

Jaewoo Shim

List of Publications by Year in descending order

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32
papers

3,374
citations

331670

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434195

31
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32
all docs

32
docs citations

32
times ranked

5453
citing authors

#	ARTICLE	IF	CITATIONS
1	Artificial optic-neural synapse for colored and color-mixed pattern recognition. Nature Communications, 2018, 9, 5106.	12.8	462
2	Phosphorene/rhenium disulfide heterojunction-based negative differential resistance device for multi-valued logic. Nature Communications, 2016, 7, 13413.	12.8	332
3	High-Performance Transition Metal Dichalcogenide Photodetectors Enhanced by Self-Assembled Monolayer Doping. Advanced Functional Materials, 2015, 25, 4219-4227.	14.9	247
4	An Ultrahigh-Performance Photodetector based on a Perovskite-Transition-Metal-Dichalcogenide Hybrid Structure. Advanced Materials, 2016, 28, 7799-7806.	21.0	242
5	Path towards graphene commercialization from lab to market. Nature Nanotechnology, 2019, 14, 927-938.	31.5	235
6	Heterogeneous integration of single-crystalline complex-oxide membranes. Nature, 2020, 578, 75-81.	27.8	218
7	High-Performance 2D Rhenium Disulfide (ReS ₂) Transistors and Photodetectors by Oxygen Plasma Treatment. Advanced Materials, 2016, 28, 6985-6992.	21.0	209
8	Controlled crack propagation for atomic precision handling of wafer-scale two-dimensional materials. Science, 2018, 362, 665-670.	12.6	208
9	MXene Electrode for the Integration of WSe ₂ and MoS ₂ Field Effect Transistors. Advanced Functional Materials, 2016, 26, 5328-5334.	14.9	198
10	A High-Performance WSe ₂ /h-BN Photodetector using a Triphenylphosphine (PPh ₃)-Based n-Doping Technique. Advanced Materials, 2016, 28, 4824-4831.	21.0	139
11	Artificial van der Waals hybrid synapse and its application to acoustic pattern recognition. Nature Communications, 2020, 11, 3936.	12.8	125
12	Electronic and Optoelectronic Devices based on Two-Dimensional Materials: From Fabrication to Application. Advanced Electronic Materials, 2017, 3, 1600364.	5.1	123
13	Extremely Large Gate Modulation in Vertical Graphene/WSe ₂ Heterojunction Barristor Based on a Novel Transport Mechanism. Advanced Materials, 2016, 28, 5293-5299.	21.0	92
14	Recent progress in Van der Waals (vdW) heterojunction-based electronic and optoelectronic devices. Carbon, 2018, 133, 78-89.	10.3	83
15	Light-Triggered Ternary Device and Inverter Based on Heterojunction of van der Waals Materials. ACS Nano, 2017, 11, 6319-6327.	14.6	78
16	Broad Detection Range Rhenium Diselenide Photodetector Enhanced by (3-Aminopropyl)Triethoxysilane and Triphenylphosphine Treatment. Advanced Materials, 2016, 28, 6711-6718.	21.0	72
17	Graphene-assisted spontaneous relaxation towards dislocation-free heteroepitaxy. Nature Nanotechnology, 2020, 15, 272-276.	31.5	71
18	A multiple negative differential resistance heterojunction device and its circuit application to ternary static random access memory. Nanoscale Horizons, 2020, 5, 654-662.	8.0	70

#	ARTICLE	IF	CITATIONS
19	Double Negative Differential Transconductance Characteristic: From Device to Circuit Application toward Quaternary Inverter. <i>Advanced Functional Materials</i> , 2019, 29, 1905540.	14.9	39
20	Ultra-low Doping on Two-Dimensional Transition Metal Dichalcogenides using DNA Nanostructure Doped by a Combination of Lanthanide and Metal Ions. <i>Scientific Reports</i> , 2016, 6, 20333.	3.3	30
21	High-Efficiency WSe_2 Photovoltaic Devices with Electron-Selective Contacts. <i>ACS Nano</i> , 2022, 16, 8827-8836.	14.6	22
22	Polarity control in a single transition metal dichalcogenide (TMD) transistor for homogeneous complementary logic circuits. <i>Nanoscale</i> , 2019, 11, 12871-12877.	5.6	21
23	Controllable potential barrier for multiple negative-differential-transconductance and its application to multi-valued logic computing. <i>Npj 2D Materials and Applications</i> , 2021, 5, .	7.9	17
24	Optimization of graphene-MoS ₂ barristor by 3-aminopropyltriethoxysilane (APTES). <i>Organic Electronics</i> , 2016, 33, 172-177.	2.6	15
25	Effects of Thermal Annealing on In Situ Phosphorus-Doped Germanium n^+/p Junction. <i>IEEE Electron Device Letters</i> , 2013, 34, 15-17.	3.9	7
26	Thin-Film Transistors: High-Performance 2D Rhenium Disulfide (ReS ₂) Transistors and Photodetectors by Oxygen Plasma Treatment (Adv. Mater. 32/2016). <i>Advanced Materials</i> , 2016, 28, 6984-6984.	21.0	6
27	Theoretical and Experimental Investigation of Graphene/High-k/p-Si Junctions. <i>IEEE Electron Device Letters</i> , 2016, 37, 4-7.	3.9	5
28	Effects of point defect healing on phosphorus implanted germanium n^+/p junction and its thermal stability. <i>Journal of Applied Physics</i> , 2013, 114, .	2.5	4
29	Characteristics of Ultrashallow Hetero Indium-Gallium-Zinc-Oxide/Germanium Junction. <i>IEEE Electron Device Letters</i> , 2012, 33, 1363-1365.	3.9	2
30	Photodetectors: High-Performance Transition Metal Dichalcogenide Photodetectors Enhanced by Self-Assembled Monolayer Doping (Adv. Funct. Mater. 27/2015). <i>Advanced Functional Materials</i> , 2015, 25, 4368-4368.	14.9	1
31	Photodetectors: Broad Detection Range Rhenium Diselenide Photodetector Enhanced by (3-Aminopropyl)Triethoxysilane and Triphenylphosphine Treatment (Adv. Mater. 31/2016). <i>Advanced Materials</i> , 2016, 28, 6518-6518.	21.0	1
32	Dopant profile model in a shallow germanium n^+/p junction. <i>Journal of the Korean Physical Society</i> , 2013, 63, 1855-1858.	0.7	0