Zhiguo Wang

List of Publications by Year
in descending order

134	4,291	92079	124102
papers	citations	37 h-index	61 g-index

140	140	140	7991
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Design of active nickel single-atom decorated MoS2 as a pH-universal catalyst for hydrogen evolution reaction. Nano Energy, 2018, 53, 458-467.	16.5	234
2	Room-Temperature High-Performance H₂S Sensor Based on Porous CuO Nanosheets Prepared by Hydrothermal Method. ACS Applied Materials & Interfaces, 2016, 8, 20962-20968.	8.3	230
3	Lead-Free Cs₄CuSb₂Cl₁₂ Layered Double Perovskite Nanocrystals. Journal of the American Chemical Society, 2020, 142, 11927-11936.	14.6	149
4	Optical Properties and Photocatalytic Applications of Two-Dimensional Janus Group-III Monochalcogenides. Journal of Physical Chemistry C, 2019, 123, 11388-11396.	3.3	147
5	Two-Dimensional van der Waals Materials with Aligned In-Plane Polarization and Large Piezoelectric Effect for Self-Powered Piezoelectric Sensors. Nano Letters, 2019, 19, 5410-5416.	9.5	143
6	Lowering Charge Transfer Barrier of LiMn₂O₄ via Nickel Surface Doping To Enhance Li⁺ Intercalation Kinetics at Subzero Temperatures. Journal of the American Chemical Society, 2019, 141, 14038-14042.	14.6	141
7	Robust Piezo-Phototronic Effect in Multilayer Î³-InSe for High-Performance Self-Powered Flexible Photodetectors. ACS Nano, 2019, 13, 7291-7299.	15.3	128
8	O2 plasma and cation tuned nickel phosphide nanosheets for highly efficient overall water splitting. Nano Energy, 2018, 54, 82-90.	16.5	122
9	Black reduced porous SnO2 nanosheets for CO2 electroreduction with high formate selectivity and low overpotential. Applied Catalysis B: Environmental, 2020, 260, 118134.	20.7	117
10	Atomic-Resolution Visualization of Distinctive Chemical Mixing Behavior of Ni, Co, and Mn with Li in Layered Lithium Transition-Metal Oxide Cathode Materials. Chemistry of Materials, 2015, 27, 5393-5401.	7.1	111
11	Ni and Co Segregations on Selective Surface Facets and Rational Design of Layered Lithium Transitionâ€Metal Oxide Cathodes. Advanced Energy Materials, 2016, 6, 1502455.	22.2	103
12	Defect-Mediated Lithium Adsorption and Diffusion on Monolayer Molybdenum Disulfide. Scientific Reports, 2015, 5, 18712.	3.4	88
13	Single-layered V2O5 a promising cathode material for rechargeable Li and Mg ion batteries: an ab initio study. Physical Chemistry Chemical Physics, 2013, 15, 8705.	2.9	85
14	Mechanical and electronic properties of Janus monolayer transition metal dichalcogenides. Journal of Physics Condensed Matter, 2018, 30, 215301.	1.9	84
15	Efficiently Synergistic Hydrogen Evolution Realized by Trace Amount of Pt-Decorated Defect-Rich SnS₂ Nanosheets. ACS Applied Materials & Interfaces, 2017, 9, 37750-37759.	8.3	79
16	Controlled growth of vertical 3D MoS_{2(1â^'x)}Se_{2x} nanosheets for an efficient and stable hydrogen evolution reaction. Journal of Materials Chemistry A, 2016, 4, 18060-18066.	10.5	78
17	Anomalous Li Storage Capability in Atomically Thin Two-Dimensional Sheets of Nonlayered MoO₂. Nano Letters, 2018, 18, 1506-1515.	9.5	75
18	Layer-Dependent Chemically Induced Phase Transition of Two-Dimensional MoS₂. Nano Letters, 2018, 18, 3435-3440.	9.5	75

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19	Origin of Structural Transformation in Mono- and Bi-Layered Molybdenum Disulfide. Scientific Reports, 2016, 6, 26666.	3.4	72
20	Atomistic simulations of the mechanical properties of silicon carbide nanowires. Physical Review B, 2008, 77, .	3.3	67
