

Roya Maboudian

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4847674/publications.pdf>

Version: 2024-02-01

253
papers

14,572
citations

18436

62
h-index

22764

112
g-index

254
all docs

254
docs citations

254
times ranked

16870
citing authors

#	ARTICLE	IF	CITATIONS
1	Strong interlayer coupling in van der Waals heterostructures built from single-layer chalcogenides. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 6198-6202.	3.3	970
2	Critical Review: Adhesion in surface micromechanical structures. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1997, 15, 1.	1.6	787
3	Hole Selective MoO ₃ Contact for Silicon Solar Cells. Nano Letters, 2014, 14, 967-971.	4.5	476
4	Alkyltrichlorosilane-based self-assembled monolayer films for stiction reduction in silicon micromachines. Journal of Microelectromechanical Systems, 1998, 7, 252-260.	1.7	396
5	High Surface Area MoS ₂ /Graphene Hybrid Aerogel for Ultrasensitive NO ₂ Detection. Advanced Functional Materials, 2016, 26, 5158-5165.	7.8	357
6	Self-assembled monolayers as anti-stiction coatings for MEMS: characteristics and recent developments. Sensors and Actuators A: Physical, 2000, 82, 219-223.	2.0	344
7	Evidence of Structural Strain in Epitaxial Graphene Layers on 6H-SiC(0001). Physical Review Letters, 2008, 101, 156801.	2.9	274
8	Surface processes in MEMS technology. Surface Science Reports, 1998, 30, 207-269.	3.8	264
9	Metal-catalyzed crystallization of amorphous carbon to graphene. Applied Physics Letters, 2010, 96, .	1.5	234
10	Silver Dendrites from Galvanic Displacement on Commercial Aluminum Foil As an Effective SERS Substrate. Journal of the American Chemical Society, 2010, 132, 1476-1477.	6.6	230
11	Facile fabrication of flexible all solid-state micro-supercapacitor by direct laser writing of porous carbon in polyimide. Carbon, 2015, 83, 144-151.	5.4	229
12	Tribological Challenges in Micromechanical Systems. Tribology Letters, 2002, 12, 95-100.	1.2	226
13	Thermal Behavior of Alkyl Monolayers on Silicon Surfaces. Langmuir, 1997, 13, 6164-6168.	1.6	218
14	Air-Stable n-Doping of WSe ₂ by Anion Vacancy Formation with Mild Plasma Treatment. ACS Nano, 2016, 10, 6853-6860.	7.3	202
15	Highly flexible, all solid-state micro-supercapacitors from vertically aligned carbon nanotubes. Nanotechnology, 2014, 25, 055401.	1.3	191
16	SURFACE CHEMISTRY AND TRIBOLOGY OF MEMS. Annual Review of Physical Chemistry, 2004, 55, 35-54.	4.8	178
17	Graphene decoration with metal nanoparticles: Towards easy integration for sensing applications. Nanoscale, 2012, 4, 438-440.	2.8	164
18	Dichlorodimethylsilane as an anti-stiction monolayer for MEMS: a comparison to the octadecyltrichlorosilane self-assembled monolayer. Journal of Microelectromechanical Systems, 2001, 10, 41-49.	1.7	163

#	ARTICLE	IF	CITATIONS
19	Thermal Behavior of Alkylsiloxane Self-Assembled Monolayers on the Oxidized Si(100) Surface. <i>Langmuir</i> , 1997, 13, 3775-3780.	1.6	161
20	Metallization and nanostructuring of semiconductor surfaces by galvanic displacement processes. <i>Surface Science Reports</i> , 2007, 62, 499-525.	3.8	159
21	Alkene based monolayer films as anti-stiction coatings for polysilicon MEMS. <i>Sensors and Actuators A: Physical</i> , 2001, 91, 239-248.	2.0	149
22	Observation of Three Growth Mechanisms in Self-Assembled Monolayers. <i>Journal of Physical Chemistry B</i> , 1998, 102, 4441-4445.	1.2	147
23	Silicon carbide nanowires as highly robust electrodes for micro-supercapacitors. <i>Journal of Power Sources</i> , 2013, 230, 298-302.	4.0	144
24	Gold Deposition by Galvanic Displacement on Semiconductor Surfaces: A Effect of Substrate on Adhesion. <i>Journal of Physical Chemistry B</i> , 2002, 106, 401-407.	1.2	143
25	Si Nanowire Bridges in Microtrenches: Integration of Growth into Device Fabrication. <i>Advanced Materials</i> , 2005, 17, 2098-2102.	11.1	140
26	Silicon carbide coated silicon nanowires as robust electrode material for aqueous micro-supercapacitor. <i>Applied Physics Letters</i> , 2012, 100, .	1.5	136
27	High-performance all solid-state micro-supercapacitor based on patterned photoresist-derived porous carbon electrodes and an ionogel electrolyte. <i>Journal of Materials Chemistry A</i> , 2014, 2, 7997-8002.	5.2	135
28	High-Performance Surface-Micromachined Inchworm Actuator. <i>Journal of Microelectromechanical Systems</i> , 2004, 13, 63-74.	1.7	133
29	Advances in silicon carbide science and technology at the micro- and nanoscales. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2013, 31, .	0.9	127
30	Aluminum-induced dreierketten chain cross-links increase the mechanical properties of nanocrystalline calcium aluminosilicate hydrate. <i>Scientific Reports</i> , 2017, 7, 44032.	1.6	122
31	Highly crystalline MoS ₂ thin films grown by pulsed laser deposition. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	117
32	Direct observation of sulfur dimers in alkanethiol self-assembled monolayers on Au(111). <i>Physical Review B</i> , 1999, 59, R10449-R10452.	1.1	116
33	MnO _x -decorated carbonized porous silicon nanowire electrodes for high performance supercapacitors. <i>Energy and Environmental Science</i> , 2017, 10, 1505-1516.	15.6	109
34	A low-temperature CVD process for silicon carbide MEMS. <i>Sensors and Actuators A: Physical</i> , 2002, 97-98, 410-415.	2.0	108
35	Single Nanowire Thermal Conductivity Measurements by Raman Thermography. <i>ACS Nano</i> , 2010, 4, 4908-4914.	7.3	107
36	Photoresist-derived porous carbon for on-chip micro-supercapacitors. <i>Carbon</i> , 2013, 57, 395-400.	5.4	107

