

Amalia Patan

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

125
papers

3,625
citations

27
h-index

57
g-index

138
ext. papers

4,347
ext. citations

5.6
avg, IF

4.9
L-index

#	Paper	IF	Citations
125	Terahertz control of photoluminescence emission in few-layer InSe. <i>Applied Physics Letters</i> , 2022 , 120, 092104	3.4	0
124	Large Tunneling Magnetoresistance in van der Waals Ferromagnet/Semiconductor Heterojunctions. <i>Advanced Materials</i> , 2021 , e2104658	24	10
123	Light-Induced Stark Effect and Reversible Photoluminescence Quenching in Inorganic Perovskite Nanocrystals. <i>Advanced Optical Materials</i> , 2021 , 9, 2100104	8.1	1
122	Anomalous Low Thermal Conductivity of Atomically Thin InSe Probed by Scanning Thermal Microscopy. <i>Advanced Functional Materials</i> , 2021 , 31, 2008967	15.6	4
121	Universal mobility characteristics of graphene originating from charge scattering by ionised impurities. <i>Communications Physics</i> , 2021 , 4,	5.4	16
120	CsPb(Br/I) ₃ Perovskite Nanocrystals for Hybrid GaN-Based High-Bandwidth White Light-Emitting Diodes. <i>ACS Applied Nano Materials</i> , 2021 , 4, 8383-8389	5.6	3
119	Ferroelectric semiconductor junctions based on graphene/In ₂ Se ₃ /graphene van der Waals heterostructures. <i>2D Materials</i> , 2021 , 8, 045020	5.9	4
118	Tunable spin-orbit coupling in two-dimensional InSe. <i>Physical Review B</i> , 2021 , 104,	3.3	2
117	Resonance and antiresonance in Raman scattering in GaSe and InSe crystals. <i>Scientific Reports</i> , 2021 , 11, 924	4.9	2
116	Imaging shape and strain in nanoscale engineered semiconductors for photonics by coherent x-ray diffraction. <i>Communications Materials</i> , 2020 , 1,	6	1
115	Enhanced Optical Emission from 2D InSe Bent onto Si-Pillars. <i>Advanced Optical Materials</i> , 2020 , 8, 2000888	8.8	10
114	The Interaction of Hydrogen with the van der Waals Crystal -InSe. <i>Molecules</i> , 2020 , 25,	4.8	8
113	Interlayer Band-to-Band Tunneling and Negative Differential Resistance in van der Waals BP/InSe Field-Effect Transistors. <i>Advanced Functional Materials</i> , 2020 , 30, 1910713	15.6	41
112	High Responsivity and Wavelength Selectivity of GaN-Based Resonant Cavity Photodiodes. <i>Advanced Optical Materials</i> , 2020 , 8, 1901276	8.1	15
111	Resonant tunnelling into the two-dimensional subbands of InSe layers. <i>Communications Physics</i> , 2020 , 3,	5.4	13
110	Production and processing of graphene and related materials. <i>2D Materials</i> , 2020 , 7, 022001	5.9	179
109	Design of van der Waals interfaces for broad-spectrum optoelectronics. <i>Nature Materials</i> , 2020 , 19, 299-304	30.4	64

