Samuel Lara Avila

List of Publications by Year
in descending order

68 papers	2,801 citations	218677 26 h-index	175258 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. Chemical Society Reviews, 2014, 43, 7378-7411.	38.1	433
2	Towards a quantum resistance standard based on epitaxial graphene. Nature Nanotechnology, 2010, 5, 186-189.	31.5	405
3	Dynamic Hall Effect Driven by Circularly Polarized Light in a Graphene Layer. Physical Review Letters, 2010, 105, 227402.	7.8	150
4	Nonâ€Volatile Photochemical Gating of an Epitaxial Graphene/Polymer Heterostructure. Advanced Materials, 2011, 23, 878-882.	21.0	130
5	Terahertz Radiation Driven Chiral Edge Currents in Graphene. Physical Review Letters, 2011, 107, 276601.	7.8	118
6	Magnetic quantum ratchet effect in graphene. Nature Nanotechnology, 2013, 8, 104-107.	31.5	116
7	Anomalously strong pinning of the filling factor<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î½</mml:mi><mml:mo>=</mml:mo><mml:mn>2</mml:mn></mml:mrow></mml:math>in epitaxial graphene. Physical Review B, 2011, 83, .	3.2	110
8	Helicity-dependent photocurrents in graphene layers excited by midinfrared radiation of a CO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>laser. Physical Review B, 2011, 84, .	3.2	84
9	Quantum resistance metrology using graphene. Reports on Progress in Physics, 2013, 76, 104501.	20.1	79
10	Disordered Fermi Liquid in Epitaxial Graphene from Quantum Transport Measurements. Physical Review Letters, 2011, 107, 166602.	7.8	74
11	Graphene, universality of the quantum Hall effect and redefinition of the SI system. New Journal of Physics, 2011, 13, 093026.	2.9	65
12	Precision comparison of the quantum Hall effect in graphene and gallium arsenide. Metrologia, 2012, 49, 294-306.	1.2	64
13	Operation of graphene quantum Hall resistance standard in a cryogen-free table-top system. 2D Materials, 2015, 2, 035015.	4.4	63
14	Uniform doping of graphene close to the Dirac point by polymer-assisted assembly of molecular dopants. Nature Communications, 2018, 9, 3956.	12.8	61
15	Light-Triggered Conductance Switching in Single-Molecule Dihydroazulene/Vinylheptafulvene Junctions. Journal of Physical Chemistry C, 2011, 115, 18372-18377.	3.1	57
16	Weak localization scattering lengths in epitaxial, and CVD graphene. Physical Review B, 2012, 86, .	3.2	53
17	Dihydroazulene Photoswitch Operating in Sequential Tunneling Regime: Synthesis and Singleâ€Molecule Junction Studies. Advanced Functional Materials, 2012, 22, 4249-4258.	14.9	52
18	Express Optical Analysis of Epitaxial Graphene on SiC: Impact of Morphology on Quantum Transport. Nano Letters, 2013, 13, 4217-4223.	9.1	51

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19	Energy loss rates of hot Dirac fermions in epitaxial, exfoliated, and CVD graphene. Physical Review B, 2013, 87, .	3.2	44
20	Phase Space for the Breakdown of the Quantum Hall Effect in Epitaxial Graphene. Physical Review Letters, 2013, 111, 096601.	7.8	37
21	Tuning carrier density across Dirac point in epitaxial graphene on SiC by corona discharge. Applied Physics Letters, 2014, 105, 063106.	3.3	34
22	The conquest of middle-earth: combining top-down and bottom-up nanofabrication for constructing nanoparticle based devices. Nanoscale, 2014, 6, 14605-14616.	5.6	33
23	Giant quantum Hall plateaus generated by charge transfer in epitaxial graphene. Scientific Reports, 2016, 6, 30296.	3.3	32
24	Controlling deposition of nanoparticles by tuning surface charge of SiO₂by surface modifications. RSC Advances, 2016, 6, 104246-104253.	3.6	30
25	Quantum Hall Effect and Quantum Point Contact in Bilayer-Patched Epitaxial Graphene. Nano Letters, 2014, 14, 3369-3373.	9.1	29
26	Wafer-scale homogeneity of transport properties in epitaxial graphene on SiC. Carbon, 2015, 87, 409-414.	10.3	29
27	A prototype of RK/200 quantum Hall array resistance standard on epitaxial graphene. Journal of Applied Physics, 2015, 118, 044506.	2.5	25
28	Towards quantum-limited coherent detection of terahertz waves in charge-neutral graphene. Nature Astronomy, 2019, 3, 983-988.	10.1	25
29	Engineering and metrology of epitaxial graphene. Solid State Communications, 2011, 151, 1094-1099.	1.9	23
30	Bianthrone in a Single-Molecule Junction: Conductance Switching with a Bistable Molecule Facilitated by Image Charge Effects. Journal of Physical Chemistry C, 2010, 114, 20686-20695.	3.1	19
31	Aligned Growth of Gold Nanorods in PMMA Channels: Parallel Preparation of Nanogaps. ACS Nano, 2012, 6, 3861-3867.	14.6	19
32	Low contact resistance in epitaxial graphene devices for quantum metrology. AIP Advances, 2015, 5, .	1.3	19
33	Hot carrier relaxation of Dirac fermions in bilayer epitaxial graphene. Journal of Physics Condensed Matter, 2015, 27, 164202.	1.8	19
34	Polymer-encapsulated molecular doped epigraphene for quantum resistance metrology. Metrologia, 2019, 56, 045004.	1.2	17
35	Multiscale Charge Transport in van der Waals Thin Films: Reduced Graphene Oxide as a Case Study. ACS Nano, 2021, 15, 2654-2667.	14.6	17
36	Influence of Impurity Spin Dynamics on Quantum Transport in Epitaxial Graphene. Physical Review Letters, 2015, 115, 106602.	7.8	16