#	ARTICLE	IF	CITATIONS
37	Vapor phase anti-stiction coatings for MEMS. IEEE Transactions on Device and Materials Reliability, 2003, 3, 173-178.	1.5	106
38	General Thermal Texturization Process of MoS ₂ for Efficient Electrocatalytic Hydrogen Evolution Reaction. Nano Letters, 2016, 16, 4047-4053.	4.5	106
39	Covalent Attachment of Organic Monolayers to Silicon Carbide Surfaces. Langmuir, 2008, 24, 4007-4012.	1.6	104
40	The chemistry and structure of calcium (alumino) silicate hydrate: A study by XANES, ptychographic imaging, and wide- and small-angle scattering. Cement and Concrete Research, 2019, 115, 367-378.	4.6	104
41	Synthesis of High Density, Size-Controlled Si Nanowire Arrays via Porous Anodic Alumina Mask. Chemistry of Materials, 2006, 18, 988-991.	3.2	100
42	Selective Ultrathin Carbon Sheath on Porous Silicon Nanowires: Materials for Extremely High Energy Density Planar Micro-Supercapacitors. Nano Letters, 2014, 14, 1843-1847.	4.5	96
43	Effects of ambient humidity and temperature on the NO ₂ sensing characteristics of WS ₂ /graphene aerogel. Applied Surface Science, 2018, 450, 372-379.	3.1	96
44	Adhesion Characteristics of PDMS Surfaces During Repeated Pull-Off Force Measurements. Advanced Engineering Materials, 2010, 12, 398-404.	1.6	93
45	Effect of hydrogen termination on the work of adhesion between rough polycrystalline silicon surfaces. Journal of Applied Physics, 1997, 81, 3474-3483.	1.1	92
46	Wafer level anti-stiction coatings for MEMS. Sensors and Actuators A: Physical, 2003, 104, 213-221.	2.0	91
47	Hierarchical Co ₃ O ₄ /CuO nanorod array supported on carbon cloth for highly sensitive non-enzymatic glucose biosensing. Sensors and Actuators B: Chemical, 2019, 298, 126860.	4.0	89
48	Adhesion hysteresis of silane coated microcantilevers. Acta Materialia, 2000, 48, 4531-4541.	3.8	86
49	Gecko-Inspired Combined Lamellar and Nanofibrillar Array for Adhesion on Nonplanar Surface. Langmuir, 2009, 25, 12449-12453.	1.6	84
50	Microfabricated Thermally Isolated Low Work-Function Emitter. Journal of Microelectromechanical Systems, 2014, 23, 1182-1187.	1.7	83
51	Platinum Nanoparticle Loading of Boron Nitride Aerogel and Its Use as a Novel Material for Low-Power Catalytic Gas Sensing. Advanced Functional Materials, 2016, 26, 433-439.	7.8	82
52	In Situ Localized Growth of Ordered Metal Oxide Hollow Sphere Array on Microheater Platform for Sensitive, Ultra-Fast Gas Sensing. ACS Applied Materials & Interfaces, 2017, 9, 2634-2641.	4.0	81
53	Selective Growth of Si Nanowire Arrays via Galvanic Displacement Processes in Water-in-Oil Microemulsions. Journal of the American Chemical Society, 2005, 127, 4574-4575.	6.6	77
54	Polymer-Oligopeptide Composite Coating for Selective Detection of Explosives in Water. Analytical Chemistry, 2009, 81, 4192-4199.	3.2	77

#	ARTICLE	IF	CITATIONS
55	High Speed Epitaxial Perovskite Memory on Flexible Substrates. <i>Advanced Materials</i> , 2017, 29, 1605699.	11.1	74
56	Catalytic hydrogen sensing using microheated platinum nanoparticle-loaded graphene aerogel. <i>Sensors and Actuators B: Chemical</i> , 2015, 206, 399-406.	4.0	72
57	Flexible micro-supercapacitors with high energy density from simple transfer of photoresist-derived porous carbon electrodes. <i>Carbon</i> , 2014, 74, 163-169.	5.4	71
58	Formation of Alkanethiol Monolayer on Ge(111). <i>Journal of the American Chemical Society</i> , 2001, 123, 2422-2425.	6.6	70
59	Effects of CO ₂ and temperature on the structure and chemistry of C ₆₀ (A ⁺)S ⁺ H investigated by Raman spectroscopy. <i>RSC Advances</i> , 2017, 7, 48925-48933.	1.7	70
60	Nanowire-Assembled Hierarchical ZnCo ₂ O ₄ Microstructure Integrated with a Low-Power Microheater for Highly Sensitive Formaldehyde Detection. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 31764-31771.	4.0	69
61	Stiction reduction processes for surfacemicromachines. <i>Tribology Letters</i> , 1997, 3, 215-221.	1.2	67
62	Adhesion and Friction Issues Associated With Reliable Operation of MEMS. <i>MRS Bulletin</i> , 1998, 23, 47-51.	1.7	66
63	A direct thin-film path towards low-cost large-area III-V photovoltaics. <i>Scientific Reports</i> , 2013, 3, 2275.	1.6	65
64	Facile synthesis of ZnO-SnO ₂ hetero-structured nanowires for high-performance NO ₂ sensing application. <i>Sensors and Actuators B: Chemical</i> , 2021, 333, 129613.	4.0	65
65	Recent Progress Toward a Manufacturable Polycrystalline SiC Surface Micromachining Technology. <i>IEEE Sensors Journal</i> , 2004, 4, 441-448.	2.4	63
66	Stability of ammonium fluoride-treated Si(100). <i>Journal of Applied Physics</i> , 1995, 78, 3801-3808.	1.1	61
67	3D MoS ₂ Aerogel for Ultrasensitive NO ₂ Detection and Its Tunable Sensing Behavior. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700217.	1.9	60
68	Suspended Mechanical Structures Based on Elastic Silicon Nanowire Arrays. <i>Nano Letters</i> , 2007, 7, 1100-1104.	4.5	58
69	Temperature dependence of Raman spectra for individual silicon nanowires. <i>Physical Review B</i> , 2009, 80, .	1.1	58
70	Single-layer CVD-grown graphene decorated with metal nanoparticles as a promising biosensing platform. <i>Biosensors and Bioelectronics</i> , 2012, 33, 56-59.	5.3	57
71	In Situ Localized Growth of Porous Tin Oxide Films on Low Power Microheater Platform for Low Temperature CO Detection. <i>ACS Sensors</i> , 2016, 1, 339-343.	4.0	57
72	Factors enhancing the reliability of touch-mode electrostatic actuators. <i>Sensors and Actuators A: Physical</i> , 2000, 79, 245-250.	2.0	56