108	Photoluminescence dynamics in few-layer InSe. <i>Physical Review Materials</i> , 2020 , 4,	3.2	7
107	Van der Waals SnSe ₂ (1-x)S _{2x} Alloys: Composition-Dependent Bowing Coefficient and Electron-Phonon Interaction. <i>Advanced Functional Materials</i> , 2020 , 30, 1908092	15.6	10
106	Defect-Assisted High Photoconductive UV-Visible Gain in Perovskite-Decorated Graphene Transistors. <i>ACS Applied Electronic Materials</i> , 2020 , 2, 147-154	4	8
105	Room temperature upconversion electroluminescence from a mid-infrared In(AsN) tunneling diode. <i>Applied Physics Letters</i> , 2020 , 116, 142108	3.4	0
104	Enhanced Photoresponse in MoTe ₂ Photodetectors with Asymmetric Graphene Contacts. <i>Advanced Optical Materials</i> , 2019 , 7, 1900190	8.1	42
103	Formation and Healing of Defects in Atomically Thin GaSe and InSe. <i>ACS Nano</i> , 2019 , 13, 5112-5123	16.7	23
102	Two-Dimensional Covalent Crystals by Chemical Conversion of Thin van der Waals Materials. <i>Nano Letters</i> , 2019 , 19, 6475-6481	11.5	26
101	Schottky-barrier thin-film transistors based on HfO ₂ -capped InSe. <i>Applied Physics Letters</i> , 2019 , 115, 033502	3.4	10
100	Hybrid light emitting diodes based on stable, high brightness all-inorganic CsPbI ₃ perovskite nanocrystals and InGaN. <i>Nanoscale</i> , 2019 , 11, 13450-13457	7.7	24
99	Realization of Universal Quantum Gates with Spin-Qubits in Colloidal Quantum Dots. <i>Advanced Quantum Technologies</i> , 2019 , 2, 1900017	4.3	4
98	Photoquantum Hall Effect and Light-Induced Charge Transfer at the Interface of Graphene/InSe Heterostructures. <i>Advanced Functional Materials</i> , 2019 , 29, 1805491	15.6	13
97	Optical Detection and Spatial Modulation of Mid-Infrared Surface Plasmon Polaritons in a Highly Doped Semiconductor. <i>Advanced Optical Materials</i> , 2018 , 6, 1700492	8.1	2
96	Mid-IR plasmonic compound with gallium oxide toplayer formed by GaSb oxidation in water. <i>Semiconductor Science and Technology</i> , 2018 , 33, 095009	1.8	3
95	Coherent acoustic phonons in van der Waals nanolayers and heterostructures. <i>Physical Review B</i> , 2018 , 98,	3.3	19
94	Magnetotransport and lateral confinement in an InSe van der Waals Heterostructure. <i>2D Materials</i> , 2018 , 5, 035040	5.9	6
93	Tunnel spectroscopy of localised electronic states in hexagonal boron nitride. <i>Communications Physics</i> , 2018 , 1,	5.4	25
92	Epitaxial growth of InSe and In ₂ Se ₃ on GaSe. <i>2D Materials</i> , 2018 , 5, 035026	5.9	55
91	Gate-Defined Quantum Confinement in InSe-Based van der Waals Heterostructures. <i>Nano Letters</i> , 2018 , 18, 3950-3955	11.5	33

90	Engineering p-n junctions and bandgap tuning of InSe nanolayers by controlled oxidation. <i>2D Materials</i> , 2017 , 4, 025043	5.9	63
89	Fast, multicolor photodetection with graphene-contacted p-GaSe/n-InSe van der Waals heterostructures. <i>Nanotechnology</i> , 2017 , 28, 27LT01	3.4	133
88	Giant Quantum Hall Plateau in Graphene Coupled to an InSe van der Waals Crystal. <i>Physical Review Letters</i> , 2017 , 119, 157701	7.4	33
87	Microwave Generation in Synchronized Semiconductor Superlattices. <i>Physical Review Applied</i> , 2017 , 7,	4.3	5
86	High electron mobility, quantum Hall effect and anomalous optical response in atomically thin InSe. <i>Nature Nanotechnology</i> , 2017 , 12, 223-227	28.7	723
85	Surface Sensing of Quantum Dots by Electron Spins. <i>Nano Letters</i> , 2016 , 16, 6343-6348	11.5	6
84	Phonon-Assisted Resonant Tunneling of Electrons in Graphene-Boron Nitride Transistors. <i>Physical Review Letters</i> , 2016 , 116, 186603	7.4	63
83	Nanomechanical probing of the layer/substrate interface of an exfoliated InSe sheet on sapphire. <i>Scientific Reports</i> , 2016 , 6, 26970	4.9	13
82	The direct-to-indirect band gap crossover in two-dimensional van der Waals Indium Selenide crystals. <i>Scientific Reports</i> , 2016 , 6, 39619	4.9	114
81	Quantum confinement and photoresponsivity of In ₂ Se ₃ nanosheets grown by physical vapour transport. <i>2D Materials</i> , 2016 , 3, 025030	5.9	68
80	Resonant Zener tunnelling via zero-dimensional states in a narrow gap diode. <i>Scientific Reports</i> , 2016 , 6, 32039	4.9	2
79	Electron spin coherence near room temperature in magnetic quantum dots. <i>Scientific Reports</i> , 2015 , 5, 10855	4.9	14
78	H-tailored surface conductivity in narrow band gap In(AsN). <i>Applied Physics Letters</i> , 2015 , 106, 022111	3.4	4
77	Resonant tunnelling between the chiral Landau states of twisted graphene lattices. <i>Nature Physics</i> , 2015 , 11, 1057-1062	16.2	49
76	High broad-band photoresponsivity of mechanically formed InSe-graphene van der Waals heterostructures. <i>Advanced Materials</i> , 2015 , 27, 3760-6	24	252
75	Genesis of Solitary Cations Induced by Atomic Hydrogen. <i>Advanced Functional Materials</i> , 2015 , 25, 5353-5359	3.5	5
74	Ligand-Induced Control of Photoconductive Gain and Doping in a Hybrid Graphene-Quantum Dot Transistor. <i>Advanced Electronic Materials</i> , 2015 , 1, 1500062	6.4	48
73	Peculiarities of the hydrogenated In(AsN) alloy. <i>Semiconductor Science and Technology</i> , 2015 , 30, 105030	1.8	4

