposited nanostructured diamond films. <i>Journal of Applied Physics</i> , 2002 , 91, 5347-5352	2.5	46
63	Micro-raman stress investigations and X-ray diffraction analysis of polycrystalline diamond (PCD) tools. <i>Diamond and Related Materials</i> , 1996 , 5, 1159-1165	3.5	44
62	Synthesis and Characterization of Multilayered Diamond Coatings for Biomedical Implants. <i>Materials</i> , 2011 , 4, 857-867	3.5	42

61	High density plasma processing of nanostructured diamond films on metals. <i>Journal of Applied Physics</i> , 1998 , 84, 6469-6471	2.5	42
60	Mesenchymal stem cell adhesion and spreading on microwave plasma-nitrided titanium alloy. <i>Journal of Biomedical Materials Research - Part A</i> , 2006 , 76, 279-87	5.4	32
59	High density plasma processing of diamond films on titanium: Residual stress and adhesion measurements. <i>Journal of Applied Physics</i> , 1995 , 78, 7053-7058	2.5	31
58	Multilayer nanocrystalline/microcrystalline diamond films studied by laser reflectance interferometry. <i>Diamond and Related Materials</i> , 2000 , 9, 1512-1517	3.5	29
57	Mesenchymal stem cell adhesion and spreading on nanostructured biomaterials. <i>Journal of Nanoscience and Nanotechnology</i> , 2004 , 4, 986-9	1.3	28
56	Improved adhesion of ultra-hard carbon films on cobalt-chromium orthopaedic implant alloy. <i>Journal of Materials Science: Materials in Medicine</i> , 2011 , 22, 307-16	4.5	26
55	Gas-phase thermodynamic models of nitrogen-induced nanocrystallinity in chemical vapor-deposited diamond. <i>Applied Physics Letters</i> , 2002 , 80, 2550-2552	3.4	26
54	Temperature-responsive properties of poly(N-vinylcaprolactam) multilayer hydrogels in the presence of Hofmeister anions. <i>Materials Research Express</i> , 2014 , 1, 035039	1.7	24
53	Preliminary tribological evaluation of nanostructured diamond coatings against ultra-high molecular weight polyethylene. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2008 , 85, 140-8	3.5	24
52	Plasma boriding of a cobalt-chromium alloy as an interlayer for nanostructured diamond growth. <i>Applied Surface Science</i> , 2015 , 328, 133-139	6.7	22
51	Spatially controlled fabrication of a bright fluorescent nanodiamond-array with enhanced far-red Si-V luminescence. <i>Nanotechnology</i> , 2014 , 25, 045302	3.4	21
50	In situ diagnostics of film thickness and surface roughness of diamond films on a Ti6Al4V alloy by optical pyrometry. <i>Applied Physics Letters</i> , 1998 , 73, 181-183	3.4	21
49	Nanomechanical properties of electrospun composite scaffolds based on polycaprolactone and hydroxyapatite. <i>Journal of Nanoscience and Nanotechnology</i> , 2009 , 9, 4839-45	1.3	20
48	Interfacial adhesion and toughness of nanostructured diamond coatings. <i>Journal of Materials Research</i> , 2000 , 15, 1052-1055	2.5	19
47	Metal-boride phase formation on tungsten carbide (WC-Co) during microwave plasma chemical vapor deposition. <i>Applied Surface Science</i> , 2016 , 364, 315-321	6.7	17
46	Silicon vacancy color center photoluminescence enhancement in nanodiamond particles by isolated substitutional nitrogen on {100} surfaces. <i>Journal of Applied Physics</i> , 2013 , 113, 44701	2.5	17
45	Structural and mechanical properties of nanostructured metalloceramic coatings on cobalt chrome alloys. <i>Applied Physics Letters</i> , 2003 , 82, 1625-1627	3.4	17
44	Nanoindentation and x-ray diffraction studies of pressure-induced amorphization in C-70 fullerene. <i>Applied Physics Letters</i> , 2000 , 77, 851-853	3.4	17