21	Modification of Defect Structures in Graphene by Electron Irradiation: Ab Initio Molecular Dynamics Simulations. Journal of Physical Chemistry C, 2012, 116, 16070-16079.	3.3	61
22	Modelling and simulation of electron-rich effect on Li diffusion in group IVA elements (Si, Ge and Sn) for Li ion batteries. Journal of Materials Chemistry A, 2014, 2, 13976-13982.	10.5	59
23	Comparison of Tetragonal and Cubic Tin as Anode for Mg Ion Batteries. ACS Applied Materials & Interfaces, 2014, 6, 6786-6789.	8.3	57
24	Electronic Modulation of Nickel Disulfide toward Efficient Water Electrolysis. Small, 2020, 16, e1905885.	11.2	55
25	Electron-Rich Driven Electrochemical Solid-State Amorphization in Liâ€“Si Alloys. Nano Letters, 2013, 13, 4511-4516.	9.5	52
26	Large Intercalation Pseudocapacitance in 2D VO₂ (B): Breaking through the Kinetic Barrier. Advanced Materials, 2018, 30, e1803594.	24.3	52
27	Monolayer black phosphorus as potential anode materials for Mg-ion batteries. Journal of Materials Science, 2016, 51, 7355-7360.	3.7	51
28	Triggering Catalytic Active Sites for Hydrogen Evolution Reaction by Intrinsic Defects in Janus Monolayer MoSSe. Journal of Physical Chemistry C, 2019, 123, 12261-12267.	3.3	50
29	The effects of monovalent metal cations on the crystal and electronic structures of Cs2MBiCl6 (M =) Tj ETQq1 1 0.784314 rgBT /Over	3.1	49
30	Two-dimensional hetero-nanostructured electrocatalyst of Ni/NiFe-layered double oxide for highly efficient hydrogen evolution reaction in alkaline medium. Chemical Engineering Journal, 2021, 426, 131827.	13.0	48
31	Atomistic simulations of the size, orientation, and temperature dependence of tensile behavior in GaN nanowires. Physical Review B, 2007, 76, .	3.3	45
32	First principles prediction of nitrogen-doped carbon nanotubes as a high-performance cathode for Liâ€“S batteries. RSC Advances, 2013, 3, 16775.	3.7	45
33	Electronic and optical properties of two-dimensional covalent organic frameworks. Journal of Materials Chemistry, 2012, 22, 16964.	6.7	43
34	Sodium adsorption and diffusion on monolayer black phosphorus with intrinsic defects. Applied Surface Science, 2018, 427, 189-197.	6.3	42
35	2H â†' 1Tâ€² phase transformation in Janus monolayer MoSSe and MoSTe: an efficient hole injection contact for 2H-MoS₂. Journal of Materials Chemistry C, 2018, 6, 13000-13005.	5.6	40
36	Highly Efficient and Stable Hydrogen Production in All pH Range by Two-Dimensional Structured Metal-Doped Tungsten Semicarbides. Research, 2019, 2019, 4029516.	5.9	39

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37	Novel Electronic and Magnetic Properties of Graphene Nanoflakes in a Boron Nitride Layer. Journal of Physical Chemistry C, 2012, 116, 7581-7586.	3.3	38
38	Adsorption and diffusion of lithium on heteroatom-doped monolayer molybdenum disulfide. Applied Surface Science, 2018, 455, 911-918.	6.3	37
39	Ultra-sensitive UV and H2S dual functional sensors based on porous In2O3 nanoparticles operated at room temperature. Journal of Alloys and Compounds, 2019, 770, 721-731.	5.7	37
40	A two-dimensional MoS₂/C₃N broken-gap heterostructure, a first principles study. RSC Advances, 2019, 9, 19837-19843.	3.7	34
41	Structural, electronic and mechanical properties of two-dimensional Janus transition metal carbides and nitrides. Physica E: Low-Dimensional Systems and Nanostructures, 2018, 103, 307-313.	2.8	33
42	Defects in gallium nitride nanowires: First principles calculations. Journal of Applied Physics, 2010, 108, .	2.3	30
43	Review on the temperature memory effect in shape memory alloys. International Journal of Smart and Nano Materials, 2011, 2, 101-119.	4.2	29
