Changhyun Pang

List of Publications by Year
in descending order

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Version: 2024-02-01

111 papers	7,682 citations	94381 37 h-index	51562 86 g-index
120 all docs	120 docs citations	120 times ranked	10424 citing authors

#	Article	IF	Citations
1	A flexible and highly sensitive strain-gauge sensor using reversible interlocking of nanofibres. Nature Materials, 2012, 11, 795-801.	13.3	1,453
2	Conductive Fiberâ€Based Ultrasensitive Textile Pressure Sensor for Wearable Electronics. Advanced Materials, 2015, 27, 2433-2439.	11.1	929
3	Highly Skinâ€Conformal Microhairy Sensor for Pulse Signal Amplification. Advanced Materials, 2015, 27, 634-640.	11.1	621
4	Recent advances in flexible sensors for wearable and implantable devices. Journal of Applied Polymer Science, 2013, 130, 1429-1441.	1.3	382
5	A wet-tolerant adhesive patch inspired by protuberances in suction cups of octopi. Nature, 2017, 546, 396-400.	13.7	369
6	Selective metal deposition at graphene line defects by atomic layer deposition. Nature Communications, 2014, 5, 4781.	5.8	243
7	Flow-enhanced solution printing of all-polymer solar cells. Nature Communications, 2015, 6, 7955.	5.8	221
8	Bioinspired Adhesive Architectures: From Skin Patch to Integrated Bioelectronics. Advanced Materials, 2019, 31, e1803309.	11.1	203
9	An artificial neural tactile sensing system. Nature Electronics, 2021, 4, 429-438.	13.1	161
10	Towards the Next Level of Bioinspired Dry Adhesives: New Designs and Applications. Advanced Functional Materials, 2011, 21, 3606-3616.	7.8	157
11	Highly Permeable Skin Patch with Conductive Hierarchical Architectures Inspired by Amphibians and Octopi for Omnidirectionally Enhanced Wet Adhesion. Advanced Functional Materials, 2019, 29, 1807614.	7.8	129
12	Self-Powered Pressure- and Vibration-Sensitive Tactile Sensors for Learning Technique-Based Neural Finger Skin. Nano Letters, 2019, 19, 3305-3312.	4.5	121
13	Conductive and Stretchable Adhesive Electronics with Miniaturized Octopusâ€Like Suckers against Dry/Wet Skin for Biosignal Monitoring. Advanced Functional Materials, 2018, 28, 1805224.	7.8	111
14	Highly Adaptable and Biocompatible Octopusâ€Like Adhesive Patches with Meniscusâ€Controlled Unfoldable 3D Microtips for Underwater Surface and Hairy Skin. Advanced Science, 2018, 5, 1800100.	5.6	105
15	Microtopographyâ€Guided Conductive Patterns of Liquidâ€Driven Graphene Nanoplatelet Networks for Stretchable and Skinâ€Conformal Sensor Array. Advanced Materials, 2017, 29, 1606453.	11.1	101
16	Bioinspired Reversible Interlocker Using Regularly Arrayed High Aspectâ€Ratio Polymer Fibers. Advanced Materials, 2012, 24, 475-479.	11.1	92
17	Shapeâ€Controllable Microlens Arrays via Direct Transfer of Photocurable Polymer Droplets. Advanced Materials, 2012, 24, 1709-1715.	11.1	85
18	Highly sensitive non-enzymatic glucose sensor based on over-oxidized polypyrrole nanowires modified with Ni(OH)2 nanoflakes. Sensors and Actuators B: Chemical, 2015, 211, 93-101.	4.0	80