#	ARTICLE	IF	CITATIONS
73	Poly(ethylene glycol) Monolayer Formation and Stability on Gold and Silicon Nitride Substrates. <i>Langmuir</i> , 2008, 24, 10646-10653.	1.6	56
74	Single-Source Chemical Vapor Deposition of 3C-SiC Films in a LPCVD Reactor. <i>Journal of the Electrochemical Society</i> , 2004, 151, C210.	1.3	54
75	Growth of branching Si nanowires seeded by Au-Si surface migration. <i>Journal of Materials Chemistry</i> , 2008, 18, 5376.	6.7	54
76	Chemical and Thermal Stability of Alkanethiol and Sulfur Passivated InP(100). <i>Langmuir</i> , 2004, 20, 743-747.	1.6	52
77	High-Temperature All Solid-State Microsupercapacitors based on SiC Nanowire Electrode and YSZ Electrolyte. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 26658-26665.	4.0	52
78	Micromechanical properties of silicon-carbide thin films deposited using single-source chemical-vapor deposition. <i>Applied Physics Letters</i> , 2001, 79, 347-349.	1.5	51
79	Temperature-Induced Self-Pinning and Nanolayering of AuSi Eutectic Droplets. <i>Journal of the American Chemical Society</i> , 2008, 130, 2681-2685.	6.6	50
80	Silver Nanostructures on Silicon Based on Galvanic Displacement Process. <i>Journal of Physical Chemistry C</i> , 2009, 113, 16939-16944.	1.5	48
81	Formation of alkylsiloxane self-assembled monolayers on Si ₃ N ₄ . <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1999, 17, 540-544.	0.9	47
82	Gold-Coated Silver Dendrites as SERS Substrates with an Improved Lifetime. <i>Langmuir</i> , 2012, 28, 17846-17850.	1.6	47
83	Silver Nanodesert Rose as a Substrate for Surface-Enhanced Raman Spectroscopy. <i>ACS Applied Materials & Interfaces</i> , 2009, 1, 2551-2555.	4.0	46
84	Towards friction and adhesion from high modulus microfiber arrays. <i>Journal of Adhesion Science and Technology</i> , 2007, 21, 1297-1315.	1.4	45
85	Formation of <111> fiber texture in β -SiC films deposited on Si(100) substrates. <i>Diamond and Related Materials</i> , 2007, 16, 74-80.	1.8	44
86	<i>In situ</i> formation of metal-organic framework derived CuO polyhedrons on carbon cloth for highly sensitive non-enzymatic glucose sensing. <i>Journal of Materials Chemistry B</i> , 2019, 7, 4990-4996.	2.9	44
87	Nitrogen doping of polycrystalline 3C-SiC films grown using 1,3-disilabutane in a conventional LPCVD reactor. <i>Journal of Crystal Growth</i> , 2003, 259, 18-25.	0.7	43
88	Nonenzymatic glucose sensing based on deposited palladium nanoparticles on epoxy-silver electrodes. <i>Electrochimica Acta</i> , 2011, 56, 5855-5859.	2.6	43
89	Tribological Impact of SiC Encapsulation of Released Polycrystalline Silicon Microstructures. <i>Tribology Letters</i> , 2004, 17, 195-198.	1.2	42
90	Selective metallization of silicon micromechanical devices. <i>Electrochimica Acta</i> , 2002, 47, 2583-2588.	2.6	41