44	Electric field enhanced adsorption and diffusion of adatoms in MoS2 monolayer. Materials Chemistry and Physics, 2016, 183, 392-397.	4.1	29
45	Electron Transfer Governed Crystal Transformation of Tungsten Trioxide upon Li Ions Intercalation. ACS Applied Materials & Interfaces, 2016, 8, 24567-24572.	8.3	29
46	Tuning the band structures of single walled silicon carbide nanotubes with uniaxial strain: A first principles study. Applied Physics Letters, 2008, 92, 183116.	3.2	28
47	Composition Dependence of Lithium Diffusion in Lithium Silicide: A Density Functional Theory Study. ChemElectroChem, 2015, 2, 1292-1297.	3.5	28
48	Transition metal atom (Ti, V, Mn, Fe, and Co) anchored silicene for hydrogen evolution reaction. RSC Advances, 2019, 9, 26321-26326.	3.7	28
49	Catalytic activity for the hydrogen evolution reaction of edges in Janus monolayer MoXY (X/Y = S, Se,) Tj ETQq1 1 0.784314 rgBT /Ove	2.9	27
50	Cu- and Fe-Codoped Ni Porous Networks as an Active Electrocatalyst for Hydrogen Evolution in Alkaline Medium. ACS Applied Materials & Interfaces, 2020, 12, 2380-2389.	8.3	27
51	Structure and electronic properties of transition metal dichalcogenide MX2 (MÂ=ÂMo, W, Nb; XÂ=ÂS, Se) monolayers with grain boundaries. Materials Chemistry and Physics, 2014, 147, 1068-1073.	4.1	26
52	Density functional theory study of diffusion of lithium in Liâ€“Sn alloys. Journal of Materials Science, 2016, 51, 3271-3276.	3.7	26
53	Ab initio study of adsorption and diffusion of lithium on transition metal dichalcogenide monolayers. Beilstein Journal of Nanotechnology, 2017, 8, 2711-2718.	2.9	25
54	Improved Thermoelectric Performance of Monolayer HfS₂ by Strain Engineering. ACS Omega, 2021, 6, 29820-29829.	3.6	25

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55	Rhenium doping induced structural transformation in mono-layered MoS₂ with improved catalytic activity for hydrogen evolution reaction. Journal Physics D: Applied Physics, 2017, 50, 405303.	2.9	23
56	Effect of oxygen doping on the hydrogen evolution reaction in MoS2 monolayer. Journal of the Taiwan Institute of Chemical Engineers, 2018, 82, 163-168.	5.3	23
57	Grain Boundaries Trigger Basal Plane Catalytic Activity for the Hydrogen Evolution Reaction in Monolayer MoS2. Electrocatalysis, 2018, 9, 744-751.	2.9	22
58	Controlling electronic structures by irradiation in single-walled SiC nanotubes: a first-principles molecular dynamics study. Nanotechnology, 2009, 20, 075708.	2.7	21
59	Tuning the n-type contact of graphene on Janus MoSSe monolayer by strain and electric field. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 110, 148-152.	2.8	21
60	Modeling and Simulation of Piezoelectrically Driven Self-Charging Lithium Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 15893-15897.	8.3	20
61	High Thermoelectric Performance of Sb₂Si₂Te₆ Monolayers. Journal of Physical Chemistry C, 2021, 125, 16413-16419.	3.3	20
62	Engineering Molecular Heterostructured Catalyst for Oxygen Reduction Reaction. Journal of the American Chemical Society, 2023, 145, 21273-21283.	14.6	20
63	First principles study of the electronic properties of twinned SiC nanowires. Journal of Nanoparticle Research, 2011, 13, 185-191.	2.0	19
64	Facet-dependent magnesiation behavior of Î±-Sn as an anode for magnesium ion batteries. RSC Advances, 2017, 7, 44547-44551.	3.7	19
65	Oxygen Deficiency and Defect Chemistry in Delithiated Spinel LiNi_{0.5}Mn_{1.5}O₄ Cathodes for Liâ€ion Batteries. ChemElectroChem, 2015, 2, 1182-1186.	3.5	18
