

CITATION REPORT

List of articles citing

Graphene kirigami

DOI: 10.1038/nature14588

Nature, 2015, 524, 204-7.

Source: <https://exaly.com/paper-pdf/61872250/citation-report.pdf>

Version: 2024-04-27

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
638	A Paper-Based Pop-up Electrochemical Device for Analysis of Beta-Hydroxybutyrate.		
637	Self-Folding Hybrid Graphene Skin for 3D Biosensing.		
636	Bending Rules in Graphene Kirigami. 2015 , 115, 195501		22
635	Design of Hierarchically Cut Hinges for Highly Stretchable and Reconfigurable Metamaterials with Enhanced Strength. 2015 , 27, 7181-90		119
634	Nanostructuring graphene by dense electronic excitation. 2015 , 26, 465302		31
633	Fabrication of hybrid graphene oxide/polyelectrolyte capsules by means of layer-by-layer assembly on erythrocyte cell templates. 2015 , 6, 2310-8		7
632	A Perspective on the Revival of Structural (In)Stability With Novel Opportunities for Function: From Buckliphobia to Buckliphilia. 2015 , 82,		103
631	Fracture of graphene: a review. 2015 , 196, 1-31		108
630	Strong Resistance to Bending Observed for Nanoparticle Membranes. 2015 , 15, 6732-7		16
629	Two-dimensional membrane as elastic shell with proof on the folds revealed by three-dimensional atomic mapping. 2015 , 6, 8935		48
628	The effect of intrinsic crumpling on the mechanics of free-standing graphene. 2015 , 6, 8789		177
627	Controlled graphene oxide assembly on silver nanocube monolayers for SERS detection: dependence on nanocube packing procedure. 2016 , 7, 9-21		11
626	Nanoscale Mechanics of Graphene and Graphene Oxide in Composites: A Scientific and Technological Perspective. 2016 , 28, 6232-8		103
625	Initial rigid response and softening transition of highly stretchable kirigami sheet materials. 2016 , 6, 24758		79
624	Magnetic-field-free thermoelectronic power conversion based on graphene and related two-dimensional materials. 2016 , 119, 244507		13
623	Soft mobile robots driven by foldable dielectric elastomer actuators. 2016 , 120, 084901		33
622	Auxetic nanomaterials: Recent progress and future development. 2016 , 3, 041101		71

621	Detecting the Biopolymer Behavior of Graphene Nanoribbons in Aqueous Solution. 2016 , 6, 31174	5
620	Liquid Metals for Soft and Stretchable Electronics. 2016 , 3-30	11
619	Study on the separation performance of the multi-channel reduced graphene oxide membranes. 2016 , 384, 279-286	36
618	An origami-inspired ultrastretchable bioprobe film device. 2016 ,	11
617	Architecture engineering of supercapacitor electrode materials. 2016 , 09, 1640001	18
616	Kirigami Nanocomposites as Wide-Angle Diffraction Gratings. 2016 , 10, 6156-62	57
615	Nanodroplets Impacting on Graphene. 2016 , 1, 675-680	3
614	A three-dimensionally stretchable high performance supercapacitor. 2016 , 4, 14968-14973	38
613	Bilayered graphene as a platform of nanostructures with folded edge holes. 2016 , 18, 27432-27441	17
612	Bistable auxetic mechanical metamaterials inspired by ancient geometric motifs. 2016 , 9, 291-296	182
611	Stretchable Organic Semiconductor Devices. 2016 , 28, 9243-9265	139
610	Quantum elasticity of graphene: Thermal expansion coefficient and specific heat. 2016 , 94,	37
609	Superflexibility of graphene oxide. 2016 , 113, 11088-11093	90
608	Molecular dynamics simulations of the morphology transformations in unzipped carbon nanotubes. 2016 , 658, 97-102	
607	Response of thermalized ribbons to pulling and bending. 2016 , 93,	62
606	Graphene kirigami as a platform for stretchable and tunable quantum dot arrays. 2016 , 93,	19
605	Self-assembly of graphene ribbons by spontaneous self-tearing and peeling from a substrate. <i>Nature</i> , 2016 , 535, 271-5	50.4 115
604	Scaling Behavior and Strain Dependence of In-Plane Elastic Properties of Graphene. 2016 , 116, 015901	87