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19	Highly Sensitive and Bendable Capacitive Pressure Sensor and Its Application to 1 V Operation Pressureâ€Sensitive Transistor. Advanced Electronic Materials, 2017, 3, 1600455.	2.6	78
20	Conductive Hierarchical Hairy Fibers for Highly Sensitive, Stretchable, and Waterâ€Resistant Multimodal Gestureâ€Distinguishable Sensor, VR Applications. Advanced Functional Materials, 2019, 29, 1905808.	7.8	78
21	Water-Resistant and Skin-Adhesive Wearable Electronics Using Graphene Fabric Sensor with Octopus-Inspired Microsuckers. ACS Applied Materials & Interfaces, 2019, 11, 16951-16957.	4.0	74
22	Bioactivity-guided isolation of ginsenosides from Korean Red Ginseng with cytotoxic activity against human lung adenocarcinoma cells. Journal of Ginseng Research, 2018, 42, 562-570.	3.0	61
23	Copper-Assisted Direct Growth of Vertical Graphene Nanosheets on Glass Substrates by Low-Temperature Plasma-Enhanced Chemical Vapour Deposition Process. Nanoscale Research Letters, 2015, 10, 1019.	3.1	59
24	Crack-Enhanced Microfluidic Stretchable E-Skin Sensor. ACS Applied Materials & Interfaces, 2017, 9, 44678-44686.	4.0	54
25	Nano meets beetles from wing to tiptoe: Versatile tools for smart and reversible adhesions. Nano Today, 2012, 7, 496-513.	6.2	51
26	Hybrid Architectures of Heterogeneous Carbon Nanotube Composite Microstructures Enable Multiaxial Strain Perception with High Sensitivity and Ultrabroad Sensing Range. Small, 2018, 14, e1803411.	5.2	51
27	High-Output and Bending-Tolerant Triboelectric Nanogenerator Based on an Interlocked Array of Surface-Functionalized Indium Tin Oxide Nanohelixes. ACS Energy Letters, 2019, 4, 1748-1754.	8.8	48
28	A Micropillarâ€Assisted Versatile Strategy for Highly Sensitive and Efficient Triboelectric Energy Generation under Inâ€Plane Stimuli. Advanced Materials, 2020, 32, e1905539.	11.1	48
29	Bio-inspired configurable multiscale extracellular matrix-like structures for functional alignment and guided orientation of cells. Biomaterials, 2015, 69, 158-164.	5.7	47
30	Capillarity-Enhanced Organ-Attachable Adhesive with Highly Drainable Wrinkled Octopus-Inspired Architectures. ACS Applied Materials & Interfaces, 2019, 11, 25674-25681.	4.0	47
31	Suppression of 6-Hydroxydopamine-Induced Oxidative Stress by Hyperoside Via Activation of Nrf2/HO-1 Signaling in Dopaminergic Neurons. International Journal of Molecular Sciences, 2019, 20, 5832.	1.8	46
32	Anti-inflammatory activity of a new cyclic peptide, citrusin XI, isolated from the fruits of Citrus unshiu. Journal of Ethnopharmacology, 2015, 163, 106-112.	2.0	44
33	Single-Layer Graphene-Based Transparent and Flexible Multifunctional Electronics for Self-Charging Power and Touch-Sensing Systems. ACS Applied Materials & Interfaces, 2019, 11, 9301-9308.	4.0	44
34	Bioinspired Geometryâ€Switchable Janus Nanofibers for Eyeâ€Readable H₂ Sensors. Advanced Functional Materials, 2017, 27, 1701618.	7.8	43
35	Intrinsically Strainâ€Insensitive, Hyperelastic Temperatureâ€Sensing Fiber with Compressed Microâ€Wrinkles for Integrated Textronics. Advanced Materials Technologies, 2020, 5, 2000073.	3.0	42
36	Carbon-Based, Ultraelastic, Hierarchically Coated Fiber Strain Sensors with Crack-Controllable Beads. ACS Applied Materials & Interfaces, 2019, 11, 15079-15087.	4.0	40

