Gvido Bratina

List of Publications by Year
in descending order

106 papers	2,327 citations	257450 24 h-index	243625 44 g-index
106 all docs	106 docs citations	106 times ranked	3172 citing authors

#	Article	IF	Citations
1	Flexible non-volatile optical memory thin-film transistor device with over 256 distinct levels based on an organic bicomponent blend. Nature Nanotechnology, 2016, 11, 769-775.	31.5	300
2	Optically switchable transistor via energy-level phototuning in a bicomponent organic semiconductor. Nature Chemistry, 2012, 4, 675-679.	13.6	217
3	Local interface composition and band discontinuities in heterovalent heterostructures. Physical Review Letters, 1994, 72, 294-297.	7.8	130
4	Tuning AlAs-GaAs band discontinuities and the role of Si-induced local interface dipoles. Physical Review B, 1991, 43, 2450-2453.	3.2	123
5	The effect of polymer molecular weight on the performance of PTB7-Th:O-IDTBR non-fullerene organic solar cells. Journal of Materials Chemistry A, 2018, 6, 9506-9516.	10.3	76
6	A nanomesh scaffold for supramolecular nanowire optoelectronic devices. Nature Nanotechnology, 2016, 11, 900-906.	31.5	72
7	Highly active photocatalytic coatings prepared by a low-temperature method. Environmental Science and Pollution Research, 2014, 21, 11238-11249.	5.3	58
8	Microscopic capacitors and neutral interfaces in III-V/IV/III-V semiconductor heterostructures. Physical Review Letters, 1992, 69, 1283-1286.	7.8	52
9	Multiresponsive Nonvolatile Memories Based on Optically Switchable Ferroelectric Organic Fieldâ€Effect Transistors. Advanced Materials, 2021, 33, e2007965.	21.0	52
10	AlAs-GaAs heterojunction engineering by means of group-IV elemental interface layers. Physical Review B, 1992, 45, 4528-4531.	3.2	45
11	Photo-induced intramolecular charge transfer in an ambipolar field-effect transistor based on a Ï€-conjugated donorâ€“acceptor dyad. Journal of Materials Chemistry C, 2013, 1, 3985.	5.5	45
12	Structure and local dipole of Si interface layers in AlAs-GaAs heterostructures. Physical Review B, 1992, 46, 6834-6845.	3.2	44
13	Growth of ultrathin pentacene films on polymeric substrates. Physical Review B, 2009, 80, .	3.2	40
14	Behavior of the (0001) surface of sapphire upon high-temperature annealing. Surface Science, 2007, 601, 44-49.	1.9	37
15	Influence of transfer residue on the optical properties of chemical vapor deposited graphene investigated through spectroscopic ellipsometry. Journal of Applied Physics, 2013, 114, .	2.5	37
16	Electron-Withdrawing Substituted Tetrathiafulvalenes as Ambipolar Semiconductors. Chemistry of Materials, 2011, 23, 851-861.	6.7	32
17	Selfâ€Suspended Nanomesh Scaffold for Ultrafast Flexible Photodetectors Based on Organic Semiconducting Crystals. Advanced Materials, 2018, 30, e1801181.	21.0	32
18	Lack of band-offset transitivity for semiconductor heterojunctions with polar orientation: ZnSe-Ge(001), Ge-GaAs(001), and ZnSe-GaAs(001). Physical Review B, 1994, 50, 11723-11729.	3.2	31