72	Impact ionization and large room-temperature magnetoresistance in micron-sized high-mobility InAs channels. <i>Physical Review B</i> , 2014 , 90,	3.3	5
71	Room Temperature Electroluminescence from Mechanically Formed van der Waals III-V Homojunctions and Heterojunctions. <i>Advanced Optical Materials</i> , 2014 , 2, 1064-1069	8.1	61
70	Spin manipulation and spin-lattice interaction in magnetic colloidal quantum dots. <i>Physical Review B</i> , 2014 , 90,	3.3	12
69	Quantum confined acceptors and donors in InSe nanosheets. <i>Applied Physics Letters</i> , 2014 , 105, 221909	3.4	53
68	Subterahertz chaos generation by coupling a superlattice to a linear resonator. <i>Physical Review Letters</i> , 2014 , 112, 116603	7.4	38
67	Quantum oscillations in the photocurrent of GaAs/AlAs p-i-n diodes. <i>Physical Review B</i> , 2014 , 89,	3.3	9
66	Tuning the bandgap of exfoliated InSe nanosheets by quantum confinement. <i>Advanced Materials</i> , 2013 , 25, 5714-8	24	419
65	High Curie temperatures at low compensation in the ferromagnetic semiconductor (Ga,Mn)As. <i>Physical Review B</i> , 2013 , 87,	3.3	29
64	Effects of Bi incorporation on the electronic properties of GaAs: Carrier masses, hole mobility, and Bi-induced acceptor states. <i>Physica Status Solidi (B): Basic Research</i> , 2013 , 250, 779-786	1.3	15
63	Nonresonant hydrogen dopants in In(AsN): A route to high electron concentrations and mobilities. <i>Physical Review B</i> , 2013 , 87,	3.3	8
62	A micrometer-size movable light emitting area in a resonant tunneling light emitting diode. <i>Applied Physics Letters</i> , 2013 , 103, 241105	3.4	2
61	Paramagnetic, Near-Infrared Fluorescent Mn-Doped PbS Colloidal Nanocrystals. <i>Particle and Particle Systems Characterization</i> , 2013 , 30, 945-949	3.1	17
60	The differential effect of apoferritin-PbS nanocomposites on cell cycle progression in normal and cancerous cells. <i>Journal of Materials Chemistry</i> , 2012 , 22, 660-665		13
59	Bi-induced p-type conductivity in nominally undoped Ga(AsBi). <i>Applied Physics Letters</i> , 2012 , 100, 092109	3.4	35
58	Effects of hydrogen on the electronic properties of Ga(AsBi) alloys. <i>Applied Physics Letters</i> , 2012 , 101, 222103	3.4	9
57	Band-gap profiling by laser writing of hydrogen-containing III-N-Vs. <i>Physical Review B</i> , 2012 , 86,	3.3	16
56	Development of dilute nitride materials for mid-infrared diode lasers. <i>Semiconductor Science and Technology</i> , 2012 , 27, 094009	1.8	19
55	Nano-sized light emitting diodes by near field laser exposure. <i>Applied Physics Letters</i> , 2011 , 98, 183102	3.4	4