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37	Shape-Tunable Polymer Nanofibrillar Structures by Oblique Electron Beam Irradiation. Langmuir, 2009, 25, 8879-8882.	1.6	39
38	Fabrication and analysis of enforced dry adhesives with coreâ€“shell micropillars. Soft Matter, 2013, 9, 1422-1427.	1.2	37
39	Cytotoxic Constituents from the Sclerotia of Poria cocos against Human Lung Adenocarcinoma Cells by Inducing Mitochondrial Apoptosis. Cells, 2018, 7, 116.	1.8	37
40	Diving beetleâ€“like miniaturized plungers with reversible, rapid biofluid capturing for machine learningâ€“based care of skin disease. Science Advances, 2021, 7, .	4.7	36
41	Antifungal Phenols from Woodfordia uniflora Collected in Oman. Journal of Natural Products, 2020, 83, 2261-2268.	1.5	35
42	Combined Steam and CO₂ Reforming of CH₄ on LaSrNiO_x Mixed Oxides Supported on Al₂O₃-Modified SiC Support. Energy & Fuels, 2015, 29, 1055-1065.	2.5	34
43	Identification of cytotoxic and anti-inflammatory constituents from the bark of Toxicodendron vernicifluum (Stokes) F.A. Barkley. Journal of Ethnopharmacology, 2015, 162, 231-237.	2.0	34
44	Highly Air/Water-Permeable Hierarchical Mesh Architectures for Stretchable Underwater Electronic Skin Patches. ACS Applied Materials & Interfaces, 2020, 12, 14425-14432.	4.0	34
45	Betulinic Acid Suppresses Ovarian Cancer Cell Proliferation through Induction of Apoptosis. Biomolecules, 2019, 9, 257.	1.8	33
46	An Electronically Perceptive Bioinspired Soft Wet-Adhesion Actuator with Carbon Nanotube-Based Strain Sensors. ACS Nano, 2021, 15, 14137-14148.	7.3	33
47	Fischerâ€“Tropsch synthesis on Co/AlSBA-15: effects of hydrophilicity of supports on cobalt dispersion and product distributions. Catalysis Science and Technology, 2015, 5, 3525-3535.	2.1	32
48	Beetle-Inspired Bidirectional, Asymmetric Interlocking Using Geometry-Tunable Nanohairs. ACS Applied Materials & Interfaces, 2012, 4, 4225-4230.	4.0	31
49	High-Performance Hybrid Catalyst with Selectively Functionalized Carbon by Temperature-Directed Switchable Polymer. Chemistry of Materials, 2013, 25, 1526-1532.	3.2	31
50	Bio-inspired functionalization and redox charge transfer of graphene oxide sponges for pseudocapacitive electrodes. Carbon, 2015, 83, 71-78.	5.4	30
51	Tough Carbon Nanotubeâ€Implanted Bioinspired Threeâ€Dimensional Electrical Adhesive for Isotropically Stretchable Waterâ€Repellent Bioelectronics. Advanced Functional Materials, 2022, 32, 2107285.	7.8	30
52	Printable wet-resistive textile strain sensors using bead-blended composite ink for robustly integrative wearable electronics. Composites Part B: Engineering, 2021, 210, 108674.	5.9	29
53	Bioinspired Hairy Skin Electronics for Detecting the Direction and Incident Angle of Airflow. ACS Applied Materials & Interfaces, 2019, 11, 13608-13615.	4.0	28
54	Analysis of Preload-Dependent Reversible Mechanical Interlocking Using Beetle-Inspired Wing Locking Device. Langmuir, 2012, 28, 2181-2186.	1.6	27

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55	Uniform pressure responses for nanomaterials-based biological on-skin flexible pressure sensor array. Carbon, 2021, 181, 169-176.	5.4	27
56	Snailâ€Inspired Dry Adhesive with Embedded Microstructures for Enhancement of Energy Dissipation. Advanced Materials Technologies, 2019, 4, 1900316.	3.0	26
57	A transparent, glue-free, skin-attachable graphene pressure sensor with micropillars for skin-elasticity measurement. Nanotechnology, 2019, 30, 335501.	1.3	26
58	Delivery of a spheroids-incorporated human dermal fibroblast sheet increases angiogenesis and M2 polarization for wound healing. Biomaterials, 2021, 275, 120954.	5.7	26
59	Vulpinic acid contributes to the cytotoxicity of Pulveroboletus ravenelii to human cancer cells by inducing apoptosis. RSC Advances, 2017, 7, 35297-35304.	1.7	23
60	Identification of Anti-Inflammatory Compounds from Hawaiian Noni (Morinda citrifolia L.) Fruit Juice. Molecules, 2020, 25, 4968.	1.7	23
61	Programmable Fabrication of Submicrometer Bent Pillar Structures Enabled by a Photoreconfigurable Azopolymer. ACS Applied Materials & Interfaces, 2020, 12, 5058-5064.	4.0	22
62	Beyond Human Hand: Shape-Adaptive and Reversible Magnetorheological Elastomer-Based Robot Gripper Skin. ACS Applied Materials & Interfaces, 2020, 12, 44147-44155.	4.0	21
63	Bioinspired Microsphere-Embedded Adhesive Architectures for an Electrothermally Actuating Transport Device of Dry/Wet Pliable Surfaces. ACS Applied Materials & Interfaces, 2021, 13, 6930-6940.	4.0	20
64	Electrostaticâ€“Mechanical Synergistic In Situ Multiscale Tissue Adhesion for Sustainable Residueâ€Free Bioelectronics Interfaces. Advanced Materials, 2022, 34, e2105338.	11.1	19
65	Microwave-reduced graphene oxide for efficient and stable hole extraction layers of polymer solar cells. Current Applied Physics, 2015, 15, 953-957.	1.1	18
66	Fabrication of aligned nanofibers by electric-field-controlled electrospinning: insulating-block method. Nanotechnology, 2016, 27, 435301.	1.3	18
67	Hydrophobicity Evolution on Rough Surfaces. Langmuir, 2020, 36, 689-696.	1.6	17
68	Robust Microzip Fastener: Repeatable Interlocking Using Polymeric Rectangular Parallelepiped Arrays. ACS Applied Materials & Interfaces, 2015, 7, 2561-2568.	4.0	15
69	7Î±,15-Dihydroxydehydroabietic acid from Pinus koraiensis inhibits the promotion of angiogenesis through downregulation of VEGF, p-Akt and p-ERK in HUVECs. Bioorganic and Medicinal Chemistry Letters, 2018, 28, 1084-1089.	1.0	15
70	Ultra-intimate hydrogel hybrid skin patch with asymmetric elastomeric spatula-like cylinders. Chemical Engineering Journal, 2022, 444, 136581.	6.6	14
71	Highly durable and unidirectionally stooped polymeric nanohairs for gecko-like dry adhesive. Nanotechnology, 2015, 26, 415301.	1.3	13
72	Conformably Skin-Adherent Piezoelectric Patch with Bioinspired Hierarchically Arrayed Microsuckers Enables Physical Energy Amplification. ACS Energy Letters, 2022, 7, 1820-1827.	8.8	13