603	Effects of size and surface on the auxetic behaviour of monolayer graphene kirigami. 2016 , 6, 35157	23
602	All-in-One Shape-Adaptive Self-Charging Power Package for Wearable Electronics. 2016 , 10, 10580-10588	230
601	Additive lattice kirigami. 2016 , 2, e1601258	39
600	Predicting origami-inspired programmable self-folding of hydrogel trilayers. 2016 , 25, 11LT02	19
599	A Paper-Based "Pop-up" Electrochemical Device for Analysis of Beta-Hydroxybutyrate. 2016 , 88, 6326-33	120
598	Nanomechanical z-shape folding of graphene on flat substrate. 2016 , 9, 84-90	12
597	Thermal conductivity of graphene kirigami: Ultralow and strain robustness. 2016 , 104, 203-213	49
596	Programming curvature using origami tessellations. 2016 , 15, 583-8	248
595	Novel effects of strains in graphene and other two dimensional materials. 2016 , 617, 1-54	239
594	Science and Culture: Kirigami and technology cut a fine figure, together. 2016 , 113, 240-1	16
593	Strain engineering of graphene: a review. 2016 , 8, 3207-17	327
592	Highly stretchable MoS ₂ kirigami. 2016 , 8, 458-63	54
591	2D or not 2D? Shape-programming polymer sheets. 2016 , 52, 79-106	242
590	Unusual thermal conductivity behavior of serpentine graphene nanoribbons under tensile strain. 2016 , 96, 513-521	12
589	Geometrical distortion leads to Griffith strength reduction in graphene membranes. 2017 , 14, 31-37	16
588	Cutting monolayer graphene into flexible spin filters. 2017 , 115, 43-49	4
587	Serigraphy-Guided Reduction of Graphene Oxide Biopapers for Wearable Sensory Electronics. 2017 , 27, 1604802	37
586	Statistical Mechanics of Thin Spherical Shells. 2017 , 7,	16

585	A review on mechanics and mechanical properties of 2D materials Graphene and beyond. 2017 , 13, 42-77	581
584	Negative Poisson's ratio in graphene oxide. 2017 , 9, 4007-4012	38
583	From Flatland to Spaceland: Higher Dimensional Patterning with Two-Dimensional Materials. 2017 , 29, 1605096	59
582	Buckling-Induced Kirigami. 2017 , 118, 084301	134
581	A kirigami-based Parylene C stretch sensor. 2017 ,	7
580	Thin film partially attached onto elastomer substrate for three-dimensional microstructure. 2017 ,	
579	Interface thermal conductance of van der Waals monolayers on amorphous substrates. 2017 , 28, 135402	33
578	Sequential self-folding of polymer sheets. 2017 , 3, e1602417	183
577	Single-Layer Graphene Membranes Withstand Ultrahigh Applied Pressure. 2017 , 17, 3081-3088	54
576	Patterning Curved Three-Dimensional Structures With Programmable Kirigami Designs. 2017 , 84,	24
575	Design and application of 'J-shaped' stress-strain behavior in stretchable electronics: a review. 2017 , 17, 1689-1704	99
574	Carbon nanotube stabilized single layer graphene cantilevers. 2017 , 110, 151901	4
573	Stretchable and Soft Electronics using Liquid Metals. 2017 , 29, 1606425	818
572	Tailoring Auxetic and Contractile Graphene to Achieve Interface Structures with Fully Mechanically Controllable Thermal Transports. 2017 , 4, 1700278	7
571	Micro arch-bridge structured surface fabricated by kirigami-on-elastomer approach for liquid-dependent iso/anisotropic wetting. 2017 , 110, 161602	2
570	A Kirigami shape memory polymer honeycomb concept for deployment. 2017 , 26, 05LT03	29
569	Atomistic modeling of out-of-plane deformation of a propagating Griffith crack in graphene. 2017 , 228, 3063-3075	18
568	Stretchable electronic devices using graphene and its hybrid nanostructures. 2017 , 3, 71-91	26

