

Samuel Lara Avila

List of Publications by Year in descending order

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68
papers

2,801
citations

218592

26
h-index

175177

52
g-index

69
all docs

69
docs citations

69
times ranked

3277
citing authors

#	ARTICLE	IF	CITATIONS
1	Single-molecule electronics: from chemical design to functional devices. <i>Chemical Society Reviews</i> , 2014, 43, 7378-7411.	18.7	433
2	Towards a quantum resistance standard based on epitaxial graphene. <i>Nature Nanotechnology</i> , 2010, 5, 186-189.	15.6	405
3	Dynamic Hall Effect Driven by Circularly Polarized Light in a Graphene Layer. <i>Physical Review Letters</i> , 2010, 105, 227402.	2.9	150
4	Non-volatile Photochemical Gating of an Epitaxial Graphene/Polymer Heterostructure. <i>Advanced Materials</i> , 2011, 23, 878-882.	11.1	130
5	Terahertz Radiation Driven Chiral Edge Currents in Graphene. <i>Physical Review Letters</i> , 2011, 107, 276601.	2.9	118
6	Magnetic quantum ratchet effect in graphene. <i>Nature Nanotechnology</i> , 2013, 8, 104-107.	15.6	116
7	Anomalous strong pinning of the filling factor $\nu = 2$ in epitaxial graphene. <i>Physical Review B</i> , 2011, 83, .	1.1	110
8	Helicity-dependent photocurrents in graphene layers excited by midinfrared radiation of a CO laser. <i>Physical Review B</i> , 2011, 84, .	1.1	84
9	Quantum resistance metrology using graphene. <i>Reports on Progress in Physics</i> , 2013, 76, 104501.	8.1	79
10	Disordered Fermi Liquid in Epitaxial Graphene from Quantum Transport Measurements. <i>Physical Review Letters</i> , 2011, 107, 166602.	2.9	74
11	Graphene, universality of the quantum Hall effect and redefinition of the SI system. <i>New Journal of Physics</i> , 2011, 13, 093026.	1.2	65
12	Precision comparison of the quantum Hall effect in graphene and gallium arsenide. <i>Metrologia</i> , 2012, 49, 294-306.	0.6	64
13	Operation of graphene quantum Hall resistance standard in a cryogen-free table-top system. <i>2D Materials</i> , 2015, 2, 035015.	2.0	63
14	Uniform doping of graphene close to the Dirac point by polymer-assisted assembly of molecular dopants. <i>Nature Communications</i> , 2018, 9, 3956.	5.8	61
15	Light-Triggered Conductance Switching in Single-Molecule Dihydroazulene/Vinylheptafulvene Junctions. <i>Journal of Physical Chemistry C</i> , 2011, 115, 18372-18377.	1.5	57
16	Weak localization scattering lengths in epitaxial, and CVD graphene. <i>Physical Review B</i> , 2012, 86, .	1.1	53
17	Dihydroazulene Photoswitch Operating in Sequential Tunneling Regime: Synthesis and Single-Molecule Junction Studies. <i>Advanced Functional Materials</i> , 2012, 22, 4249-4258.	7.8	52
18	Express Optical Analysis of Epitaxial Graphene on SiC: Impact of Morphology on Quantum Transport. <i>Nano Letters</i> , 2013, 13, 4217-4223.	4.5	51

#	ARTICLE	IF	CITATIONS
19	Energy loss rates of hot Dirac fermions in epitaxial, exfoliated, and CVD graphene. <i>Physical Review B</i> , 2013, 87, .	1.1	44
20	Phase Space for the Breakdown of the Quantum Hall Effect in Epitaxial Graphene. <i>Physical Review Letters</i> , 2013, 111, 096601.	2.9	37
21	Tuning carrier density across Dirac point in epitaxial graphene on SiC by corona discharge. <i>Applied Physics Letters</i> , 2014, 105, 063106.	1.5	34
22	The conquest of middle-earth: combining top-down and bottom-up nanofabrication for constructing nanoparticle based devices. <i>Nanoscale</i> , 2014, 6, 14605-14616.	2.8	33
23	Giant quantum Hall plateaus generated by charge transfer in epitaxial graphene. <i>Scientific Reports</i> , 2016, 6, 30296.	1.6	32
24	Controlling deposition of nanoparticles by tuning surface charge of SiO ₂ by surface modifications. <i>RSC Advances</i> , 2016, 6, 104246-104253.	1.7	30
25	Quantum Hall Effect and Quantum Point Contact in Bilayer-Patched Epitaxial Graphene. <i>Nano Letters</i> , 2014, 14, 3369-3373.	4.5	29
26	Wafer-scale homogeneity of transport properties in epitaxial graphene on SiC. <i>Carbon</i> , 2015, 87, 409-414.	5.4	29
27	A prototype of RK/200 quantum Hall array resistance standard on epitaxial graphene. <i>Journal of Applied Physics</i> , 2015, 118, 044506.	1.1	25
28	Towards quantum-limited coherent detection of terahertz waves in charge-neutral graphene. <i>Nature Astronomy</i> , 2019, 3, 983-988.	4.2	25
29	Engineering and metrology of epitaxial graphene. <i>Solid State Communications</i> , 2011, 151, 1094-1099.	0.9	23
30	Bianthrone in a Single-Molecule Junction: Conductance Switching with a Bistable Molecule Facilitated by Image Charge Effects. <i>Journal of Physical Chemistry C</i> , 2010, 114, 20686-20695.	1.5	19
31	Aligned Growth of Gold Nanorods in PMMA Channels: Parallel Preparation of Nanogaps. <i>ACS Nano</i> , 2012, 6, 3861-3867.	7.3	19
32	Low contact resistance in epitaxial graphene devices for quantum metrology. <i>AIP Advances</i> , 2015, 5, .	0.6	19
33	Hot carrier relaxation of Dirac fermions in bilayer epitaxial graphene. <i>Journal of Physics Condensed Matter</i> , 2015, 27, 164202.	0.7	19
34	Polymer-encapsulated molecular doped epigraphene for quantum resistance metrology. <i>Metrologia</i> , 2019, 56, 045004.	0.6	17
35	Multiscale Charge Transport in van der Waals Thin Films: Reduced Graphene Oxide as a Case Study. <i>ACS Nano</i> , 2021, 15, 2654-2667.	7.3	17
36	Influence of Impurity Spin Dynamics on Quantum Transport in Epitaxial Graphene. <i>Physical Review Letters</i> , 2015, 115, 106602.	2.9	16