66	Thermal conductivity of GaN nanotubes simulated by nonequilibrium molecular dynamics. Physical Review B, 2007, 75, .	3.3	17
67	Strain Engineering and Electric Field Tunable Electronic Properties of Janus MoSSe/WX₂ (Xâ€‰=â€‰S, Se) van der Waals Heterostructures. Physica Status Solidi (B): Basic Research, 2019, 256, 1900261.	1.6	17
68	Intrinsic defects in yttrium iron garnet: A first-principles study. Journal of Applied Physics, 2020, 128, .	2.3	17
69	Density Functional Theory Study on the Hydrogen Evolution Reaction in the S-rich SnS2 Nanosheets. Electrocatalysis, 2020, 11, 604-611.	2.9	17
70	Stoneâ€“Wales defects created by low energy recoils in single-walled silicon carbide nanotubes. Journal of Applied Physics, 2009, 106, .	2.3	15
71	Structure and electronic properties of boron nitride sheet with grain boundaries. Journal of Nanoparticle Research, 2012, 14, 1.	2.0	15
72	Nanostructured Ni₂SeS on Porous-Carbon Skeletons as Highly Efficient Electrocatalyst for Hydrogen Evolution in Acidic Medium. Inorganic Chemistry, 2020, 59, 6018-6025.	4.2	15

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73	Improving the catalytic activity for hydrogen evolution of monolayered SnSe_{2(1â"}_x₎S₂_x by mechanical strain. Beilstein Journal of Nanotechnology, 2018, 9, 1820-1827.	2.9	14
74	Lithium and sodium diffusion in solid electrolyte materials of AM₂(PO₄)₃(A = Li, Na,) Tj ETQq1 1 0.0 0 rgBT 1 Overlock	0.0	13
75	A general strategy to generate oxygen vacancies in bimetallic layered double hydroxides for water oxidation. Chemical Communications, 2023, 59, 3138-3141.	4.2	13
76	Direct formation of SiO2/SnO2 composite nanoparticles with high surface area and high thermal stability by solâ€"gel-hydrothermal process. Journal of Sol-Gel Science and Technology, 2009, 49, 196-201.	2.3	12
77	Mechanical bending induced catalytic activity enhancement of monolayer 1ÂTâ€™-MoS2 for hydrogen evolution reaction. Journal of Nanoparticle Research, 2017, 19, 1.	2.0	12
78	Geochronology of Sandia Cave. Smithsonian Contributions To Anthropology, 1986, , 1-32.	0.0	11
79	Mechanical behavior of twinned SiC nanowires under combined tension-torsion and compression-torsion strain. Journal of Applied Physics, 2010, 108, .	2.3	10
80	Oral Administration of a Fusion Protein between the Cholera Toxin B Subunit and the 42-Amino Acid Isoform of Amyloid-Î² Peptide Produced in Silkworm Pupae Protects against Alzheimer's Disease in Mice. PLoS ONE, 2014, 9, e113585.	2.5	10
81	Enhancement of adsorption and diffusion of lithium in single-walled carbon nanotubes by external electric field. Journal of Nanoparticle Research, 2016, 18, 1.	2.0	10
82	Trapping polysulfide on two-dimensional molybdenum disulfide for Liâ€"S batteries through phase selection with optimized binding. Beilstein Journal of Nanotechnology, 2019, 10, 774-780.	2.9	10
83	Plasma-Treated Ultrathin Ternary FePSe₃ Nanosheets as a Bifunctional Electrocatalyst for Efficient Zincâ€"Air Batteries. ACS Applied Materials & Interfaces, 2020, 12, 29393-29403.	8.3	10
84	Thermoelectric performance of ZrNX (X = Cl, Br and I) monolayers. Physical Chemistry Chemical Physics, 2021, 24, 560-567.	2.9	10
85	Composites of Piezoelectric Materials and Silicon as Anodes for Lithiumâ€ion Batteries. ChemElectroChem, 2017, 4, 1523-1527.	3.5	9
86	Density functional theory analysis of surface structures of spinel LiNi0.5Mn1.5O4 cathode materials. Journal of Materials Science, 2017, 52, 605-612.	3.7	9
87	Eliminating Trapâ€States and Functionalizing Vacancies in 2D Semiconductors by Electrochemistry. Small, 2019, 15, e1901899.	11.2	9
