

# Vladimir Protasenko

## List of Publications by Year in descending order

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32  
papers

1,823  
citations

430754

18  
h-index

552653

26  
g-index

34  
all docs

34  
docs citations

34  
times ranked

2990  
citing authors

#	ARTICLE	IF	CITATIONS
1	Esaki Diodes in van der Waals Heterojunctions with Broken-Gap Energy Band Alignment. Nano Letters, 2015, 15, 5791-5798.	4.5	319
2	High-voltage field effect transistors with wide-bandgap $\text{In}^2\text{-Ga}_2\text{O}_3$ nanomembranes. Applied Physics Letters, 2014, 104, .	1.5	288
3	Transistors with chemically synthesized layered semiconductor $\text{WS}_2$ exhibiting 105 room temperature modulation and ambipolar behavior. Applied Physics Letters, 2012, 101, .	1.5	237
4	MBE-grown $232\text{Å} \sim 270\text{Å}$ nm deep-UV LEDs using monolayer thin binary GaN/AlN quantum heterostructures. Applied Physics Letters, 2017, 110, .	1.5	105
5	Polarization engineering in group III nitride heterostructures: New opportunities for device design. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1511-1516.	0.8	83
6	Tunnel-injection quantum dot deep-ultraviolet light-emitting diodes with polarization-induced doping in III-nitride heterostructures. Applied Physics Letters, 2014, 104, 021105.	1.5	77
7	Layered transition metal dichalcogenides: promising near-lattice-matched substrates for GaN growth. Scientific Reports, 2016, 6, 23708.	1.6	76
8	Deep ultraviolet emission from ultra-thin GaN/AlN heterostructures. Applied Physics Letters, 2016, 109, .	1.5	73
9	Crystal orientation dictated epitaxy of ultrawide-bandgap 5.4- to 8.6-eV $\text{In}^{\pm}(\text{AlGa})_{2-3}$ O $_{3-3}$ on m-plane sapphire. Science Advances, 2021, 7, .	4.7	71
10	Tunnel-injection GaN quantum dot ultraviolet light-emitting diodes. Applied Physics Letters, 2013, 102, .	1.5	64
11	N-polar III-nitride quantum well light-emitting diodes with polarization-induced doping. Applied Physics Letters, 2011, 99, .	1.5	63
12	Deep-UV emission at $219\text{Å}$ nm from ultrathin MBE GaN/AlN quantum heterostructures. Applied Physics Letters, 2017, 111, .	1.5	54
13	CdSe nanowires with illumination-enhanced conductivity: Induced dipoles, dielectrophoretic assembly, and field-sensitive emission. Journal of Applied Physics, 2007, 101, 073704.	1.1	52
14	Room temperature microwave oscillations in GaN/AlN resonant tunneling diodes with peak current densities up to 220 kA/cm <sup>2</sup> . Applied Physics Letters, 2018, 112, .	1.5	51
15	Two-dimensional electron gases in strained quantum wells for AlN/GaN/AlN double heterostructure field-effect transistors on AlN. Applied Physics Letters, 2014, 104, .	1.5	42
16	New Tunneling Features in Polar III-Nitride Resonant Tunneling Diodes. Physical Review X, 2017, 7, .	2.8	42
17	Broken Symmetry Effects due to Polarization on Resonant Tunneling Transport in Double-Barrier Nitride Heterostructures. Physical Review Applied, 2019, 11, .	1.5	25
18	$\text{In}^3$ -phase inclusions as common structural defects in alloyed $\text{In}^2\text{-(Al}_x\text{Ga}_{1-x})_2\text{O}_3$ and doped $\text{In}^2\text{-Ga}_2\text{O}_3$ films. APL Materials, 2021, 9, .	2.2	23

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19	MBE growth and donor doping of coherent ultrawide bandgap AlGa <sub>N</sub> alloy layers on single-crystal AlN substrates. Applied Physics Letters, 2021, 118, .	1.5	16
20	Bandgap narrowing and Mott transition in Si-doped Al <sub>0.7</sub> Ga <sub>0.3</sub> N. Applied Physics Letters, 2019, 114, .	1.5	13
21	Light-emitting diodes with AlN polarization-induced buried tunnel junctions: A second look. Applied Physics Letters, 2020, 117, .	1.5	11
22	Fighting Broken Symmetry with Doping: Toward Polar Resonant Tunneling Diodes with Symmetric Characteristics. Physical Review Applied, 2020, 13, .	1.5	11
23	Extended Defect Propagation in Highly Tensile-Strained Ge Waveguides. Crystals, 2017, 7, 157.	1.0	5
24	Bottom tunnel junction blue light-emitting field-effect transistors. Applied Physics Letters, 2020, 117, 031107.	1.5	5
25	Efficient InGa <sub>N</sub> p-Contacts for deep-UV Light Emitting Diodes. , 2019, , .		3
26	First demonstration of two-dimensional WS <sub>2</sub> transistors exhibiting 10 <sup>5</sup> room temperature modulation and ambipolar behavior. , 2012, , .		2
27	Self-assembled Ge QDs Formed by High-Temperature Annealing on Al(Ga)As (001). Journal of Electronic Materials, 2015, 44, 1338-1343.	1.0	2
28	Tunnel injection GaN/AlN quantum dot UV LED. , 2012, , .		1
29	Nanomembrane Ga <sub>2</sub> O <sub>3</sub> high-voltage field effect transistors. , 2013, , .		1
30	Deep-UV LEDs using polarization-induced doping: Electroluminescence at cryogenic temperatures. , 2015, , .		1
31	Device characteristics of single-layer graphene FETs grown on copper. , 2010, , .		0
32	Polarization-engineered N-face III <sub>N</sub> nitride quantum well LEDs. , 2010, , .		0