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37	Effect of graphene substrate type on formation of Bi ₂ Se ₃ nanoplates. <i>Scientific Reports</i> , 2019, 9, 4791.	1.6	16
38	Reststrahl band-assisted photocurrents in epitaxial graphene layers. <i>Physical Review B</i> , 2013, 88, .	1.1	15
39	High mobility epitaxial graphene devices via aqueous-ozone processing. <i>Applied Physics Letters</i> , 2015, 106, 063503.	1.5	15
40	Phase coherence and energy relaxation in epitaxial graphene under microwave radiation. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	11
41	Physics of a disordered Dirac point in epitaxial graphene from temperature-dependent magnetotransport measurements. <i>Physical Review B</i> , 2015, 92, .	1.1	11
42	Molecular Lipid Films on Microengineering Materials. <i>Langmuir</i> , 2019, 35, 10286-10298.	1.6	11
43	Clustering and Morphology Evolution of Gold on Nanostructured Surfaces of Silicon Carbide: Implications for Catalysis and Sensing. <i>ACS Applied Nano Materials</i> , 2021, 4, 1282-1293.	2.4	10
44	Nanopatterning of Mobile Lipid Monolayers on Electron-Beam-Sculpted Teflon AF Surfaces. <i>ACS Nano</i> , 2015, 9, 1271-1279.	7.3	9
45	Parallel Fabrication of Self-Assembled Nanogaps for Molecular Electronic Devices. <i>Small</i> , 2018, 14, 1803471.	5.2	9
46	Ambipolar charge transport in quasi-free-standing monolayer graphene on SiC obtained by gold intercalation. <i>Physical Review B</i> , 2020, 102, .	1.1	9
47	Apparent Power Law Scaling of Variable Range Hopping Conduction in Carbonized Polymer Nanofibers. <i>Scientific Reports</i> , 2016, 6, 37783.	1.6	8
48	Site-selective immobilization of functionalized DNA origami on nanopatterned Teflon AF. <i>Journal of Materials Chemistry C</i> , 2017, 5, 7637-7643.	2.7	7
49	Probing variable range hopping lengths by magneto conductance in carbonized polymer nanofibers. <i>Scientific Reports</i> , 2018, 8, 4948.	1.6	7
50	Highly efficient UV detection in a metal-semiconductor-metal detector with epigraphene. <i>Applied Physics Letters</i> , 2022, 120, .	1.5	6
51	Enhancing optoelectronic properties of SiC-grown graphene by a surface layer of colloidal quantum dots. <i>2D Materials</i> , 2017, 4, 031001.	2.0	5
52	Chemical Sensing with Atomically Thin Platinum Templated by a 2D Insulator. <i>Advanced Materials Interfaces</i> , 2020, 7, 1902104.	1.9	5
53	The performance limits of epigraphene Hall sensors doped across the Dirac point. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	5
54	Guided selective deposition of nanoparticles by tuning of the surface potential. <i>Europhysics Letters</i> , 2017, 119, 18004.	0.7	3

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55	Toward Optimized Charge Transport in Multilayer Reduced Graphene Oxides. Nano Letters, 2022, , .	4.5	3
56	Thermal Stability of Epitaxial Graphene Electrodes for Conductive Polymer Nanofiber Devices. Crystals, 2017, 7, 378.	1.0	2
57	Photon helicity driven currents in graphene. , 2010, , .		1
58	Electron-phonon coupling of epigraphene at millikelvin temperatures measured by quantum transport thermometry. Applied Physics Letters, 2021, 118, 103102.	1.5	1
59	Terahertz radiation induced edge currents in graphene. , 2011, , .		0
60	Terahertz radiation induced photocurrents in graphene subjected to an in-plane magnetic field. , 2012, , .		0
61	Breakdown of the quantum Hall effect in graphene. , 2012, , .		0
62	Practical and Fundamental Impact of Epitaxial Graphene on Quantum Metrology. Mapan - Journal of Metrology Society of India, 2013, 28, 239-250.	1.0	0
63	Reststrahlen Band assisted photocurrents in graphene. , 2013, , .		0
64	Magnetic quantum ratchet effect in graphene. , 2013, , .		0
65	Bianthrone at a metal surface: Conductance switching with a bistable molecule made feasible by image charge effects. , 2015, , .		0
66	Fabrication of graphene quantum hall resistance standard in a cryogen-table-top system. , 2016, , .		0
67	Towards a cryogen-free table-top primary resistance standard. , 2016, , .		0
68	Stable and Tunable Charge Carrier Control of Graphene for Quantum Resistance Metrology. , 2018, , .		0