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19	Epitaxial growth and interface parameters of Si layers on GaAs(001) and AlAs(001) substrates. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1991, 9, 2225.	1.6	30
20	Microscopic control of ZnSe-GaAs heterojunction band offsets. Physica B: Condensed Matter, 1993, 185, 557-565.	2.7	30
21	ZnSe-GaAs heterojunction parameters. Journal of Crystal Growth, 1993, 127, 387-391.	1.5	29
22	Band offsets and strain in CdTe-GaAs heterostructures. Physical Review B, 1993, 48, 8899-8910.	3.2	26
23	Novel Chitosanâ€“Mg(OH)₂-Based Nanocomposite Membranes for Direct Alkaline Ethanol Fuel Cells. ACS Sustainable Chemistry and Engineering, 2019, 7, 19356-19368.	6.7	26
24	Time-of-flight mobility of charge carriers in position-dependent electric field between coplanar electrodes. Applied Physics Letters, 2012, 101, 093304.	3.3	25
25	Pentacene on graphene: Differences between single layer and bilayer. Carbon, 2014, 69, 162-168.	10.3	23
26	Influence of Solid-State Microstructure on the Electronic Performance of 5,11-Bis(triethylsilylethynyl) Anthradithiophene. Chemistry of Materials, 2013, 25, 1823-1828.	6.7	21
27	Fastâ€Response Photonic Device Based on Organicâ€Crystal Heterojunctions Assembled into a Verticalâ€Yetâ€Open Asymmetric Architecture. Advanced Materials, 2017, 29, 1605760.	21.0	21
28	Arsenic cap layer desorption and the formation of GaAs(001)c(4Ã—4) surfaces. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1995, 13, 2041.	1.6	20
29	In diffusion and electronic energy structure in polymer layers on In tin oxide. Thin Solid Films, 2011, 519, 4216-4219.	1.8	20
30	The coherency loss microstructure at a CdTe/GaAs(001) interface. Philosophical Magazine Letters, 1993, 67, 279-285.	1.2	19
31	Modification of Al/GaAs(001) Schottky barriers by means of heterovalent interface layers. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1994, 12, 2653.	1.6	19
32	Atomic scale roughness of GaAs(001)2Ã—4 surfaces. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1996, 14, 623.	1.6	19
33	Electronic and structural characterisation of a tetrathiafulvalene compound as a potential candidate for ambipolar transport properties. CrystEngComm, 2011, 13, 6597.	2.6	19
34	Mo6S9âˆ’xIx nanowires as additives for enhanced organic solar cell performance. Solar Energy Materials and Solar Cells, 2014, 127, 63-66.	6.2	19
35	Solution-Processed Grapheneâ€“Nanographene van der Waals Heterostructures for Photodetectors with Efficient and Ultralong Charge Separation. Journal of the American Chemical Society, 2021, 143, 17109-17116.	13.7	19
36	Effect of Water Layer at the SiO₂/Graphene Interface on Pentacene Morphology. Langmuir, 2014, 30, 11681-11688.	3.5	18

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37	Modulation of charge transport properties of reduced graphene oxide by submonolayer physisorption of an organic dye. Organic Electronics, 2013, 14, 1787-1792.	2.6	17
38	Contact resistance in organic thin film transistors. Synthetic Metals, 2009, 159, 1210-1214.	3.9	16
39	Single-step solution processing of small-molecule organic semiconductor field-effect transistors at high yield. Applied Physics Letters, 2011, 99, .	3.3	16
40	Graphene-Induced Enhancement of n-Type Mobility in Perylenediimide Thin Films. Journal of Physical Chemistry C, 2014, 118, 24819-24826.	3.1	16
41	Factors determining large observed increases in power conversion efficiency of P3HT:PCBM solar cells embedded with Mo6S9â^'xIx nanowires. Synthetic Metals, 2016, 212, 105-112.	3.9	16
42	Fabrication of poly(3-hexylthiophene) nanowires for high-mobility transistors. Organic Electronics, 2016, 30, 92-98.	2.6	16
43	Characterization of Pure and Modified TiO \$\$_{2}\$\$ 2 Layer on Glass and Aluminum Support by Beam Deflection Spectrometry. International Journal of Thermophysics, 2014, 35, 1990-2000.	2.1	14
44	Tuning AlAs-GaAs heterostructure properties by means of MBE-grown Si interface layers. Surface Science, 1991, 251-252, 82-86.	1.9	13
45	Phonons in Si/GaAs superlattices. Physical Review B, 1992, 46, 7296-7299.	3.2	13
46	Engineering ZnSe-GaAs band offsets. Journal of Crystal Growth, 1992, 117, 573-577.	1.5	13
47	Modification of heterojunction band offsets at IIIâ€"V/IV/IIIâ€"V interfaces. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1993, 11, 1628.	1.6	13
48	Structural properties of heterostructures with engineered band offsets. Journal of Crystal Growth, 1996, 159, 703-708.	1.5	13
49	Characterisation of charge carrier transport in thin organic semiconductor layers by time-of-flight photocurrent measurements. Organic Electronics, 2019, 64, 117-130.	2.6	13
50	Si-GaAs(001) superlattice structure. Journal of Crystal Growth, 1993, 127, 121-125.	1.5	12
51	Displacement current in bottom-contact organic thin-film transistor. Journal Physics D: Applied Physics, 2008, 41, 135109.	2.8	12
52	Grafold-driven nucleation of pentacene on graphene. Surface Science, 2013, 609, L5-L8.	1.9	12
53	Influence of a gold substrate on the optical properties of graphene. Journal of Applied Physics, 2015, 117, .	2.5	12
54	Chemical vapor deposition of Al from dimethylethylamine alane on GaAs(100)c(4Ã—4) surfaces. Journal of Applied Physics, 1994, 76, 3471-3478.	2.5	11