#	ARTICLE	IF	CITATIONS
91	Graphitization of n-type polycrystalline silicon carbide for on-chip supercapacitor application. Applied Physics Letters, 2011, 99, .	1.5	41
92	Semiconductor nanowires directly grown on graphene “ towards wafer scale transferable nanowire arrays with improved electrical contact. Nanoscale, 2013, 5, 4114.	2.8	41
93	Boron Doping and Defect Engineering of Graphene Aerogels for Ultrasensitive NO ₂ Detection. Journal of Physical Chemistry C, 2018, 122, 20358-20365.	1.5	41
94	Electrical, mechanical and metal contact properties of polycrystalline 3C-SiC films for MEMS in harsh environments. Surface and Coatings Technology, 2007, 201, 8893-8898.	2.2	40
95	Characterization of boron-doped micro- and nanocrystalline diamond films deposited by wafer-scale hot filament chemical vapor deposition for MEMS applications. Diamond and Related Materials, 2008, 17, 23-28.	1.8	40
96	Angular distribution of Rh atoms desorbed from ion-bombarded Rh{100}: Effect of local environment. Physical Review B, 1990, 42, 7311-7316.	1.1	39
97	Selective deposition of gold nanoclusters on silicon by a galvanic displacement process. Microelectronic Engineering, 2002, 64, 479-485.	1.1	39
98	Template assisted deposition of Ag nanoparticle arrays for surface-enhanced Raman scattering applications. Sensors and Actuators B: Chemical, 2007, 125, 353-356.	4.0	39
99	Palladium nanostructures from galvanic displacement as hydrogen peroxide sensor. Sensors and Actuators B: Chemical, 2010, 147, 681-686.	4.0	39
100	Reversible Liquid-Liquid Transitions in the Early Stages of Monolayer Self-Assembly. Journal of Physical Chemistry B, 2000, 104, 1556-1559.	1.2	36
101	Strategies for controlling Si nanowire formation during Au-assisted electroless etching. Journal of Materials Chemistry, 2011, 21, 10359.	6.7	36
102	Conductometric gas sensing behavior of WS ₂ aerogel. FlatChem, 2017, 5, 1-8.	2.8	36
103	Oxidation mechanism of the ammonium fluoride-treated Si(100) surface. Journal of Applied Physics, 1996, 80, 5408-5414.	1.1	35
104	Study of the desorption mechanism of alkylsiloxane self-assembled monolayers through isotopic labeling and high resolution electron energy-loss spectroscopy experiments. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 932-936.	0.9	35
105	Nitrogen doping of polycrystalline 3C-SiC films grown by single-source chemical vapor deposition. Thin Solid Films, 2002, 419, 69-75.	0.8	35
106	Thermal Behavior of Perfluoroalkylsiloxane Monolayers on the Oxidized Si(100) Surface. Langmuir, 2006, 22, 2726-2730.	1.6	35
107	Ultrasoother Gold Thin Films by Self-Limiting Galvanic Displacement on Silicon. ACS Applied Materials & Interfaces, 2011, 3, 1581-1584.	4.0	35
108	Reconstructing hydrophobic ZIF-8 crystal into hydrophilic hierarchically-porous nanoflowers as catalyst carrier for nonenzymatic glucose sensing. Sensors and Actuators B: Chemical, 2020, 313, 128031.	4.0	35

#	ARTICLE	IF	CITATIONS
109	Laterally Actuated Platinum-Coated Polysilicon NEM Relays. <i>Journal of Microelectromechanical Systems</i> , 2013, 22, 768-778.	1.7	34
110	Vibrational Spectra of Hydrogenated Buckminsterfullerene: A Candidate for the Unidentified Infrared Emission. <i>Astrophysical Journal</i> , 2001, 548, L225-L228.	1.6	34
111	High-selectivity etching of polycrystalline 3C-SiC films using HBr-based transformer coupled plasma. <i>Applied Physics Letters</i> , 2003, 82, 1742-1744.	1.5	33
112	Growth and characterization of nitrogen-doped polycrystalline 3C-SiC thin films for harsh environment MEMS applications. <i>Journal of Micromechanics and Microengineering</i> , 2010, 20, 035011.	1.5	32
113	Growth of Epitaxial 3C-SiC Films on Si(100) via Low Temperature SiC Buffer Layer. <i>Crystal Growth and Design</i> , 2010, 10, 36-39.	1.4	32
114	Structure and Morphology of Annealed Gold Films Galvanically Displaced on the Si(111) Surface. <i>Journal of Physical Chemistry C</i> , 2007, 111, 7508-7513.	1.5	31
115	Low-Temperature, Ion Beam-Assisted SiC Thin Films With Antireflective ZnO Nanorod Arrays for High-Temperature Photodetection. <i>IEEE Electron Device Letters</i> , 2011, 32, 1564-1566.	2.2	31
116	Effect of Fiber Geometry on Macroscale Friction of Ordered Low-Density Polyethylene Nanofiber Arrays. <i>Langmuir</i> , 2011, 27, 11008-11016.	1.6	31
117	Surface functionalization of carbon cloth with cobalt-porphyrin-based metal organic framework for enhanced electrochemical sensing. <i>Carbon</i> , 2019, 148, 64-71.	5.4	31
118	Stress control of polycrystalline 3C-SiC films in a large-scale LPCVD reactor using 1,3-disilabutane and dichlorosilane as precursors. <i>Journal of Micromechanics and Microengineering</i> , 2006, 16, 2736-2739.	1.5	30
119	Copper Deposition onto Silicon by Galvanic Displacement: Effect of Silicon Dissolution Rate. <i>Journal of the Electrochemical Society</i> , 2008, 155, E70.	1.3	30
120	Cycling characteristics of high energy density, electrochemically activated porous-carbon supercapacitor electrodes in aqueous electrolytes. <i>Journal of Materials Chemistry A</i> , 2013, 1, 10518.	5.2	30
121	Pd Nanoclusters Confined in ZIF-8 Matrixes for Fluorescent Detection of Glucose and Cholesterol. <i>ACS Applied Nano Materials</i> , 2021, 4, 9132-9142.	2.4	30
122	Synthesis and gas sensing properties of NiO/ZnO heterostructured nanowires. <i>Journal of Alloys and Compounds</i> , 2021, 877, 160189.	2.8	30
123	Adhesion evaluation of immersion plating copper films on silicon by microindentation measurements. <i>Thin Solid Films</i> , 2003, 434, 100-105.	0.8	28
124	Mutanofactin promotes adhesion and biofilm formation of cariogenic <i>Streptococcus mutans</i> . <i>Nature Chemical Biology</i> , 2021, 17, 576-584.	3.9	28
125	Residual stress characterization of polycrystalline 3C-SiC films on Si(100) deposited from methylsilane. <i>Journal of Applied Physics</i> , 2009, 106, 013505.	1.1	27
126	Electrical Characterization of n-Type Polycrystalline 3C-Silicon Carbide Thin Films Deposited by 1,3-Disilabutane. <i>Journal of the Electrochemical Society</i> , 2006, 153, G548.	1.3	26

