Jose A Garrido

List of Publications by Year
in descending order

155	10,119	47006 47	36028 97
papers	citations	h-index	g-index

158	158	158	14290
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Heat dissipation in few-layer MoS₂ and MoS₂/hBN heterostructure. 2D Materials, 2022, 9, 015005.	4.4	6
2	Full-bandwidth electrophysiology of seizures and epileptiform activity enabled by flexible graphene microtransistor depth neural probes. Nature Nanotechnology, 2022, 17, 301-309.	31.5	49
3	The advantages of mapping slow brain potentials using DCâ€coupled graphene microâ€transistors: Clinical and translational applications. Clinical and Translational Medicine, 2022, 12, .	4.0	4
4	A 1024-Channel 10-Bit 36-muW/ch CMOS ROIC for Multiplexed GFET-Only Sensor Arrays in Brain Mapping. IEEE Transactions on Biomedical Circuits and Systems, 2021, 15, 860-876.	4.0	6
5	Graphene active sensor arrays for long-term and wireless mapping of wide frequency band epicortical brain activity. Nature Communications, 2021, 12, 211.	12.8	44
6	Novel Graphene Electrode for Retinal Implants: An in vivo Biocompatibility Study. Frontiers in Neuroscience, 2021, 15, 615256.	2.8	12
7	Characterization of optogenetically-induced cortical spreading depression in awake mice using graphene micro-transistor arrays. Journal of Neural Engineering, 2021, 18, 055002.	3.5	13
8	Carbon Incorporation in MOCVD of MoS₂ Thin Films Grown from an Organosulfide Precursor. Chemistry of Materials, 2021, 33, 4474-4487.	6.7	21
9	Novel transducers for high-channel-count neuroelectronic recording interfaces. Current Opinion in Biotechnology, 2021, 72, 39-47.	6.6	3
10	Effect of channel thickness on noise in organic electrochemical transistors. Applied Physics Letters, 2020, 117, .	3.3	14
11	Bias dependent variability of low-frequency noise in single-layer graphene FETs. Nanoscale Advances, 2020, 2, 5450-5460.	4.6	3
12	Photocurrent spectroscopy of in-plane surface conductive diamond homostructures. Physical Review B, 2020, 101, .	3.2	3
13	Distortionâ€Free Sensing of Neural Activity Using Graphene Transistors. Small, 2020, 16, 1906640.	10.0	20
14	Switchless Multiplexing of Graphene Active Sensor Arrays for Brain Mapping. Nano Letters, 2020, 20, 3528-3537.	9.1	42
15	Multiplexed neural sensor array of graphene solution-gated field-effect transistors. 2D Materials, 2020, 7, 025046.	4.4	23
16	Production and processing of graphene and related materials. 2D Materials, 2020, 7, 022001.	4.4	333
17	Improved metal-graphene contacts for low-noise, high-density microtransistor arrays for neural sensing. Carbon, 2020, 161, 647-655.	10.3	19
18	Low-Frequency Noise Parameter Extraction Method for Single-Layer Graphene FETs. IEEE Transactions on Electron Devices, 2020, 67, 2093-2099.	3.0	10