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55	Initial stages of growth of organic semiconductors on vicinal (0001) sapphire surfaces. Surface Science, 2008, 602, 1368-1375.	1.9	11
56	Ionization Energy and Energy Gap Structure of MoSI Molecular Wires: Kelvin Probe, Ultraviolet Photoelectron Spectroscopy, and Cyclic Voltammetry Measurements. Langmuir, 2011, 27, 4296-4299.	3.5	11
57	Charge carrier transport in polycrystalline CH3NH3PbI3 perovskite thin films in a lateral direction characterized by time-of-flight photoconductivity. Materials Chemistry and Physics, 2018, 220, 182-189.	4.0	11
58	Elucidation of Donor:Acceptor Phase Separation in Nonfullerene Organic Solar Cells and Its Implications on Device Performance and Charge Carrier Mobility. ACS Applied Energy Materials, 2019, 2, 7535-7545.	5.1	11
59	Conjugated Polymer Mesocrystals with Structural and Optoelectronic Coherence and Anisotropy in Three Dimensions. Advanced Materials, 2022, 34, e2103002.	21.0	11
60	Siâ€GaAs(001) superlattices. Applied Physics Letters, 1992, 61, 1570-1572.	3.3	10
61	Chemical bonding and electronic properties of Seâ€rich ZnSeâ€"GaAs(001) interfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1996, 14, 3135-3143.	2.1	10
62	Al/ZnSe(100) Schottky-barrier height versus initial ZnSe surface reconstruction. Physical Review B, 1998, 57, R9431-R9434.	3.2	10
63	Graphene flakes at the SiO2/organic-semiconductor interface for high-mobility field-effect transistors. Organic Electronics, 2015, 27, 221-226.	2.6	10
64	Cross-sectional lateral-force microscopy of semiconductor heterostructures and multiple quantum wells. Physical Review B, 1995, 52, R8625-R8628.	3.2	9
65	Interfacial chemical bonds, reactions, and band alignment in ZnSe/GaAs(001) heterojunctions. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1996, 14, 2967.	1.6	9
66	Ripening of Rubrene Islands. Journal of Physical Chemistry C, 2007, 111, 18558-18562.	3.1	9
67	Low resistance graded contacts to nâ€type ZnSe. Applied Physics Letters, 1996, 68, 370-372.	3.3	8
68	Interface resistivity and lifetime of thin film transistors exposed to ambient air. Applied Physics Letters, 2009, 94, 123301.	3.3	8
69	Role of transport band edge variation on delocalized charge transport in high-mobility crystalline organic semiconductors. Physical Review B, 2017, 96, .	3.2	8
70	Influence of substrate morphology on growth mode of thin organic films: An atomic force microscopy study. Journal of Vacuum Science & Technology B, 2007, 25, 1152.	1.3	7
71	Fabrication of rubrene nanowires on vicinal (0001) sapphire surfaces. Surface Science, 2007, 601, L25-L28.	1.9	7
72	Interface-controlled growth of organic semiconductors on graphene. Surface Science, 2017, 664, 16-20.	1.9	7