#	ARTICLE	IF	CITATIONS
127	Investigation of quaternary ammonium silane-coated sand filter for the removal of bacteria and viruses from drinking water. <i>Journal of Applied Microbiology</i> , 2012, 113, 1196-1207.	1.4	26
128	Solvent-induced formation of unidirectionally curved and tilted Si nanowires during metal-assisted chemical etching. <i>Journal of Materials Chemistry C</i> , 2013, 1, 220-224.	2.7	26
129	Characterization of polycrystalline 3C-SiC films deposited from the precursors 1,3-disilabutane and dichlorosilane. <i>Journal of Applied Physics</i> , 2008, 103, 084907.	1.1	25
130	Comparative studies on electrochemical cycling behavior of two different silica-based ionogels. <i>Journal of Power Sources</i> , 2016, 301, 299-305.	4.0	25
131	Plasma assisted formation of 3D highly porous nanostructured metal oxide network on microheater platform for Low power gas sensing. <i>Sensors and Actuators B: Chemical</i> , 2019, 301, 127067.	4.0	25
132	Electronic and nuclear effects in ion-induced desorption from NaCl{100}. <i>Journal of Chemical Physics</i> , 1992, 96, 3298-3305.	1.2	24
133	Single-Source Chemical Vapor Deposition of SiC Films in a Large-Scale Low-Pressure CVD Growth, Chemical, and Mechanical Characterization Reactor. <i>Journal of the Electrochemical Society</i> , 2006, 153, C562.	1.3	24
134	Effect of Formation Temperature and Roughness on Surface Potential of Octadecyltrichlorosilane Self-Assembled Monolayer on Silicon Surfaces. <i>Journal of Physical Chemistry A</i> , 2007, 111, 12339-12343.	1.1	24
135	Templated 3D Ultrathin CVD Graphite Networks with Controllable Geometry: Synthesis and Application As Supercapacitor Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 18413-18417.	4.0	24
136	Direct Organization of Morphology-Controllable Mesoporous SnO ₂ Using Amphiphilic Graft Copolymer for Gas-Sensing Applications. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 37246-37253.	4.0	24
137	Energy- and angle-resolved measurements of the Rh(4F9/2) and Rh(4F7/2) populations from ion bombarded Rh{100}. <i>Journal of Chemical Physics</i> , 1992, 96, 6314-6317.	1.2	23
138	Angle-resolved velocity distributions of excited Rh atoms ejected from ion-bombarded Rh{100}. <i>Journal of Chemical Physics</i> , 1992, 97, 3846-3854.	1.2	23
139	Bonding characteristics of 3C-SiC wafers with hydrofluoric acid for high-temperature MEMS applications. <i>Sensors and Actuators A: Physical</i> , 2005, 119, 599-604.	2.0	23
140	Strain engineering of epitaxially transferred, ultrathin layers of III-V semiconductor on insulator. <i>Applied Physics Letters</i> , 2011, 98, 012111.	1.5	23
141	Comment on "Structure and composition of GaAs(001) surfaces". <i>Physical Review Letters</i> , 1993, 70, 3172-3172.	2.9	22
142	MEMS Rotary Engine Power System. <i>IEEJ Transactions on Sensors and Micromachines</i> , 2003, 123, 326-330.	0.0	22
143	Characterization of Adhesion Force in MEMS at High Temperature Using Thermally Actuated Microstructures. <i>Journal of Microelectromechanical Systems</i> , 2012, 21, 541-548.	1.7	22
144	Surface engineering for reliable operation of MEMS devices. <i>Journal of Adhesion Science and Technology</i> , 2003, 17, 583-591.	1.4	21

#	ARTICLE	IF	CITATIONS
145	Enhanced Ohmic contact via graphitization of polycrystalline silicon carbide. Applied Physics Letters, 2010, 97, 262107.	1.5	21
146	Galvanic Deposition of Pt Clusters on Silicon: Effect of HF Concentration and Application as Catalyst for Silicon Nanowire Growth. Langmuir, 2010, 26, 432-437.	1.6	21
147	Determination of substrate pinning in epitaxial and supported graphene layers via Raman scattering. Physical Review B, 2011, 83, .	1.1	21
148	Characterization of AFM cantilevers coated with diamond-like carbon. Diamond and Related Materials, 2001, 10, 2190-2194.	1.8	20
149	Fracture of Polycrystalline 3C-SiC Films in Microelectromechanical Systems. Journal of Microelectromechanical Systems, 2004, 13, 972-976.	1.7	20
150	Adhesion characteristics of MEMS in microfluidic environments. Journal of Microelectromechanical Systems, 2005, 14, 947-953.	1.7	20
151	Evolution in surface morphology of epitaxial graphene layers on SiC induced by controlled structural strain. Applied Physics Letters, 2008, 93, 191916.	1.5	20
152	Epitaxial Graphene Growth on 3C-SiC(111)/AlN(0001)/Si(100). Electrochemical and Solid-State Letters, 2011, 14, K13.	2.2	20
153	Real-Time Observation of Reactive Spreading of Gold on Silicon. Physical Review Letters, 2009, 103, 256102.	2.9	19
154	Characterization of Encapsulated Micromechanical Resonators Sealed and Coated With Polycrystalline SiC. Journal of Microelectromechanical Systems, 2010, 19, 357-366.	1.7	19
155	Silicate Bond Characteristics in Calcium-Silicate Hydrates Determined by High Pressure Raman Spectroscopy. Journal of Physical Chemistry C, 2020, 124, 18335-18345.	1.5	19
156	Plastic deformation mechanism of calcium-silicate hydrates determined by deviatoric-stress Raman spectroscopy. Cement and Concrete Research, 2021, 146, 106476.	4.6	19
157	Interaction of H(D) Atoms with Octadecylsiloxane Self-Assembled Monolayers on the Si(100) Surface. Langmuir, 1997, 13, 6491-6496.	1.6	18
158	Transistor-Based Work-Function Measurement of Metal-Organic Frameworks for Ultra-Low Power, Rationally Designed Chemical Sensors. Chemistry - A European Journal, 2019, 25, 13176-13183.	1.7	18
159	Electrochemical Fabrication of Supported Ni Nanostructures Through Transferred Porous Anodic Alumina Mask. Electrochemical and Solid-State Letters, 2006, 9, D13.	2.2	17
160	Cathodic corrosion of polycrystalline silicon MEMS. Sensors and Actuators A: Physical, 2008, 145-146, 323-329.	2.0	17
161	Microfabricated silicon carbide thermionic energy converter for solar electricity generation. , 2012, , .		17
162	Effect of Temperature on In-Use Stiction of Cantilever Beams Coated With Perfluorinated Alkylsiloxane Monolayers. Journal of Microelectromechanical Systems, 2006, 15, 737-744.	1.7	16