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19	Impact of contact overlap on transconductance and noise in organic electrochemical transistors. Flexible and Printed Electronics, 2019, 4, 044003.	2.7	30
20	Crossover from ballistic to diffusive thermal transport in suspended graphene membranes. 2D Materials, 2019, 6, 025034.	4.4	19
21	Versatile Graphene-Based Platform for Robust Nanobiohybrid Interfaces. ACS Omega, 2019, 4, 3287-3297.	3.5	9
22	Neural interfaces based on flexible graphene transistors: A new tool for electrophysiology. , 2019, , .		1
23	Velocity Saturation Effect on Low Frequency Noise in Short Channel Single Layer Graphene Field Effect Transistors. ACS Applied Electronic Materials, 2019, 1, 2626-2636.	4.3	16
24	High-resolution mapping of infraslow cortical brain activity enabled by graphene microtransistors. Nature Materials, 2019, 18, 280-288.	27.5	121
25	Uniformly coated highly porous graphene/MnO₂foams for flexible asymmetric supercapacitors. Nanotechnology, 2018, 29, 225402.	2.6	18
26	Lipid Monolayer Formation and Lipid Exchange Monitored by a Graphene Field-Effect Transistor. Langmuir, 2018, 34, 4224-4233.	3.5	11
27	Flexible Graphene Solutionâ€Gated Fieldâ€Effect Transistors: Efficient Transducers for Microâ€Electrocorticography. Advanced Functional Materials, 2018, 28, 1703976.	14.9	97
28	Photocurrent generation of biohybrid systems based on bacterial reaction centers and graphene electrodes. Diamond and Related Materials, 2018, 89, 286-292.	3.9	6
29	Understanding the bias dependence of low frequency noise in single layer graphene FETs. Nanoscale, 2018, 10, 14947-14956.	5.6	23
30	Single-layer graphene modulates neuronal communication and augments membrane ion currents. Nature Nanotechnology, 2018, 13, 755-764.	31.5	120
31	Mapping brain activity with flexible graphene micro-transistors. 2D Materials, 2017, 4, 025040.	4.4	72
32	GaN surface states investigated by electrochemical studies. Applied Physics Letters, 2017, 110, .	3.3	18
33	Frequency response of electrolyte-gated graphene electrodes and transistors. Journal Physics D: Applied Physics, 2017, 50, 095304.	2.8	17
34	Protecting a Diamond Quantum Memory by Charge State Control. Nano Letters, 2017, 17, 5931-5937.	9.1	66
35	Graphene in the Design and Engineering of Nextâ€Generation Neural Interfaces. Advanced Materials, 2017, 29, 1700909.	21.0	129
36	Electrochemical characterization of GaN surface states. Journal of Applied Physics, 2017, 122, .	2.5	10

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37	<i>Î±,Ï‰</i>-dihexyl-sexithiophene thin films for solution-gated organic field-effect transistors. Applied Physics Letters, 2016, 108, .	3.3	4
38	Graphene field effect transistors for in vitro and ex vivo recordings. IEEE Nanotechnology Magazine, 2016, , 1-1.	2.0	13
39	Liquid Crystals: Alignment and Graphene-Assisted Decoration of Lyotropic Chromonic Liquid Crystals Containing DNA Origami Nanostructures (Small 12/2016). Small, 2016, 12, 1542-1542.	10.0	0
40	Alignment and Graphene-Assisted Decoration of Lyotropic Chromonic Liquid Crystals Containing DNA Origami Nanostructures. Small, 2016, 12, 1658-1666.	10.0	11
41	High surface area graphene foams by chemical vapor deposition. 2D Materials, 2016, 3, 045013.	4.4	53
42	Photoresponse of supramolecular self-assembled networks on grapheneâ€“diamond interfaces. Nature Communications, 2016, 7, 10700.	12.8	40
43	THz-circuits driven by photo-thermoelectric, gate-tunable graphene-junctions. Scientific Reports, 2016, 6, 35654.	3.3	32
44	Flexible graphene transistors for recording cell action potentials. 2D Materials, 2016, 3, 025007.	4.4	53
45	Surface State Mediated Electron Transfer Across the N-Type SiC/Electrolyte Interface. Journal of Physical Chemistry C, 2016, 120, 6524-6533.	3.1	21
46	Suppression of Photoanodic Surface Oxidation of n-Type 6H-SiC Electrodes in Aqueous Electrolytes. Langmuir, 2016, 32, 1637-1644.	3.5	11
47	Resettable, Low-temperature Accumulation Gas Sensors Based on Hydrogenated Diamond Transducers. Procedia Engineering, 2015, 120, 590-593.	1.2	5
48	Optoelectronic properties of p-diamond/n-GaN nanowire heterojunctions. Journal of Applied Physics, 2015, 118, .	2.5	12
49	Doped GaN nanowires on diamond: Structural properties and charge carrier distribution. Journal of Applied Physics, 2015, 117, .	2.5	20
50	Effects of Hydroxylation and Silanization on the Surface Properties of ZnO Nanowires. ACS Applied Materials & Interfaces, 2015, 7, 5331-5337.	8.0	11
51	Position-Controlled Growth of GaN Nanowires and Nanotubes on Diamond by Molecular Beam Epitaxy. Nano Letters, 2015, 15, 1773-1779.	9.1	69
52	Role of grain boundaries in tailoring electronic properties of polycrystalline graphene by chemical functionalization. 2D Materials, 2015, 2, 024008.	4.4	74
53	Photocurrent Generation in Diamond Electrodes Modified with Reaction Centers. ACS Applied Materials & Interfaces, 2015, 7, 8099-8107.	8.0	42
54	Photocatalytic Stability of Single- and Few-Layer MoS₂. ACS Nano, 2015, 9, 11302-11309.	14.6	197