88	Dual cylindrical metallic grating-cladding polymer hollow waveguide for terahertz transmission with low loss. Applied Physics Letters, 2010, 97, .	3.2	8
89	Tuning the electronic properties of single-walled SiC nanotubes by external electric field. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 81, 192-195.	2.8	8
90	Surface treated nickel phosphide nanosheet with oxygen as highly efficient bifunctional electrocatalysts for overall water splitting. Applied Surface Science, 2019, 496, 143741.	6.3	8

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91	Atomistic study of the melting behavior of single crystalline wurtzite gallium nitride nanowires. Journal of Materials Research, 2007, 22, 742-747.	2.6	7
92	Further insights into the taxonomy of the Silene nocturna species complex (Caryophyllaceae): a systematic survey of the taxa from Sardinia and Corsica. Phytotaxa, 2014, 175, 37.	0.3	7
93	Density functional theory study of aluminium and chromium doped Yttrium ion garnet. Materials Research Express, 2019, 6, 036105.	1.7	7
94	Nanomechanical behavior of single crystalline SiC nanotubes revealed by molecular dynamics simulations. Journal of Applied Physics, 2008, 104, 093506.	2.3	6
95	Antisite defects in La0.7Sr0.3MnO3 and La0.7Sr0.3FeO3. Applied Physics Letters, 2013, 102, 151911.	3.2	6
96	Outâ€ofâ€Cell Oxygen Diffusivity Evaluation in Lithiumâ€“Air Batteries. ChemElectroChem, 2014, 1, 2052-2057.	3.5	6
97	Triggering basal plane active sites of monolayer MoS2 for the hydrogen evolution reaction by phosphorus doping. Journal of Nanoparticle Research, 2018, 20, 1.	2.0	6
98	Mechanical Properties of Two-Dimensional Materials (Graphene, Silicene and MoS2 Monolayer) Upon Lithiation. Journal of Electronic Materials, 2020, 49, 5713-5720.	2.2	6
99	Transition Metal Atoms Anchored on CuPS3 Monolayer for Enhancing Catalytic Performance of Hydrogen Evolution Reactions. Electrocatalysis, 2022, 13, 494-501.	2.9	6
100	Charge Separation in Wurtzite/Zincâ€Blende Heterojunction GaN Nanowires. ChemPhysChem, 2010, 11, 3329-3332.	2.3	5
101	An ab initio molecular dynamics study on the threshold displacement energies in yttrium aluminum garnet. Journal of Applied Physics, 2019, 126, .	2.3	5
102	Gradient-supervised person re-identification based on dense feature pyramid network. Complex & Intelligent Systems, 2022, 8, 5329-5342.	6.5	5
103	Mechanical elasticity and piezoelectricity in monolayer transition-metal dichalcogenide alloys. Journal of Physics and Chemistry of Solids, 2019, 135, 109081.	4.1	4
104	Orientation and temperature dependence of the tensile behavior of GaN nanowires: an atomistic study. Journal of Materials Science: Materials in Electronics, 2008, 19, 863-867.	2.2	3
105	TENSILE BEHAVIOR OF AMORPHOUS LAYER COATED SILICON CARBIDE NANOWIRES: AN ATOMIC SIMULATION. Modern Physics Letters B, 2011, 25, 325-332.	1.9	3
106	Atomic scale study of surface orientations and energies of Ti2O3 crystals. Applied Physics Letters, 2017, 111, .	3.2	3
107	High intrinsic catalytic activity of boron nanotubes for hydrogen evolution reaction: an ab initio study. Materials Research Express, 2019, 6, 025036.	1.7	3
108	The dependence of interfacial properties on the layer number in 1Tâ€²/2H-MoS2 van der Waals heterostructures. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126747.	2.2	3

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109	Pedestrian reâ€identification based on attribute mining and reasoning. IET Image Processing, 2021, 15, 2399-2411.	2.6	3
110	Dual-donor codoping approach to realize low-resistance n-type ZnS semiconductor. Applied Physics Letters, 2011, 99, .	3.2	2