#	ARTICLE	IF	CITATIONS
163	Electropolishing of n-type 3C-polycrystalline silicon carbide. <i>Electrochemistry Communications</i> , 2014, 40, 17-19.	2.3	16
164	Electrodeposition of High-Purity Indium Thin Films and Its Application to Indium Phosphide Solar Cells. <i>Journal of the Electrochemical Society</i> , 2014, 161, D794-D800.	1.3	16
165	Low-power catalytic gas sensing using highly stable silicon carbide microheaters. <i>Journal of Micromechanics and Microengineering</i> , 2017, 27, 045003.	1.5	16
166	Atomically ordered intermetallic PdZn coupled with Co nanoparticles as a highly dispersed dual catalyst chemically bonded to N-doped carbon for boosting oxygen reduction reaction performance. <i>Journal of Materials Chemistry A</i> , 2020, 8, 21327-21338.	5.2	16
167	Polycrystalline silicon carbide as a substrate material for reducing adhesion in MEMS. <i>Tribology Letters</i> , 2006, 21, 226-232.	1.2	15
168	Amine-functionalized metal-organic framework ZIF-8 toward colorimetric CO ₂ sensing in indoor air environment. <i>Sensors and Actuators B: Chemical</i> , 2021, 344, 130313.	4.0	15
169	In-situ synthesized N-doped ZnO for enhanced CO ₂ sensing: Experiments and DFT calculations. <i>Sensors and Actuators B: Chemical</i> , 2022, 357, 131359.	4.0	15
170	Dynamics of Copper Deposition onto Silicon by Galvanic Displacement. <i>Journal of the Electrochemical Society</i> , 2008, 155, D244.	1.3	14
171	Tuning the Friction Characteristics of Gecko-Inspired Polydimethylsiloxane Micropillar Arrays by Embedding Fe ₃ O ₄ and SiO ₂ Particles. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 13232-13237.	4.0	14
172	Control of strain gradient in doped polycrystalline silicon carbide films through tailored doping. <i>Journal of Micromechanics and Microengineering</i> , 2006, 16, L1-L5.	1.5	13
173	Casting Nanoporous Platinum in Metal-Organic Frameworks. <i>Advanced Materials</i> , 2019, 31, e1807553.	11.1	13
174	Transformer coupled plasma etching of 3C-SiC films using fluorinated chemistry for microelectromechanical systems applications. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2004, 22, 513.	1.6	12
175	Effects of Annealing on Residual Stress and Strain Gradient of Doped Polycrystalline SiC Thin Films. <i>Electrochemical and Solid-State Letters</i> , 2008, 11, D35.	2.2	12
176	Experimental Investigation of Silicon Surface Migration in Low Pressure Nonreducing Gas Environments. <i>Electrochemical and Solid-State Letters</i> , 2009, 12, H437.	2.2	12
177	Branching induced faceting of Si nanotrees. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	12
178	A finite element technique for accurate determination of interfacial adhesion force in MEMS using electrostatic actuation. <i>Journal of Micromechanics and Microengineering</i> , 2011, 21, 115025.	1.5	12
179	Micellar block copolymer templated galvanic displacement for epitaxial nanowire device integration. <i>Journal of Materials Chemistry</i> , 2011, 21, 8807.	6.7	12
180	Role of Counter-substrate Surface Energy in Macroscale Friction of Nanofiber Arrays. <i>Langmuir</i> , 2012, 28, 2922-2927.	1.6	12