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55	Ultrafast electronic readout of diamond nitrogenâ€“vacancy centres coupled to graphene. Nature Nanotechnology, 2015, 10, 135-139.	31.5	70
56	Electrical Coupling Between Cells and Graphene Transistors. Small, 2015, 11, 1703-1710.	10.0	25
57	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. Nanoscale, 2015, 7, 4598-4810.	5.6	2,452
58	Heteroepitaxial ZnO films on diamond: Optoelectronic properties and the role of interface polarity. Journal of Applied Physics, 2014, 115, 213508.	2.5	3
59	Emergence of Photoswitchable States in a Grapheneâ€“Azobenzeneâ€“Au Platform. Nano Letters, 2014, 14, 6823-6827.	9.1	40
60	Detection of random vapour concentrations using an integrating diamond gas sensor. Sensors and Actuators B: Chemical, 2014, 195, 603-608.	7.8	18
61	Addressing Single Nitrogen-Vacancy Centers in Diamond with Transparent in-Plane Gate Structures. Nano Letters, 2014, 14, 2359-2364.	9.1	45
62	A Currentâ€“Voltage Model for Graphene Electrolyte-Gated Field-Effect Transistors. IEEE Transactions on Electron Devices, 2014, 61, 3971-3977.	3.0	33
63	Low dimensionality of the surface conductivity of diamond. Physical Review B, 2014, 89, .	3.2	17
64	Influence of substrate material, orientation, and surface termination on GaN nanowire growth. Journal of Applied Physics, 2014, 116, .	2.5	21
65	Three-Dimensional Bicomponent Supramolecular Nanoporous Self-Assembly on a Hybrid All-Carbon Atomically Flat and Transparent Platform. Nano Letters, 2014, 14, 4486-4492.	9.1	20
66	Organophosphonate Biofunctionalization of Diamond Electrodes. ACS Applied Materials & Interfaces, 2014, 6, 13909-13916.	8.0	10
67	Graphene Transistors with Multifunctional Polymer Brushes for Biosensing Applications. ACS Applied Materials & Interfaces, 2014, 6, 9705-9710.	8.0	77
68	Diamond surface conductivity: Properties, devices, and sensors. MRS Bulletin, 2014, 39, 542-548.	3.5	64
69	Induction heating-assisted repeated growth and electrochemical transfer of graphene on millimeter-thick metal substrates. Diamond and Related Materials, 2014, 47, 46-52.	3.9	16
70	Graphene Transistors for Bioelectronics. Proceedings of the IEEE, 2013, 101, 1780-1792.	21.3	121
71	Semiconductor/Polymer Nanocomposites of Acrylates and Nanocrystalline Silicon by Laserâ€Induced Thermal Polymerization. Macromolecular Materials and Engineering, 2013, 298, 1160-1165.	3.6	11
72	Water adsorbate mediated accumulation gas sensing at hydrogenated diamond surfaces. Sensors and Actuators B: Chemical, 2013, 181, 894-903.	7.8	17