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73	Color temperature control of quantum dot white light emitting diodes by grafting organic fluorescent molecules. Journal of Materials Chemistry C, 2014, 2, 9800-9804.	2.7	11
74	Methyl Acetate Synthesis by Esterification on the Modified Ferrierite: Correlation of Acid Sites Measured by Pyridine IR and NH₃-TPD for Steady-State Activity. Journal of Nanoscience and Nanotechnology, 2016, 16, 4626-4630.	0.9	11
75	Diketopiperazines from Costa Rican endolichenic fungus Colpoma sp. CR1465A. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 2438-2441.	1.0	10
76	Hepatoprotective Potency of Chrysophanol 8-O-Glucoside from Rheum palmatum L. against Hepatic Fibrosis via Regulation of the STAT3 Signaling Pathway. International Journal of Molecular Sciences, 2020, 21, 9044.	1.8	10
77	Ginkgobilol, a new diarylpentanoid and an osteogenic diarylpentanoid analog from Ginkgo biloba leaves. Bioorganic and Medicinal Chemistry Letters, 2020, 30, 127641.	1.0	10
78	Enhanced biocompatibility and multidirectional wet adhesion of insect-like synergistic wrinkled pillars with microcavities. Chemical Engineering Journal, 2022, 429, 132467.	6.6	10
79	Electrochemical Performances of Yttrium Doped Li₃V_{2â€“X}Y_X(PO₄)₃/C Cathode Material for Lithium Secondary Battery. Journal of Nanoscience and Nanotechnology, 2015, 15, 8042-8047.	0.9	9
80	A Hierarchically Tailored Wrinkled Three-Dimensional Foam for Enhanced Elastic Supercapacitor Electrodes. Nano Letters, 2021, 21, 7079-7085.	4.5	9
81	Wet soft bio-adhesion of insect-inspired polymeric oil-loadable perforated microcylinders. Chemical Engineering Journal, 2021, 423, 130194.	6.6	9
82	Colloidal Supraballs of Mesoporous Silica Nanoparticles as Bioresorbable Adhesives for Hydrogels. Chemistry of Materials, 2022, 34, 584-593.	3.2	9
83	Hexagonal deposits of colloidal particles. Physical Review E, 2019, 100, 022602.	0.8	8
84	Phallac acids A and B, new sesquiterpenes from the fruiting bodies of Phallus luteus. Journal of Antibiotics, 2020, 73, 729-732.	1.0	8
85	Withasomniferol D, a New Anti-Adipogenic Withanolide from the Roots of Ashwagandha (Withania) Tj ETQq1 1 0.784314 rgBT /Overlo	1.7	8
86	Estrogenic Activity of Mycoestrogen (3Î²,5Î±,22E)-Ergost-22-en-3-ol via Estrogen Receptor Î±-Dependent Signaling Pathways in MCF-7 Cells. Molecules, 2022, 27, 36.	1.7	7
87	Development of a stem cell spheroidâ€laden patch with high retention at skin wound site. Bioengineering and Translational Medicine, 2022, 7, .	3.9	7
88	Ulmusakidian, a new coumarin glycoside and antifungal phenolic compounds from the root bark of Ulmus davidiana var. japonica. Bioorganic and Medicinal Chemistry Letters, 2021, 36, 127828.	1.0	6
89	Theoretical analysis of flexible strain-gauge sensor with nanofibrillar mechanical interlocking. Current Applied Physics, 2015, 15, 274-278.	1.1	5
90	The Effects of Triterpenoid Saponins from the Seeds of Momordica cochinchinensis on Adipocyte Differentiation and Mature Adipocyte Inflammation. Plants, 2020, 9, 984.	1.6	5