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37	Effect of graphene substrate type on formation of Bi2Se3 nanoplates. Scientific Reports, 2019, 9, 4791.	3.3	16
38	Reststrahl band-assisted photocurrents in epitaxial graphene layers. Physical Review B, 2013, 88, .	3.2	15
39	High mobility epitaxial graphene devices via aqueous-ozone processing. Applied Physics Letters, 2015, 106, 063503.	3.3	15
40	Phase coherence and energy relaxation in epitaxial graphene under microwave radiation. Applied Physics Letters, 2013, 103, .	3.3	11
41	Physics of a disordered Dirac point in epitaxial graphene from temperature-dependent magnetotransport measurements. Physical Review B, 2015, 92, .	3.2	11
42	Molecular Lipid Films on Microengineering Materials. Langmuir, 2019, 35, 10286-10298.	3.5	11
43	Clustering and Morphology Evolution of Gold on Nanostructured Surfaces of Silicon Carbide: Implications for Catalysis and Sensing. ACS Applied Nano Materials, 2021, 4, 1282-1293.	5.0	10
44	Nanopatterning of Mobile Lipid Monolayers on Electron-Beam-Sculpted Teflon AF Surfaces. ACS Nano, 2015, 9, 1271-1279.	14.6	9
45	Parallel Fabrication of Selfâ€Assembled Nanogaps for Molecular Electronic Devices. Small, 2018, 14, 1803471.	10.0	9
46	Ambipolar charge transport in quasi-free-standing monolayer graphene on SiC obtained by gold intercalation. Physical Review B, 2020, 102, .	3.2	9
47	Apparent Power Law Scaling of Variable Range Hopping Conduction in Carbonized Polymer Nanofibers. Scientific Reports, 2016, 6, 37783.	3.3	8
48	Site-selective immobilization of functionalized DNA origami on nanopatterned Teflon AF. Journal of Materials Chemistry C, 2017, 5, 7637-7643.	5.5	7
49	Probing variable range hopping lengths by magneto conductance in carbonized polymer nanofibers. Scientific Reports, 2018, 8, 4948.	3.3	7
50	Highly efficient UV detection in a metalâ€“semiconductorâ€“metal detector with epigraphene. Applied Physics Letters, 2022, 120, .	3.3	6
51	Enhancing optoelectronic properties of SiC-grown graphene by a surface layer of colloidal quantum dots. 2D Materials, 2017, 4, 031001.	4.4	5
52	Chemical Sensing with Atomically Thin Platinum Templated by a 2D Insulator. Advanced Materials Interfaces, 2020, 7, 1902104.	3.7	5
53	The performance limits of epigraphene Hall sensors doped across the Dirac point. Applied Physics Letters, 2020, 116, .	3.3	5
54	Guided selective deposition of nanoparticles by tuning of the surface potential. Europhysics Letters, 2017, 119, 18004.	2.0	3

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55	Toward Optimized Charge Transport in Multilayer Reduced Graphene Oxides. Nano Letters, 2022, , .	9.1	3
56	Thermal Stability of Epitaxial Graphene Electrodes for Conductive Polymer Nanofiber Devices. Crystals, 2017, 7, 378.	2.2	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.	3.3	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.	1.5	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