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73	Functional Polymer Brushes on Hydrogenated Graphene. Chemistry of Materials, 2013, 25, 466-470.	6.7	40
74	Functional Polymer Brushes on Diamond as a Platform for Immobilization and Electrical Wiring of Biomolecules. Advanced Functional Materials, 2013, 23, 2979-2986.	14.9	21
75	Purified Neurons can Survive on Peptideâ€Free Graphene Layers. Advanced Healthcare Materials, 2013, 2, 929-933.	7.6	103
76	Enzyme-modified electrolyte-gated organic field-effect transistors. Proceedings of SPIE, 2012, , .	0.8	2
77	Diamond solutionâ€gated field effect transistors: Properties and bioelectronic applications. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1631-1642.	1.8	15
78	Fundamentals and Applications of Diamond. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1607-1608.	1.8	0
79	Solid polyelectrolyte-gated surface conductive diamond field effect transistors. Applied Physics Letters, 2012, 100, 023510.	3.3	13
80	Solution processable carbon nanotube network thin-film transistors operated in electrolytic solutions at various pH. Applied Physics Letters, 2012, 101, .	3.3	15
81	Charge state manipulation of qubits in diamond. Nature Communications, 2012, 3, 729.	12.8	187
82	Self-Assembled GaN Nanowires on Diamond. Nano Letters, 2012, 12, 2199-2204.	9.1	73
83	Biofunctional Electrolyteâ€Gated Organic Fieldâ€Effect Transistors. Advanced Materials, 2012, 24, 4511-4517.	21.0	93
84	Nanostructured polymer brushes and protein density gradients on diamond by carbon templating. Soft Matter, 2011, 7, 4861.	2.7	37
85	Polymer Brushes on Graphene. Journal of the American Chemical Society, 2011, 133, 10490-10498.	13.7	142
86	High-transconductance graphene solution-gated field effect transistors. Applied Physics Letters, 2011, 99, .	3.3	78
87	Chemical control of the charge state of nitrogen-vacancy centers in diamond. Physical Review B, 2011, 83, .	3.2	272
88	Graphene Transistor Arrays for Recording Action Potentials from Electrogenic Cells. Advanced Materials, 2011, 23, 5045-5049.	21.0	210
89	Graphene Transistors for Bioelectronics: Graphene Transistor Arrays for Recording Action Potentials from Electrogenic Cells (Adv. Mater. 43/2011). Advanced Materials, 2011, 23, 4968-4968.	21.0	4
90	Hydrophobic Interaction and Charge Accumulation at the Diamond-Electrolyte Interface. Physical Review Letters, 2011, 106, 196103.	7.8	29

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91	Electrolyte-gated organic field-effect transistors for sensing applications. Applied Physics Letters, 2011, 98, .	3.3	99
92	Electrical passivation and chemical functionalization of SiC surfaces by chlorine termination. Applied Physics Letters, 2011, 98, .	3.3	16
93	Graphene Solutionâ€Gated Fieldâ€Effect Transistor Array for Sensing Applications. Advanced Functional Materials, 2010, 20, 3117-3124.	14.9	137
94	Photoconductance of a submicron oxidized line in surface conductive single crystalline diamond. Applied Physics Letters, 2010, 97, 111107.	3.3	7
95	Low-frequency noise in diamond solution-gated field effect transistors. Applied Physics Letters, 2010, 97, .	3.3	15
96	Thermally Induced Alkylation of Diamond. Langmuir, 2010, 26, 18862-18867.	3.5	15
97	Electronic properties of ultrananocrystalline diamond surfaces. Applied Physics Letters, 2010, 96, .	3.3	14
98	Controlling Surface Functionality through Generation of Thiol Groups in a Self-Assembled Monolayer. Langmuir, 2010, 26, 15895-15900.	3.5	26
99	Microstructured poly(2-oxazoline) bottle-brush brushes on nanocrystalline diamond. Physical Chemistry Chemical Physics, 2010, 12, 4360.	2.8	31
100	Low-temperature transport in highly boron-doped nanocrystalline diamond. Physical Review B, 2009, 79, .	3.2	35
101	Photoresponse and morphology of pentacene thin films modified by oxidized and reduced diamond surfaces. Physical Review B, 2009, 80, .	3.2	4
102	Interaction of Hydrogen and Oxygen with Nanocrystalline Diamond Surfaces. Materials Research Society Symposia Proceedings, 2009, 1203, 1.	0.1	0
103	Diamond Transistor Array for Extracellular Recording From Electrogenic Cells. Advanced Functional Materials, 2009, 19, 2915-2923.	14.9	86
104	Electrochemical impedance spectroscopy of oxidized and hydrogen-terminated nitrogen-induced conductive ultrananocrystalline diamond. Electrochimica Acta, 2009, 54, 1909-1915.	5.2	27
105	Influence of hydrogen on nanocrystalline diamond surfaces investigated with HREELS and XPS. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2022-2027.	1.8	11
106	Metalâ€“insulator transition and superconductivity in highly boronâ€doped nanocrystalline diamond films. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1978-1985.	1.8	13
107	Electronic and optical properties of boron-doped nanocrystalline diamond films. Physical Review B, 2009, 79, .	3.2	220
108	Gas sensing properties of hydrogen-terminated diamond. Sensors and Actuators B: Chemical, 2008, 133, 156-165.	7.8	48