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91	A Hierarchical 3D Graphene Nanocomposite Foam for Extremely Tough, Nonâ€Wettable, and Elastic Conductor. Advanced Materials Interfaces, 2020, 7, 2000354.	1.9	5
92	Anti-Adipogenic Polyacetylene Glycosides from the Florets of Safflower (Carthamus tinctorius). Biomedicines, 2021, 9, 91.	1.4	5
93	Guided extracellular matrix formation from fibroblast cells cultured on bio-inspired configurable multiscale substrata. Data in Brief, 2015, 5, 203-207.	0.5	4
94	Discovery of Dihydrophaseic Acid Glucosides from the Florets of Carthamus tinctorius. Plants, 2020, 9, 858.	1.6	4
95	Efficiency Enhancement of Polymer Solar Cells by Patterning Nanoscale Indium Tin Oxide Layer. Journal of Nanoscience and Nanotechnology, 2008, 8, 5279-5283.	0.9	3
96	Magnetically-Programmable Cylindrical Microparticles by Facile Reaping Method. Macromolecular Research, 2018, 26, 1108-1114.	1.0	3
97	Comparative Evaluation of Apoptosis Induction Using Needles, Bark, and Pollen Extracts and Essential Oils of Pinus eldarica in Lung Cancer Cells. Applied Sciences (Switzerland), 2021, 11, 5763.	1.3	3
98	Wearable skin sensor using programmable interlocking of nanofibers. , 2013, , .		2
99	Biomimetics: Conductive and Stretchable Adhesive Electronics with Miniaturized Octopus-Like Suckers against Dry/Wet Skin for Biosignal Monitoring (Adv. Funct. Mater. 52/2018). Advanced Functional Materials, 2018, 28, 1870372.	7.8	2
100	Wearable skin sensors for in vitro diagnostics. SPIE Newsroom, 0, , .	0.1	2
101	Ergostane-Type Steroids from Korean Wild Mushroom Xerula furfuracea that Control Adipocyte and Osteoblast Differentiation. Journal of Microbiology and Biotechnology, 2020, 30, 1769-1776.	0.9	2
102	Chemical Investigation of Tetradium ruticarpum Fruits and Their Antibacterial Activity against Helicobacter pylori. ACS Omega, 2022, 7, 23736-23743.	1.6	2
103	Kinetic Modeling of Temperature Dependence of TiCl4 and NH3 Surface Reaction in Trap Systems for CVD Reactors. Industrial & Engineering Chemistry Research, 2009, 48, 1353-1356.	1.8	0
104	Biomimetic approaches for engineered organ chips and skin electronics for in vitro diagnostics. , 2012, , .		0
105	Graphene: Microtopographyâ€Guided Conductive Patterns of Liquidâ€Driven Graphene Nanoplatelet Networks for Stretchable and Skinâ€Conformal Sensor Array (Adv. Mater. 21/2017). Advanced Materials, 2017, 29, .	11.1	0
106	Electronic Skins: Hybrid Architectures of Heterogeneous Carbon Nanotube Composite Microstructures Enable Multiaxial Strain Perception with High Sensitivity and Ultrabroad Sensing Range (Small 52/2018). Small, 2018, 14, 1870253.	5.2	0
107	Spray Coating Technologies: Conductive Hierarchical Hairy Fibers for Highly Sensitive, Stretchable, and Waterâ€Resistant Multimodal Gestureâ€Distinguishable Sensor, VR Applications (Adv. Funct. Mater.) Tj ETQq1 1 0.784314 rgBT /O		
108	First Chemical Investigation of Korean Wild Mushroom, Amanita hemibapha subsp. javanica and the Identification of Anti-Helicobacter pylori Compounds. Pharmaceuticals, 2022, 15, 152.	1.7	0

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109	Electrostaticâ€“Mechanical Synergistic In Situ Multiscale Tissue Adhesion for Sustainable Residueâ€Free Bioelectronics Interfaces (Adv. Mater. 5/2022). Advanced Materials, 2022, 34, .	11.1	0
110	Tough Carbon Nanotubeâ€Implanted Bioinspired Threeâ€Dimensional Electrical Adhesive for Isotropically Stretchable Waterâ€Repellent Bioelectronics (Adv. Funct. Mater. 8/2022). Advanced Functional Materials, 2022, 32, .	7.8	0
111	Bioinspired Adhesives for Wearable Electronics. , 2022, , 347-376.		0