54	Laser writing of the electronic activity of N- and H-atoms in GaAs. <i>Applied Physics Letters</i> , 2011 , 99, 021105	3.4	7
53	Cyclotron resonance mass and Fermi energy pinning in the In(AsN) alloy. <i>Applied Physics Letters</i> , 2011 , 98, 162109	3.4	10
52	Magnetic Field Modulated Photorefectance Study of the Electron Effective Mass in Dilute Nitride Semiconductors 2011 ,		3
51	Imaging the photovoltaic response of PbS-sensitized porous titania. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011 , 208, 2450-2453	1.6	2
50	Manipulating and imaging the shape of an electronic wave function by magnetotunneling spectroscopy. <i>Physical Review Letters</i> , 2010 , 105, 236804	7.4	16
49	Hot electron transport and impact ionization in the narrow energy gap InAs _{1-x} N _x alloy. <i>Applied Physics Letters</i> , 2010 , 96, 052115	3.4	6
48	Using randomly distributed charges to create quantum dots. <i>Physical Review B</i> , 2010 , 81,	3.3	10
47	Photoluminescence of PbS nanocrystals at high magnetic fields up to 30 T. <i>Physical Review B</i> , 2010 , 82,	3.3	10
46	Self-Assembly of Electrically Conducting Biopolymer Thin Films by Cellulose Regeneration in Gold Nanoparticle Aqueous Dispersions. <i>Chemistry of Materials</i> , 2010 , 22, 2675-2680	9.6	33
45	Effect of low nitrogen concentrations on the electronic properties of InAs _{1-x} N _x . <i>Physical Review B</i> , 2009 , 80,	3.3	24
44	Large zero-field spin splitting in AlGa _N /AlN/GaN/AlN heterostructures. <i>Journal of Applied Physics</i> , 2009 , 105, 093701	2.5	20
43	Sensitive detection of photoexcited carriers by resonant tunneling through a single quantum dot. <i>Physical Review B</i> , 2009 , 79,	3.3	8
42	Growth and characterization of InAs _N /GaAs dilute nitride semiconductor alloys for the midinfrared spectral range. <i>Applied Physics Letters</i> , 2009 , 95, 031110	3.4	18
41	NEGATIVE DIFFERENTIAL VELOCITY IN ARTIFICIAL CRYSTALS PROBED BY HIGH MAGNETIC FIELDS. <i>International Journal of Modern Physics B</i> , 2009 , 23, 2766-2768	1.1	1
40	Tailoring the electrical conductivity of GaAs by nitrogen incorporation. <i>Journal of Physics Condensed Matter</i> , 2009 , 21, 174209	1.8	4
39	LO phonon-plasmon coupled modes and carrier mobilities in heavily Se-doped Ga(As, N) thin films. <i>Journal of Materials Science: Materials in Electronics</i> , 2009 , 20, 425-429	2.1	0
38	Electron effective mass and mobility in heavily doped n-GaAsN probed by Raman scattering. <i>Journal of Applied Physics</i> , 2008 , 103, 103528	2.5	14
37	Electron coherence length and mobility in highly mismatched III-N-V alloys. <i>Applied Physics Letters</i> , 2008 , 93, 252106	3.4	16

36	High field electron dynamics in dilute nitride Ga(AsN). <i>Applied Physics Letters</i> , 2008 , 93, 022111	3.4	5
35	Upconversion electroluminescence in InAs quantum dot light-emitting diodes. <i>Applied Physics Letters</i> , 2008 , 92, 091121	3.4	20
34	Resonant tunneling through a dilute nitride quantum well. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008 , 5, 198-202		
33	Magnetic-field-induced Fermi-edge singularity in the tunneling current through an InAs self-assembled quantum dot. <i>Journal of Experimental and Theoretical Physics</i> , 2007 , 105, 152-154	1	4
32	Magnetic-field-induced Fermi-edge singularity in the tunnelling current through a self-assembled InAs quantum dot. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2007 , 71, 1127-1129	0.4	
31	PROBING THE SCATTERING POTENTIAL OF N-IMPURITIES IN GaAs BY MAGNETO-TUNNELING. <i>International Journal of Modern Physics B</i> , 2007 , 21, 1600-1604	1.1	
30	Magnetoanisotropy of electron-correlation-enhanced tunneling through a quantum dot. <i>Physical Review B</i> , 2007 , 75,	3.3	19
29	Magnetophonon oscillations in the negative differential conductance of dilute nitride GaAs _{1-x} N _x submicron diodes. <i>Physical Review B</i> , 2007 , 75,	3.3	11
28	Sharp-line electroluminescence from individual quantum dots by resonant tunneling injection of carriers. <i>Applied Physics Letters</i> , 2006 , 89, 092106	3.4	8
27	Raman scattering in InAs(AlGa)As self-assembled quantum dots: Evidence of Al intermixing. <i>Applied Physics Letters</i> , 2006 , 88, 141905	3.4	18
26	Novel regimes of electron dynamics in superlattices. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2006 , 364, 3477-92	3	3
25	Optical study of resonant states in GaN _x As _{1-x} . <i>Semiconductors</i> , 2006 , 40, 1162-1164	0.7	
24	Stochastic Carrier Dynamics in Semiconductor Superlattices. <i>Acta Physica Polonica A</i> , 2006 , 109, 43-52	0.6	
23	The resonant tunneling of holes through double-barrier structures with InAs QDs at the center of a GaAs quantum well. <i>Semiconductors</i> , 2005 , 39, 543-546	0.7	
22	Effect of hydrostatic pressure on the fragmented conduction band structure of dilute Ga(AsN) alloys. <i>Physical Review B</i> , 2005 , 72,	3.3	20
21	Magnetic-field-induced suppression of electronic conduction in a superlattice. <i>Physical Review Letters</i> , 2004 , 93, 146801	7.4	12
20	Time-resolved photoluminescence of InAs quantum dots in a GaAs quantum well. <i>Applied Physics Letters</i> , 2004 , 84, 3046-3048	3.4	19
19	Magnetophotoluminescence study of the influence of substrate orientation and growth interruption on the electronic properties of InAs/GaAs quantum dots. <i>Journal of Applied Physics</i> , 2004 , 96, 2535-2539	2.5	13