43	Resonance Raman and photoluminescence investigations of micro-twins in homoepitaxially grown chemical vapor deposited diamond. <i>Applied Physics Letters</i> , 1997 , 71, 321-323	3.4	16
42	Nanoindentation on porous bioceramic scaffolds for bone tissue engineering. <i>Journal of Nanoscience and Nanotechnology</i> , 2005 , 5, 1816-20	1.3	16
41	High pressure phase transformations in neodymium studied in a diamond anvil cell using diamond-coated rhenium gaskets. <i>Journal of Physics Condensed Matter</i> , 1999 , 11, 6515-6520	1.8	16
40	Synthesis of ultrasmooth nanostructured diamond films by microwave plasma chemical vapor deposition using a He/H(2)/CH(4)/N(2) gas mixture. <i>Journal of Materials Research</i> , 2006 , 21, 2675-2682	2.5	15
39	Ultra-Smooth Nanostructured Diamond Films Deposited from He/H ₂ /CH ₄ /N ₂ Microwave Plasmas. <i>Journal of Nanoscience and Nanotechnology</i> , 2006 , 6, 258-261	1.3	14
38	Surface modification and stability of detonation nanodiamonds in microwave gas discharge plasma. <i>Applied Surface Science</i> , 2015 , 357, 1403-1409	6.7	13
37	Homoepitaxial diamond films on diamond anvils with metallic probes: the diamond/metal interface up to 74 GPa. <i>Journal of Physics Condensed Matter</i> , 1997 , 9, L67-L73	1.8	13
36	Ultra-smooth nanostructured diamond films deposited from He/H ₂ /CH ₄ /N ₂ microwave plasmas. <i>Journal of Nanoscience and Nanotechnology</i> , 2006 , 6, 258-61	1.3	13
35	Effect of nitrogen addition on the morphology and structure of boron-doped nanostructured diamond films. <i>Applied Physics Letters</i> , 2003 , 83, 5047-5049	3.4	13
34	Mechanical properties and quality of diamond films synthesized on Ti ₆ Al ₄ V alloy using the microwave plasmas of CH ₄ /H ₂ and CO/H ₂ systems. <i>Journal of Applied Physics</i> , 1998 , 83, 198-204	2.5	13
33	Metal-boride interlayers for chemical vapor deposited nanostructured NSD films on 316 and 440C stainless steel. <i>Surface and Coatings Technology</i> , 2015 , 261, 244-252	4.4	12
32	Low temperature growth of nanostructured diamond on quartz spheres. <i>Journal Physics D: Applied Physics</i> , 2005 , 38, 1410-1414	3	12
31	Rapid Growth of Nanocrystalline Diamond on Single Crystal Diamond for Studies on Materials under Extreme Conditions. <i>Scientific Reports</i> , 2018 , 8, 1402	4.9	11
30	Improved nanostructured diamond adhesion on cemented tungsten carbide with boride interlayers. <i>Diamond and Related Materials</i> , 2016 , 69, 114-120	3.5	10
29	Strong Narrow-Band Luminescence from Silicon-Vacancy Color Centers in Spatially Localized Sub-10 nm Nanodiamond. <i>Advanced Science Letters</i> , 2011 , 4, 512-515	0.1	10
28	Superhard Boron-Rich Boron Carbide with Controlled Degree of Crystallinity. <i>Materials</i> , 2020 , 13,	3.5	8
27	Hexagonal boron nitride grown using high atomic boron emission during microwave plasma chemical vapor deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2019 , 37, 061507	2.9	6
26	Non-equilibrium organosilane plasma polymerization for modulating the surface of PTFE towards potential blood contact applications. <i>Journal of Materials Chemistry B</i> , 2020 , 8, 2814-2825	7.3	6

25	Computational Predictions and Microwave Plasma Synthesis of Superhard Boron-Carbon Materials. <i>Materials</i> , 2018 , 11,	3.5	6
24	Nanoindentation hardness and atomic force microscope imaging studies of pressure-quenched zirconium metal. <i>Applied Physics Letters</i> , 2000 , 77, 3568-3570	3.4	6
23	Adhesion of nanostructured diamond film on a copperberyllium alloy. <i>Journal of Materials Research</i> , 2008 , 23, 2373-2381	2.5	5