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109	The Diamond/Aqueous Electrolyte Interface:â€‰ an Impedance Investigation. Langmuir, 2008, 24, 3897-3904.	3.5	46
110	Resolving the controversy on the pH sensitivity of diamond surfaces. Physica Status Solidi - Rapid Research Letters, 2008, 2, 31-33.	2.4	24
111	Hydrophobic and Hofmeister Effects on the Adhesion of Spider Silk Proteins onto Solid Substrates:â€‰ An AFM-Based Single-Molecule Study. Langmuir, 2008, 24, 1350-1355.	3.5	55
112	The Surface Conductivity at the Diamond/Aqueous Electrolyte Interface. Journal of the American Chemical Society, 2008, 130, 4177-4181.	13.7	38
113	Enzyme-Modified Field Effect Transistors Based on Surface-Conductive Single-Crystalline Diamond. Langmuir, 2008, 24, 9898-9906.	3.5	27
114	Peptide adsorption on a hydrophobic surface results from an interplay of solvation, surface, and intrapeptide forces. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 2842-2847.	7.1	147
115	Novel Nanocomposite Actuator Based on Sulfonated Poly(styrene-b-ethylene-co-butylene-b-styrene) Polymer. Journal of Nanoscience and Nanotechnology, 2007, 7, 3740-3743.	0.9	32
116	Gas Sensing Interactions at Hydrogenated Diamond Surfaces. IEEE Sensors Journal, 2007, 7, 1349-1353.	4.7	15
117	Immobilization of horseradish peroxidase via an amino silane on oxidized ultrananocrystalline diamond. Diamond and Related Materials, 2007, 16, 138-143.	3.9	50
118	Structured Polymer Grafts on Diamond. Journal of the American Chemical Society, 2007, 129, 15655-15661.	13.7	90
119	Structural, optical, and electronic properties of nanocrystalline and ultrananocrystalline diamond thin films. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 2874-2880.	1.8	16
120	The Ion Sensitivity of Surface Conductive Single Crystalline Diamond. Journal of the American Chemical Society, 2007, 129, 1287-1292.	13.7	73
121	Chemical Grafting of Biphenyl Self-Assembled Monolayers on Ultrananocrystalline Diamond. Journal of the American Chemical Society, 2006, 128, 16884-16891.	13.7	102
122	Synthetic Nanocrystalline Diamond as a Third-Generation Biosensor Support. Langmuir, 2006, 22, 5837-5842.	3.5	84
123	Optical properties of nanocrystalline diamond thin films. Applied Physics Letters, 2006, 88, 101908.	3.3	95
124	Direct biofunctionalization of semiconductors: A survey. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 3424-3437.	1.8	150
125	Effect of nitrogen on the electronic properties of ultrananocrystalline diamond thin films grown on quartz and diamond substrates. Physical Review B, 2006, 74, .	3.2	103
126	pH sensors based on hydrogenated diamond surfaces. Applied Physics Letters, 2005, 86, 073504.	3.3	101