#	ARTICLE	IF	CITATIONS
181	Lubrication of polycrystalline silicon MEMS via a thin silicon carbide coating. Sensors and Actuators A: Physical, 2013, 193, 238-245.	2.0	12
182	Increased Optoelectronic Quality and Uniformity of Hydrogenated p-InP Thin Films. Chemistry of Materials, 2016, 28, 4602-4607.	3.2	12
183	Hierarchical cobalt oxide-functionalized silicon carbide nanowire array for efficient and robust oxygen evolution electro-catalysis. Materials Today Energy, 2018, 7, 37-43.	2.5	12
184	Well-connected ZnO nanoparticle network fabricated by in-situ annealing of ZIF-8 for enhanced sensitivity in gas sensing application. Sensors and Actuators B: Chemical, 2021, 344, 130180.	4.0	12
185	Interfacial Adhesion between Rough Surfaces of Polycrystalline Silicon and Its Implications for M/NEMS Technology. Journal of Adhesion Science and Technology, 2010, 24, 2545-2556.	1.4	11
186	Application of principal component analysis to a full profile correlative analysis of FTIR spectra. Surface and Interface Analysis, 2012, 44, 365-371.	0.8	11
187	Nitrate amperometric sensor in neutral pH based on Pd nanoparticles on epoxy-copper electrodes. Electrochimica Acta, 2013, 103, 38-43.	2.6	11
188	Tuning Micropillar Tapering for Optimal Friction Performance of Thermoplastic Gecko-Inspired Adhesive. ACS Applied Materials & Interfaces, 2014, 6, 6936-6943.	4.0	11
189	TiN diffusion barrier for stable W/SiC(0001) interfaces in inert ambient at high temperature. Thin Solid Films, 2019, 670, 54-59.	0.8	11
190	Experiments on Quantum and Thermal Desorption from He4 Films. Physical Review Letters, 1985, 54, 2034-2037.	2.9	10
191	Nickel and platinum ohmic contacts to polycrystalline 3C-silicon carbide. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2007, 139, 235-239.	1.7	10
192	Sequestration of solid carbon in concrete: A large-scale enabler of lower-carbon intensity hydrogen from natural gas. MRS Bulletin, 2021, 46, 680-686.	1.7	10
193	The nanomechanical properties of non-crosslinked calcium aluminosilicate hydrate: The influences of tetrahedral Al and curing age. Cement and Concrete Research, 2022, 159, 106900.	4.6	10
194	Energy and angular distributions of excited rhodium atoms ejected from the rhodium (100) surface. Physical Review B, 1991, 43, 12078-12081.	1.1	9
195	Single-Source CVD of 3C-SiC Films in a LPCVD Reactor. Journal of the Electrochemical Society, 2004, 151, C215.	1.3	9
196	In situ studies of interfacial contact evolution via a two-axis deflecting cantilever microinstrument. Applied Physics Letters, 2009, 95, 131902.	1.5	9
197	Room-Temperature Wet Etching of Polycrystalline and Nanocrystalline Silicon Carbide Thin Films with HF and HNO ₃ . Journal of the Electrochemical Society, 2009, 156, D104.	1.3	9
198	Copper deposition onto silicon by galvanic displacement: Effect of Cu complex formation in NH ₄ F solutions. Electrochimica Acta, 2009, 54, 3270-3277.	2.6	9

#	ARTICLE	IF	CITATIONS
199	Magnetic micromechanical structures based on CoNi electrodeposited alloys. Journal of Micromechanics and Microengineering, 2010, 20, 125017.	1.5	9
200	Ex situ vapor phase boron doping of silicon nanowires using BBr ₃ . Nanoscale, 2010, 2, 1165.	2.8	9
201	Inline Measurement of Adhesion Force Using Electrostatic Actuation and Capacitive Readout. Journal of Microelectromechanical Systems, 2012, 21, 768-770.	1.7	9
202	Friction Characteristics of Polymeric Nanofiber Arrays against Substrates with Tailored Geometry. Langmuir, 2013, 29, 8395-8401.	1.6	9
203	Layer-by-layer self-assembled conductive thin films for MEMS applications. Sensors and Actuators A: Physical, 2006, 126, 194-200.	2.0	8
204	Electrical and Mechanical Characterization of Doped and Annealed Polycrystalline 3C-SiC Thin Films. Journal of the Electrochemical Society, 2009, 156, D5.	1.3	8
205	Corrosion mechanism and surface passivation strategies of polycrystalline silicon electrodes. Sensors and Actuators A: Physical, 2011, 166, 201-206.	2.0	8
206	Charging and discharging behavior in dielectric-coated MEMS electrodes probed by Kelvin probe force microscopy. Journal of Micromechanics and Microengineering, 2012, 22, 065031.	1.5	7
207	Silicon carbide nanowires as an electrode material for high temperature supercapacitors. , 2012, , .		7
208	Flexible micro-supercapacitors from photoresist-derived carbon electrodes on flexible substrates. , 2014, , .		7
209	Two-Fluid Wetting Behavior of a Hydrophobic Silicon Nanowire Array. Langmuir, 2014, 30, 13330-13337.	1.6	7
210	3D Stretchable Arch Ribbon Array Fabricated via Grayscale Lithography. Scientific Reports, 2016, 6, 28552.	1.6	7
211	Demonstration of Hexagonal Phase Silicon Carbide Nanowire Arrays with Vertical Alignment. Crystal Growth and Design, 2016, 16, 2887-2892.	1.4	7
212	Cobalt Oxide-Decorated Silicon Carbide Nano-Tree Array Electrode for Micro-Supercapacitor Application. Materials, 2021, 14, 4514.	1.3	7
213	Functionalization of Scanning Force Microscopy Cantilevers via Galvanic Displacement Technique. Tribology Letters, 2001, 11, 171-175.	1.2	6
214	Improved vapor-phase deposition technique for antistiction monolayers. , 2004, 5342, 204.		6
215	A Simple Soft Lithographic Nanopatterning of Gold on Gallium Arsenide via Galvanic Displacement. Journal of Nanoscience and Nanotechnology, 2010, 10, 5020-5026.	0.9	6
216	Morphological, Electrical, and Chemical Changes in Cyclically Contacting Polycrystalline Silicon Surfaces Coated with Perfluoroalkylsilane Self-Assembled Monolayer. Tribology Letters, 2011, 44, 13-17.	1.2	6