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73	Charged versus neutral interfaces in IIIâ€"V/Ge quantum wells. Journal of Crystal Growth, 1993, 127, 93-97.	1.5	6
74	Influence of growth parameters on the properties of ZnSe-GaAs(001) heterostructures. Journal of Crystal Growth, 1995, 150, 765-769.	1.5	6
75	Electrical conductivity in metal/3,4,9,10-perylenetetracarboxylic dianhydride/metal structures. Journal of Applied Physics, 2003, 93, 6090-6094.	2.5	6
76	Morphology and electronic structure of thin 3,4,9,10-perylenetetracarboxylic dianhydride layers on Si(001). Thin Solid Films, 2006, 515, 1424-1428.	1.8	6
77	The role of local potential minima on charge transport in thin organic semiconductor layers. Organic Electronics, 2017, 42, 221-227.	2.6	5
78	Evidence of enhanced photocurrent response in corannulene films. RSC Advances, 2017, 7, 45601-45606.	3.6	5
79	Negative field-dependent charge mobility in crystalline organic semiconductors with delocalized transport. Chemical Papers, 2018, 72, 1685-1695.	2.2	5
80	Some properties of melt-produced YBaCuO wire. Superconductor Science and Technology, 1988, 1, 141-144.	3.5	4
81	The role of space-charge-induced electric field on transient photocurrent response in organic semiconductors. Physica Status Solidi (B): Basic Research, 2006, 243, 473-482.	1.5	4
82	The role of Ti adhesion layer in electric charge transport in pentacene organic thin film transistors. European Physical Journal B, 2010, 73, 341-346.	1.5	4
83	X-ray absorption of cadmium in theL-edge region. Physical Review A, 2011, 84, .	2.5	4
84	Morphology of the Metal-organic Semiconductor Contacts: the Role of Substrate Surface Treatment. Springer Proceedings in Physics, 2009, , 205-210.	0.2	3
85	Enhancement of Charge Transport in Polythiophene Semiconducting Polymer by Blending with Graphene Nanoparticles. ChemPlusChem, 2019, 84, 1366-1374.	2.8	3
86	The role of charge transfer at reduced graphene oxide/organic semiconductor interface on the charge transport properties. Organic Electronics, 2020, 77, 105499.	2.6	3
87	Molecular alignment on graphene surface determines transport properties of graphene/organic semiconductor transistors. Organic Electronics, 2020, 87, 105933.	2.6	3
88	A pyrrolopyridazinedione-based copolymer for fullerene-free organic solar cells. New Journal of Chemistry, 2021, 45, 1001-1009.	2.8	3
89	Vibrational properties of Si/GaAs superlattices. Superlattices and Microstructures, 1992, 12, 429-432.	3.1	2
90	Local Interface Composition and Band Offset Tuning in ZnSe-GaAs(001) Heterostructures. Materials Research Society Symposia Proceedings, 1993, 326, 3.	0.1	2

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91	<title>Interfacial engineering in blue laser structures</title>. , 1994, 2346, 100.		2
92	<title>Nanosize stress concentrators at facets in Zn1-xCdxSe/ZnSe multiple quantum well laser structures</title>. , 1994, , .		2
93	Defect structure at a interface. Thin Solid Films, 1995, 271, 117-121.	1.8	2
94	Improved contact resistance to n-type wide gap IIâ€“VI semiconductors. Journal of Crystal Growth, 1996, 159, 718-722.	1.5	2
95	Electronic transport in perylenetetracarboxylic dianhydride: The role of In diffusion. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 797-801.	2.1	2
96	Enhanced photoconductivity of semiconductor polymers using graphene nanoflakes. Materials Today: Proceedings, 2019, 19, 2591-2595.	1.8	1
97	Microstructural and Surface Effects on Fatigue of Ti-6Al-4V Alloy. , 1990, , 344-353.		1
98	AlAs-GaAs Beterojunction Engineering by Means of Group IV Interface Layers. Materials Research Society Symposia Proceedings, 1991, 240, 603.	0.1	0
99	Modification of heterojunction band offsets at III-V/IV/III-V interfaces. , 1993, , .		0
100	Tem Investigations of CdTe/GaAs(001) Interfaces. Materials Research Society Symposia Proceedings, 1993, 319, 129.	0.1	0
101	Schottky barrier tunability in Al/ZnSe interfaces. Journal of Crystal Growth, 1998, 184-185, 193-198.	1.5	0
102	Evidence of bipolar charge transport in PTCDA. Solid State Communications, 2002, 123, 155-160.	1.9	0
103	Thermal diffusion of indium in perylenetetracarboxylic dianhydride. European Physical Journal Special Topics, 2006, 132, 127-132.	0.2	0
104	Organic Optoelectronics: Self-Suspended Nanomesh Scaffold for Ultrafast Flexible Photodetectors Based on Organic Semiconducting Crystals (Adv. Mater. 28/2018). Advanced Materials, 2018, 30, 1870204.	21.0	0
105	EXAFS Study of SnO2 Xerogel Doped with Sb and PTCDA. Physica Scripta, 2005, , 329.	2.5	0
106	Microscopic control of ZnSeâ€“GaAs heterojunction band offsets. , 1993, , 557-565.		0