18	RESONANT TRANSPORT IN SEMICONDUCTOR SUPERLATTICES IN A TILTED MAGNETIC FIELD. <i>International Journal of Modern Physics B</i> , 2004 , 18, 3617-3620	1.1	1
17	Investigation of radiative recombination from Mn-related states in Ga _{1-x} MnxAs. <i>Applied Physics Letters</i> , 2003 , 83, 866-868	3.4	5
16	Magnetic-field-induced recovery of resonant tunneling into a disordered quantum well subband. <i>Physical Review B</i> , 2003 , 68,	3.3	11
15	Dependence of quantum-dot formation on substrate orientation studied by magnetophotoluminescence. <i>Applied Physics Letters</i> , 2002 , 81, 1480-1482	3.4	12
14	Magneto-Tunnelling Spectroscopy for Spatial Mapping of Orbital Wavefunctions of the Ground and Excited Electronic States in Self-Assembled Quantum Dots. <i>Physica Status Solidi (B): Basic Research</i> , 2001 , 224, 715-722	1.3	1
13	Piezoelectric Effects on the Electron-Hole Dipole in In _{0.5} Ga _{0.5} As/GaAs Self-Assembled Quantum Dots. <i>Physica Status Solidi (B): Basic Research</i> , 2001 , 224, 37-40	1.3	4
12	Universality of the Stokes Shift for a Disordered Ensemble of Quantum Dots. <i>Physica Status Solidi (B): Basic Research</i> , 2001 , 224, 41-45	1.3	7
11	Raman Characterization of MBE Grown (Al)GaAsN. <i>Physica Status Solidi (B): Basic Research</i> , 2001 , 228, 283-286	1.3	8
10	Anisotropy of electronic wave functions in self-assembled InAs dots embedded in the center of a GaAs quantum well studied by magnetotunneling spectroscopy. <i>JETP Letters</i> , 2001 , 74, 41-45	1.2	4
9	Quantum States of Self-Assembled InAs Dots Probed by Magneto-Tunneling Spectroscopy. <i>Acta Physica Polonica A</i> , 2001 , 100, 165-173	0.6	
8	Piezoelectric Effects on the Electron-Hole Dipole in In _{0.5} Ga _{0.5} As/GaAs Self-Assembled Quantum Dots 2001 , 224, 37		1
7	Piezoelectric effects in In _{0.5} Ga _{0.5} As self-assembled quantum dots grown on (311)B GaAs substrates. <i>Applied Physics Letters</i> , 2000 , 77, 2979-2981	3.4	43
6	Quantum-dot phonons in self-assembled InAs/GaAs quantum dots: Dependence on the coverage thickness. <i>Applied Physics Letters</i> , 2000 , 77, 3556-3558	3.4	32
5	Spectral analysis of InGaAs/GaAs quantum-dot lasers. <i>Applied Physics Letters</i> , 1999 , 75, 2169-2171	3.4	23
4	Emission of electrons from the ground and first excited states of self-organized InAs/GaAs quantum dot structures. <i>Journal of Electronic Materials</i> , 1999 , 28, 486-490	1.9	31
3	High-temperature light emission from InAs quantum dots. <i>Applied Physics Letters</i> , 1999 , 75, 814-816	3.4	39
2	High-Performance Phototransistors by Alumina Encapsulation of a 2D Semiconductor with Self-Aligned Contacts. <i>Advanced Electronic Materials</i> , 2100954	6.4	0
1	Nondestructive Picosecond Ultrasonic Probing of Intralayer and van der Waals Interlayer Bonding in Hg and Hg ₂ Se ₃ . <i>Advanced Functional Materials</i> , 2106206	15.6	0

