

# Jaewoo Shim

## List of Publications by Year in descending order

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32  
papers

3,374  
citations

331670

21  
h-index

434195

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g-index

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all docs

32  
docs citations

32  
times ranked

5453  
citing authors

#	ARTICLE	IF	CITATIONS
1	High-Efficiency WSe <sub>2</sub> Photovoltaic Devices with Electron-Selective Contacts. ACS Nano, 2022, 16, 8827-8836.	14.6	22
2	Controllable potential barrier for multiple negative-differential-transconductance and its application to multi-valued logic computing. Npj 2D Materials and Applications, 2021, 5, .	7.9	17
3	Artificial van der Waals hybrid synapse and its application to acoustic pattern recognition. Nature Communications, 2020, 11, 3936.	12.8	125
4	Graphene-assisted spontaneous relaxation towards dislocation-free heteroepitaxy. Nature Nanotechnology, 2020, 15, 272-276.	31.5	71
5	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
6	Heterogeneous integration of single-crystalline complex-oxide membranes. Nature, 2020, 578, 75-81.	27.8	218
7	Polarity control in a single transition metal dichalcogenide (TMD) transistor for homogeneous complementary logic circuits. Nanoscale, 2019, 11, 12871-12877.	5.6	21
8	Double Negative Differential Transconductance Characteristic: From Device to Circuit Application toward Quaternary Inverter. Advanced Functional Materials, 2019, 29, 1905540.	14.9	39
9	Path towards graphene commercialization from lab to market. Nature Nanotechnology, 2019, 14, 927-938.	31.5	235
10	Recent progress in Van der Waals (vdW) heterojunction-based electronic and optoelectronic devices. Carbon, 2018, 133, 78-89.	10.3	83
11	Artificial optic-neural synapse for colored and color-mixed pattern recognition. Nature Communications, 2018, 9, 5106.	12.8	462
12	Controlled crack propagation for atomic precision handling of wafer-scale two-dimensional materials. Science, 2018, 362, 665-670.	12.6	208
13	Electronic and Optoelectronic Devices based on Two-Dimensional Materials: From Fabrication to Application. Advanced Electronic Materials, 2017, 3, 1600364.	5.1	123
14	Light-Triggered Ternary Device and Inverter Based on Heterojunction of van der Waals Materials. ACS Nano, 2017, 11, 6319-6327.	14.6	78
15	Broad Detection Range Rhenium Diselenide Photodetector Enhanced by (3-Aminopropyl)Triethoxysilane and Triphenylphosphine Treatment. Advanced Materials, 2016, 28, 6711-6718.	21.0	72
16	Optimization of graphene-MoS <sub>2</sub> barristor by 3-aminopropyltriethoxysilane (APTES). Organic Electronics, 2016, 33, 172-177.	2.6	15
17	Photodetectors: Broad Detection Range Rhenium Diselenide Photodetector Enhanced by (3-Aminopropyl)Triethoxysilane and Triphenylphosphine Treatment (Adv. Mater. 31/2016). Advanced Materials, 2016, 28, 6518-6518.	21.0	1
18	Thin-Film Transistors: High-Performance 2D Rhenium Disulfide (ReS <sub>2</sub> ) Transistors and Photodetectors by Oxygen Plasma Treatment (Adv. Mater. 32/2016). Advanced Materials, 2016, 28, 6984-6984.	21.0	6

#	ARTICLE	IF	CITATIONS
19	<b>An Ultrahigh-Performance Photodetector based on a Perovskite-Transition-Metal-Dichalcogenide Hybrid Structure</b> . <i>Advanced Materials</i> , 2016, 28, 7799-7806.	21.0	242
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	Phosphorene/rhenium disulfide heterojunction-based negative differential resistance device for multi-valued logic. <i>Nature Communications</i> , 2016, 7, 13413.	12.8	332
22	Extremely Large Gate Modulation in Vertical Graphene/WSe <sub>2</sub> Heterojunction Barristor Based on a Novel Transport Mechanism. <i>Advanced Materials</i> , 2016, 28, 5293-5299.	21.0	92
23	A High-Performance WSe <sub>2</sub> /h-BN Photodetector using a Triphenylphosphine (PPh <sub>3</sub> )-Based n-Doping Technique. <i>Advanced Materials</i> , 2016, 28, 4824-4831.	21.0	139
24	High-Performance 2D Rhenium Disulfide (ReS <sub>2</sub> ) Transistors and Photodetectors by Oxygen Plasma Treatment. <i>Advanced Materials</i> , 2016, 28, 6985-6992.	21.0	209
25	MXene Electrode for the Integration of WSe <sub>2</sub> and MoS <sub>2</sub> Field Effect Transistors. <i>Advanced Functional Materials</i> , 2016, 26, 5328-5334.	14.9	198
26	Theoretical and Experimental Investigation of Graphene/High-k/p-Si Junctions. <i>IEEE Electron Device Letters</i> , 2016, 37, 4-7.	3.9	5
27	Photodetectors: High-Performance Transition Metal Dichalcogenide Photodetectors Enhanced by Self-Assembled Monolayer Doping ( <i>Adv. Funct. Mater.</i> 27/2015). <i>Advanced Functional Materials</i> , 2015, 25, 4368-4368.	14.9	1
28	High-Performance Transition Metal Dichalcogenide Photodetectors Enhanced by Self-Assembled Monolayer Doping. <i>Advanced Functional Materials</i> , 2015, 25, 4219-4227.	14.9	247
29	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
30	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
31	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
32	Characteristics of Ultrashallow Hetero Indium-Gallium-Zinc-Oxide/Germanium Junction. <i>IEEE Electron Device Letters</i> , 2012, 33, 1363-1365.	3.9	2