22	Effect of Surface Oxides and Intermetallics on Nanostructured Diamond Coating of Nitinol. <i>Current Nanoscience</i> , 2006 , 2, 9-12	1.4	5
21	Interfacial oxide and carbide phases in the deposition of diamond films on beryllium metal. <i>Diamond and Related Materials</i> , 2000 , 9, 1327-1330	3.5	5
20	A wear simulation study of nanostructured CVD diamond-on-diamond articulation involving concave/convex mating surfaces 2016 , 13, 385-393		4
19	Molecularly Imprinted Polyacrylamide with Fluorescent Nanodiamond for Creatinine Detection. <i>Materials</i> , 2019 , 12,	3.5	4
18	First-Principles Predictions and Synthesis of BC by Chemical Vapor Deposition. <i>Scientific Reports</i> , 2020 , 10, 4454	4.9	3
17	Growth chemistry for the fabrication of designer diamonds for high pressure research. <i>High Pressure Research</i> , 2008 , 28, 1-8	1.6	3
16	Nitrogen-Induced Nanocrystallinity of CVD Diamond Films on Ti-6Al-4V Alloys. <i>Materials Research Society Symposia Proceedings</i> , 1998 , 555, 377		3
15	High-pressure high-temperature synthesis and thermal equation of state of high-entropy transition metal boride. <i>AIP Advances</i> , 2021 , 11, 035107	1.5	3
14	Structure and Stress Evaluation of Diamond Films Deposited on Ti-6Al-4V Alloy at Low Temperature Using CH ₄ /O ₂ /H ₂ and CO/H ₂ Gas Mixtures. <i>Materials Research Society Symposia Proceedings</i> , 1997 , 505, 629		2
13	Electrospun Gelatin/Hydroxyapatite Nanocomposite Scaffolds for Bone Tissue Engineering. <i>Materials Research Society Symposia Proceedings</i> , 2008 , 1094, 1		2
12	Mechanical Properties of Boron Doped Diamond Films Prepared by MPCVD. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 791, 293		2
11	Sputtered tungsten-based ternary and quaternary layers for nanocrystalline diamond deposition. <i>Journal of Nanoscience and Nanotechnology</i> , 2012 , 12, 4825-31	1.3	1
10	Effect of Surface Treatments on the Structural and Mechanical Properties of Nanostructured Diamond Coatings on Tungsten Carbide Cutting Tools. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 791, 322		1
9	Optical defect centers and surface morphology of isotopically enriched diamond layers in designer diamond anvils. <i>Journal of Applied Physics</i> , 2005 , 97, 073504	2.5	1
8	A diffusion approach for plasma synthesis of superhard tantalum borides. <i>Journal of Materials Research</i> , 2020 , 35, 481-490	2.5	1

- 7 Effects of direct current bias on nucleation density of superhard boron-rich boron carbide films made by microwave plasma chemical vapor deposition. *Materials Research Express*, **2021**, 8, 046401 1.7 1
- 6 Single-Step Synthesis Process for High-Entropy Transition Metal Boride Powders Using Microwave Plasma. *Ceramics*, **2021**, 4, 257-264 1.7 1
- 5 Patterning of Nano-Hydroxyapatite onto SiO₂ and Electro-spun Mat Surfaces Using Dip-Pen Nanolithography. *Journal of Molecular Structure*, **2021**, 1237, 130320 3.4 1
- 4 On the Wear Assessment of Multilayer Nanocrystalline Diamond Coated Implants of the Temporomandibular Joint. *Materials Research Society Symposia Proceedings*, **2003**, 791, 316
- 3 Structure and Mechanical Properties of Functionally-Graded Nanostructured Metallo-ceramic Coatings. *Materials Research Society Symposia Proceedings*, **2003**, 778, 781
- 2 Thermal Stability of Nanocrystalline Diamond Films Grown by Microwave Plasma Chemical Vapor Deposition. *Materials Research Society Symposia Proceedings*, **2002**, 750, 1
- 1 Nanoindentation of Pressure Quenched Fullerenes and Zirconium Metal from a Diamond Anvil Cell. *Materials Research Society Symposia Proceedings*, **2000**, 649, 7241