567	AUXHEX [A Kirigami inspired zero Poisson's ratio cellular structure. 2017 , 176, 433-441	27
566	Electronic and optical properties of strained graphene and other strained 2D materials: a review. 2017 , 80, 096501	252
565	Non-Hookean statistical mechanics of clamped graphene ribbons. 2017 , 95,	40
564	Printing, folding and assembly methods for forming 3D mesostructures in advanced materials. 2017 , 2,	372
563	Super stretchable hexagonal boron nitride Kirigami. 2017 , 632, 35-43	15
562	Carbon nanotubes kirigami mechanical metamaterials. 2017 , 19, 11032-11042	12
561	Programmable Kiri-Kirigami Metamaterials. 2017 , 29, 1604262	157
560	Nonlinear Frameworks for Reversible and Pluripotent Wetting on Topographic Surfaces. 2017 , 29, 1605078	15
559	Pauli Repulsion-Induced Expansion and Electromechanical Properties of Graphene. 2017 , 17, 236-241	12
558	Exploiting Microstructural Instabilities in Solids and Structures: From Metamaterials to Structural Transitions. 2017 , 69,	106
557	Ultrathin thermoresponsive self-folding 3D graphene. 2017 , 3, e1701084	110
556	Highly Deformable Origami Paper Photodetector Arrays. 2017 , 11, 10230-10235	65
555	Flexible mechanical metamaterials. 2017 , 2,	551
554	Nonlinear Mechanics of Interlocking Cantilevers. 2017 , 84,	1
553	Stretchable conductors by kirigami patterning of aramid-silver nanocomposites with zero conductance gradient. 2017 , 111, 161901	32
552	3D-Printed Self-Folding Electronics. 2017 , 9, 32290-32298	69
551	Kirigami actuators. 2017 , 13, 9087-9092	63
550	Optical Forging of Graphene into Three-Dimensional Shapes. 2017 , 17, 6469-6474	23

549	Ultrasensitive and stretchable graphene electrodes. 2017 , 3, e1700159	168
548	A patterned single layer graphene resistance temperature sensor. 2017 , 7, 8811	75
547	Thermal and electronic transport characteristics of highly stretchable graphene kirigami. 2017 , 9, 16329-16341	19
546	Hydrodynamic charge and heat transport on inhomogeneous curved spaces. 2017 , 96,	9
545	Nanostructures in suspended mono- and bilayer epitaxial graphene. 2017 , 125, 162-167	9
544	Ultrastretchable Analog/Digital Signal Transmission Line with Carbon Nanotube Sheets. 2017 , 9, 26286-26292	9
543	Mechanical properties of graphene and graphene-based nanocomposites. 2017 , 90, 75-127	109
542	Origami and Kirigami Nanocomposites. 2017 , 11, 7587-7599	139
541	From mesoscale to nanoscale mechanics in single-wall carbon nanotubes. 2017 , 123, 145-150	30
540	Mechanics of thermally fluctuating membranes. 2017 , 1,	26
539	In Situ Transmission Electron Microscopy Characterization and Manipulation of Two-Dimensional Layered Materials beyond Graphene. 2017 , 13, 1604259	51
538	Stiffening thermal membranes by cutting. 2017 , 96, 013002	4
537	Localization in Thin Metallic Annuli due to Diametrical Extension. 2017 , 55, 3980-3989	
536	Large stretchability and failure mechanism of graphene kirigami under tension. 2017 , 13, 8930-8939	10
535	Reversible Self-Assembly of 3D Architectures Actuated by Responsive Polymers. 2017 , 9, 41505-41511	23
534	Reconfigurable systems for multifunctional electronics. 2017 , 1,	22
533	Thermal crumpling of perforated two-dimensional sheets. 2017 , 8, 1381	16
532	Graphene: Fundamental research and potential applications. 2017 , 4, 20-32	86