111	Defects in Li-rich manganese-based layered oxide: A first-principles study. Modern Physics Letters B, 2019, 33, 1950098.	1.9	2
112	Elastic softening of group IVA (Si, Ge and Sn) materials by electron and lithium doping. Modern Physics Letters B, 2020, 34, 2050140.	1.9	2
113	Electronic properties of MoS2/Be2C van der Waals heterostructure: Effect of Bi-axil strain and vertical electric field. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 139, 115172.	2.8	2
114	First principles study of p-type doping in SiC nanowires: role of quantum effect. Journal of Nanoparticle Research, 2011, 13, 2887-2892.	2.0	1
115	Tensile behavior of single crystalline GaN nanotube bundles: An atomistic-level study. International Journal of Modern Physics B, 2014, 28, 1450135.	1.9	1
116	Effect of Fe content on Cu₂Fe_xZn_{1â^'x}SnS₄ single crystals fabricated by flux growth method. Journal Physics D: Applied Physics, 2018, 51, 295107.	2.9	1
117	SAN-GAL: Spatial Attention Network Guided by Attribute Label for Person Re-identification. Wireless Communications and Mobile Computing, 2021, 2021, 1-8.	1.4	1
118	Firstâ€Principles Molecular Dynamics Study of the Threshold Displacement Energy in LiFe₅O₈. Crystal Research and Technology, 2021, 56, 2100076.	1.3	1
119	Energy-efficient speed tuning for real-time applications. Cluster Computing, 0, , 1.	5.2	1
120	Strain and electric field tuning the electronic properties of two-dimensional MoS2/ScCl3 van der Waals heterostructure. Journal of Materials Science: Materials in Electronics, 2022, 33, 10461-10470.	2.2	1
121	High thermoelectric performance of a Sc₂Si₂Te₆ monolayer at medium temperatures: an ab initio study. Physical Chemistry Chemical Physics, 2023, 25, 1616-1626.	2.9	1
122	Knowledge-enhanced online doctor recommendation framework based on knowledge graph and joint learning. Information Sciences, 2024, 662, 120268.	7.2	1
123	DAFV: A Unified and Real-Time Framework of Joint Detection and Attributes Recognition for Fast Vehicles. Lecture Notes in Computer Science, 2021, , 353-365.	1.0	0
124	Towards Influence and Institutionalization. , 2021, , 61-73.		0
125	Threshold displacement energy of lattice atoms in yttrium ion garnet, an ab initio molecular dynamics study. Chemical Physics Letters, 2021, 771, 138518.	2.7	0
126	PrÃ¡tica do Pensamento Computacional e da LÃngua Inglesa utilizando o Scratch: uma sequÃªncia didÃ¡tica. , 0, , .		0

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127	Magnetic Anisotropy of Yttrium Iron Garnet from Density Functional Theory. Journal of Physical Chemistry C, 2023, 127, 689-695.	3.3	0
128	Tunable band-structures of MSe₂/C₃N (M = Mo and W) van der Waals Heterojunctions. Materials Research Express, 2023, 10, 035004.	1.7	0
129	Cross Attention Graph Matching Network for Image-Text Retrieval. Lecture Notes in Electrical Engineering, 2024, , 274-286.	0.0	0
130	Cross-Modal Retrieval Based onÂSemantic Filtering andÂAdaptive Pooling. Lecture Notes in Electrical Engineering, 2024, , 296-310.	0.0	0
131	MGAN: Attempting a Multimodal Graph Attention Network for Remote Sensing Cross-Modal Text-Image Retrieval. Lecture Notes in Electrical Engineering, 2024, , 261-273.	0.0	0
132	Cross Modal Retrieval Algorithm Based on Iterative Queries. Lecture Notes in Electrical Engineering, 2024, , 332-344.	0.0	0
133	Food Classification Model Based on Improved MobileNetV3. Lecture Notes in Electrical Engineering, 2024, , 287-295.	0.0	0
134	Self-selective receptive field network for person re-identification. Complex & Intelligent Systems, 0, , .	6.5	0