#	ARTICLE	IF	CITATIONS
217	Atomic-Scale Electronic Characterization of Defects in Silicon Carbide Nanowires by Electron Energy-Loss Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2018, 122, 12047-12051.	1.5	6
218	<title>Antistiction coatings for surface micromachines</title>. , 1998, 3511, 108.		5
219	Molecular vapor deposition (MVD) for improved SAM coatings. , 2005, , .		5
220	Tunable in situ growth of porous cubic silicon carbide thin films via methyltrichlorosilane-based chemical vapor deposition. <i>Applied Physics Letters</i> , 2009, 95, 101901.	1.5	5
221	Low-energy ion bombardment to tailor the interfacial and mechanical properties of polycrystalline 3C-silicon carbide. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2010, 28, 1259-1262.	0.9	5
222	Growth of 3C-SiC Thin Film on AlN/Si(100) with Atomically Abrupt Interface via Tailored Precursor Feeding Procedure. <i>Electrochemical and Solid-State Letters</i> , 2010, 13, D53.	2.2	5
223	W/TaC/SiC sandwich stack for high temperature applications. <i>Ceramics International</i> , 2019, 45, 22292-22297.	2.3	5
224	Improved Hydrogen Sensitivity and Selectivity in PdO with Metal-Organic Framework Membrane. <i>Journal of the Electrochemical Society</i> , 2020, 167, 147503.	1.3	5
225	Theoretical and experimental study of the chemisorption of 1,3 disilabutane on the Si(100) surface. <i>Journal of Chemical Physics</i> , 2003, 118, 6089-6097.	1.2	4
226	Single crystal silicon nanopillars, nanoneedles and nanoblades with precise positioning for massively parallel nanoscale device integration. <i>Nanotechnology</i> , 2012, 23, 225303.	1.3	4
227	Raman Spectroscopy for Characterization of Semiconducting Nanowires. , 2012, , 477-506.		4
228	Frictional characteristics of stiff, high aspect ratio microfiber arrays based on cyclic olefin polymers. <i>Journal of Adhesion Science and Technology</i> , 2017, 31, 1017-1027.	1.4	4
229	Extraordinary Transmission Through A Poly-SiC Membrane with Subwavelength Hole Arrays. , 2007, , .		3
230	Resolving sub-nm steps with a low-voltage miniature scanning electron microscope. <i>Microelectronic Engineering</i> , 2009, 86, 1004-1008.	1.1	3
231	Gas Sensors: Platinum Nanoparticle Loading of Boron Nitride Aerogel and Its Use as a Novel Material for Low Power Catalytic Gas Sensing (<i>Adv. Funct. Mater.</i> 3/2016). <i>Advanced Functional Materials</i> , 2016, 26, 314-314.	7.8	3
232	Enhanced thermal stability by introducing TiN diffusion barrier layer between W and SiC. <i>Journal of the American Ceramic Society</i> , 2019, 102, 5613-5619.	1.9	3
233	Nanocrystalline SiC metal-semiconductor-metal photodetector with ZnO nanorod arrays for high-temperature applications. , 2011, , .		2
234	A SiC metallization scheme using an ALD protective layer for harsh environment devices. , 2012, , .		2

#	ARTICLE	IF	CITATIONS
235	Graphene Synthesis on Electrodeposited Substrates and Its Integration in MEMS for Sensor Applications. ECS Transactions, 2014, 64, 181-188.	0.3	2
236	Ni-induced graphitization for enhanced long-term stability of ohmic contact to polycrystalline 3C-SiC. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	0.9	2
237	Al-2 % Si Induced Crystallization of Amorphous Silicon. Electrochemical and Solid-State Letters, 2007, 10, H337-H339.	2.2	1
238	Electrochemical Deposition of Copper onto Silicon. ECS Transactions, 2007, 6, 569-576.	0.3	1
239	A new chemresistive NO ₂ sensing material: Hafnium diboride. Ceramics International, 2022, 48, 6835-6841.	2.3	1
240	Observation of near-surface damage by phonon scattering. Physical Review B, 1988, 38, 12190-12199.	1.1	0
241	Angular and Energy Distributions of RH Atoms Desorbed in an Excited State from Ion-Bombarded Rh{100}. Materials Research Society Symposia Proceedings, 1990, 201, 87.	0.1	0
242	Resonant scanning tunneling spectroscopy of a quantum-well heterostructure. Surface Science Letters, 1993, 280, 263-266.	0.1	0
243	Phonon Polariton Reflectance Spectra In a Silicon Carbide Membrane Hole Array. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	0
244	The dependence of poly-crystalline SiC mid-infrared optical properties on deposition conditions. , 2008, , .		0
245	Scalable Super-Resolution Synthesis of Core-Vest Composites Assisted by Surface Plasmons. Journal of Physical Chemistry Letters, 2018, 9, 717-723.	2.1	0
246	Scalable Ultra Low-Power Chemical Sensing with Metal-Organic Frameworks. , 2019, , .		0
247	Synthesis and Electrochemical Stability of Ultrahigh Aspect Ratio Nanoporous Gold after Calixarene-Phosphine Ligand Removal. ACS Applied Materials & Interfaces, 2019, 11, 15189-15194.	4.0	0
248	Remembering NJ. ACS Sensors, 2020, 5, 887-888.	4.0	0
249	2021: A Year Starting Full of Hope. ACS Sensors, 2021, 6, 1-2.	4.0	0
250	(Invited) Microfabricated Chemical Sensors for Industrial, Health and Environmental Monitoring. ECS Meeting Abstracts, 2021, MA2021-01, 1588-1588.	0.0	0
251	Infrared and Ultraviolet Spectra of Fullerenes: HREELS Studies and Implications for the Interstellar Medium. Carbon Materials, 2010, , 27-37.	0.2	0
252	Surface Treatment and Planarization. MEMS Reference Shelf, 2011, , 925-1044.	0.6	0

#	ARTICLE	IF	CITATIONS
253	Interfacial Adhesion between Rough Surfaces of Polycrystalline Silicon and Its Implications for M/NEMS Technology. , 2011, , 211-222.		0