531	A flexible graphene terahertz detector. 2017 , 111, 021102	44
530	Thermal stiffening of clamped elastic ribbons. 2017 , 96,	13
529	Hidden Area and Mechanical Nonlinearities in Freestanding Graphene. 2017 , 118, 266101	48
528	AJ-integral-based arc-length solver for brittle and ductile crack propagation in finite deformation-finite strain hyperelastic solids with an application to graphene kirigami. 2017 , 315, 713-743	8
527	Dissolvable tattoo sensors: from science fiction to a viable technology. 2017 , 92, 013001	16
526	Anomalous Hooke's law in disordered graphene. 2017 , 4, 011003	18
525	Origami and kirigami inspired self-folding for programming three-dimensional shape shifting of polymer sheets with light. 2017 , 11, 111-120	68
524	Development of electrothermal lens actuator for endoscopic blood flow sensor. 2017 ,	
523	Mechanical properties of fullerite of various composition. 2017 , 938, 012071	2
522	Naturally-derived biopolymer nanocomposites: Interfacial design, properties and emerging applications. 2018 , 125, 1-41	130
521	Kirigami skins make a simple soft actuator crawl. 2018 , 3,	248
520	Implantable Flexible Sensors for Neural Recordings. 2018 , 381-410	
519	Strain Modulation of Graphene by Nanoscale Substrate Curvatures: A Molecular View. 2018 , 18, 2098-2104	42
518	Tunable Mechanical Metamaterials through Hybrid Kirigami Structures. 2018 , 8, 3378	49
517	Stretchable Kirigami Polyvinylidene Difluoride Thin Films for Energy Harvesting: Design, Analysis, and Performance. 2018 , 9,	30
516	Piezoelectric polymer thin films with architected cuts. 2018 , 33, 330-342	8
515	Kirigami enhances film adhesion. 2018 , 14, 2515-2525	46
514	Stress-controlled Poisson ratio of a crystalline membrane: Application to graphene. 2018 , 97,	31

513	Apparent Softening of Wet Graphene Membranes on a Microfluidic Platform. 2018 , 12, 4312-4320	11
512	Materials-by-Design: Computation, Synthesis, and Characterization from Atoms to Structures. 2018 , 93,	23
511	Kirigami-Inspired Nanoconfined Polymer Conducting Nanosheets with 2000% Stretchability. 2018 , 30, e1706390	67
510	Two-dimensional materials in functional three-dimensional architectures with applications in photodetection and imaging. 2018 , 9, 1417	136
509	Nature-inspired smart solar concentrators by 4D printing. 2018 , 122, 35-44	44
508	Developing an advanced daylight model for building energy tool to simulate dynamic shading device. 2018 , 163, 140-149	23
507	Bending energy of 2D materials: graphene, MoS and imogolite.. 2018 , 8, 4577-4583	19
506	Ultrathin Shape Change Smart Materials. 2018 , 51, 436-444	35
505	Measuring and Manipulating the Adhesion of Graphene. 2018 , 18, 449-454	20
504	Fundamental Properties of Graphene. 2018 , 73-102	3
503	Assembly and Self-Assembly of Nanomembrane Materials-From 2D to 3D. 2018 , 14, e1703665	40
502	Universal deformation pathways and flexural hardening of nanoscale 2D-material standing folds. 2018 , 29, 095704	6
501	Deformable Organic Nanowire Field-Effect Transistors. 2018 , 30, 1704401	64
500	Micro- and nano-mechanics in China: A brief review of recent progress and perspectives. 2018 , 61, 1	23
499	Self-folding mechanics of graphene tearing and peeling from a substrate. 2018 , 13, 1	11
498	Mechanical exfoliation of two-dimensional materials. 2018 , 115, 248-262	78
497	Harnessing programmed holes in hydrogel bilayers to design soft self-folding machines. 2018 , 140, 271-278	17
496	Intrinsic Properties of Suspended MoS on SiO/Si Pillar Arrays for Nanomechanics and Optics. 2018 , 12, 3235-3242	36