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127	Temperature-dependent transport properties of hydrogen-induced diamond surface conductive channels. Physical Review B, 2005, 71, .	3.2	35
128	Structural and interface properties of an AlN diamond ultraviolet light emitting diode. Applied Physics Letters, 2004, 85, 3699-3701.	3.3	13
129	Protein-modified nanocrystalline diamond thin films for biosensor applications. Nature Materials, 2004, 3, 736-742.	27.5	495
130	High quality heteroepitaxial AlN films on diamond. Journal of Applied Physics, 2004, 96, 895-902.	2.5	38
131	Novel in-plane gate devices on hydrogenated diamond surfaces. Physica Status Solidi A, 2003, 199, 56-63.	1.7	13
132	AlN/Diamond np-junctions. Diamond and Related Materials, 2003, 12, 1873-1876.	3.9	25
133	Scribing into hydrogenated diamond surfaces using atomic force microscopy. Applied Physics Letters, 2003, 82, 3336-3338.	3.3	19
134	AlN/diamond heterojunction diodes. Applied Physics Letters, 2003, 82, 290-292.	3.3	92
135	Fabrication of in-plane gate transistors on hydrogenated diamond surfaces. Applied Physics Letters, 2003, 82, 988-990.	3.3	39
136	Electrical and optical measurements of CVD diamond doped with sulfur. Physical Review B, 2002, 65, .	3.2	19
137	Capacitanceâ€"voltage studies of Al-Schottky contacts on hydrogen-terminated diamond. Applied Physics Letters, 2002, 81, 637-639.	3.3	22
138	A new acceptor state in CVD-diamond. Diamond and Related Materials, 2002, 11, 347-350.	3.9	14
139	Epitaxial growth of phosphorus doped diamond on {111} substrate. Diamond and Related Materials, 2002, 11, 328-331.	3.9	15
140	n-Type doping of diamond by sulfur and phosphorus. Diamond and Related Materials, 2002, 11, 289-295.	3.9	62
141	Characterization of Sub-Micron In-Plane Devices in H-Terminated Diamond. Physica Status Solidi A, 2002, 193, 517-522.	1.7	4
142	Local Oxidation of Hydrogenated Diamond Surfaces for Device Fabrication. Physica Status Solidi A, 2002, 193, 523-528.	1.7	20
143	Characterization of n-Type Doped Homoepitaxial Diamond Thin Films. Physica Status Solidi A, 2002, 193, 541-545.	1.7	23
144	Scattering times in AlGaN/GaN two-dimensional electron gas from magnetoresistance measurements. Journal of Applied Physics, 2000, 88, 932-937.	2.5	48

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145	Tailoring of internal fields in AlGaN/GaN and InGaN/GaN heterostructure devices. Physical Review B, 2000, 61, 2773-2778.	3.2	34
146	Low-frequency noise and mobility fluctuations in AlGaN/GaN heterostructure field-effect transistors. Applied Physics Letters, 2000, 76, 3442-3444.	3.3	50
147	Si-doped AlxGa1-xN photoconductive detectors. Semiconductor Science and Technology, 1999, 14, 685-689.	2.0	40
148	Polarization fields determination in AlGaN/GaN heterostructure field-effect transistors from charge control analysis. Applied Physics Letters, 1999, 75, 2407-2409.	3.3	65
149	Polarization Field Determination in AlGaN/GaN HFETs. Physica Status Solidi A, 1999, 176, 195-199.	1.7	9
150	Low frequency noise and screening effects in AlGaN/GaN HEMTs. Electronics Letters, 1998, 34, 2357.	1.0	23
151	GaN-based solar-ultraviolet detection instrument. Applied Optics, 1998, 37, 5058.	2.1	33
152	Photoconductive gain modelling of GaN photodetectors. Semiconductor Science and Technology, 1998, 13, 563-568.	2.0	167
153	Photoconductor gain mechanisms in GaN ultraviolet detectors. Applied Physics Letters, 1997, 71, 870-872.	3.3	163
154	Characterization and Modeling of Photoconductive GaN Ultraviolet Detectors. MRS Internet Journal of Nitride Semiconductor Research, 1997, 2, 1.	1.0	13
155	Single and Multisite Grapheneâ€Based Electroretinography Recording Electrodes: A Benchmarking Study. Advanced Materials Technologies, 0, , 2101181.	5.8	1