495	Abnormal linear elasticity in polycrystalline phosphorene. 2018 , 20, 8668-8675	6
494	Highly stretchable kirigami metallic glass structures with ultra-small strain energy loss. 2018 , 142, 83-87	24
493	Architecting Graphene Oxide Rolled-Up Micromotors: A Simple Paper-Based Manufacturing Technology. 2018 , 14, 1702746	21
492	Intrinsic rippling enhances static non-reciprocity in a graphene metamaterial. 2018 , 10, 1207-1214	2
491	Ultrastretchable Kirigami Bioprobes. 2018 , 7, 1701100	75
490	From flat sheets to curved geometries: Origami and kirigami approaches. 2018 , 21, 241-264	166
489	Flexible Graphene Solution-Gated Field-Effect Transistors: Efficient Transducers for Micro-Electrocorticography. 2018 , 28, 1703976	67
488	Facilitated Carrier Collection of Surface-Textured Hybrid PEDOT:PSS-Silicon Solar Cells Using Kirigami Graphene. 2018 ,	1
487	Materials and Structures toward Soft Electronics. 2018 , 30, e1801368	298
486	Manipulating three-dimensional bending to extraordinarily stiffen two-dimensional membranes by interference colors. 2018 , 10, 21782-21789	4
485	Shape-morphing architected sheets with non-periodic cut patterns. 2018 , 14, 9744-9749	49
484	Nanomechanical Strain Concentration on a Two-Dimensional Nanobridge within a Large Suspended Bilayer Graphene for Molecular Mass Detection. 2018 , 1, 6752-6759	2
483	. 2018 , 27, 1082-1088	14
482	Flexural phonons in supported graphene: from pinning to localization. 2018 , 8, 16256	3
481	van der Waals Graphene Kirigami Heterostructure for Strain-Controlled Thermal Transparency. 2018 , 12, 11254-11262	13
480	Mechanically Assembled, Three-Dimensional Hierarchical Structures of Cellular Graphene with Programmed Geometries and Outstanding Electromechanical Properties. 2018 , 12, 12456-12463	37
479	Recent Advances in Smart Wearable Sensing Systems. 2018 , 3, 1800444	78
478	Estimation of the effective properties of two-dimensional cellular materials: a review. 2018 , 8, 209-230	12

477	Accelerated Search and Design of Stretchable Graphene Kirigami Using Machine Learning. 2018 , 121, 255304	66
476	Kirigami-inspired, highly stretchable micro-supercapacitor patches fabricated by laser conversion and cutting. 2018 , 4, 36	42
475	Depinning Dynamics of Crack Fronts. 2018 , 121, 235501	9
474	Mechanics and Electromechanics of Two-Dimensional Atomic Membranes. 2018 , 1-37	
473	Multi-step self-guided pathways for shape-changing metamaterials. <i>Nature</i> , 2018 , 561, 512-515	50.4 79
472	Fabrication of Three-Dimensional Graphene-Based Polyhedrons via Origami-Like Self-Folding. 2018 ,	
471	Focused-ion-beam-based nano-kirigami: from art to photonics. 2018 , 7, 1637-1650	34
470	Device Configurations and Future Prospects of Flexible/Stretchable Lithium-Ion Batteries. 2018 , 28, 1805596	88
469	Graphene Nanoribbons with Atomically Sharp Edges Produced by AFM Induced Self-Folding. 2018 , 14, e1803386	10
468	Kirigami-Inspired Deformable 3D Structures Conformable to Curved Biological Surface. 2018 , 5, 1801070	33
467	The Energy Absorption Behavior of Cruciforms Designed by Kirigami Approach. 2018 , 85,	7
466	Shape transformable bifurcated stents. 2018 , 8, 13911	14
465	Pop-Up Conducting Large-Area Biographene Kirigami. 2018 , 12, 9714-9720	22
464	Tailoring the mechanical properties of 2D materials and heterostructures. 2018 , 5, 032005	76
463	Solvent-assisted programming of flat polymer sheets into reconfigurable and self-healing 3D structures. 2018 , 9, 1906	70
462	Bending Rigidity of 2D Silica. 2018 , 120, 226101	11
461	Synthesizing molecular fishing nets. 2018 , 71, 40-47	49
460	Size- and temperature-dependent bending rigidity of graphene using modal analysis. 2018 , 139, 334-341	27

459	Universal folding pathways of polyhedron nets. 2018 , 115, E6690-E6696	9
458	Kirigami stretchable strain sensors with enhanced piezoelectricity induced by topological electrodes. 2018 , 112, 251904	36
457	Chemically Derived Kirigami of WSe. 2018 , 140, 10980-10987	23
456	Electronic structure theory of strained two-dimensional materials with hexagonal symmetry. 2018 , 98,	37
455	Directional sensing based on flexible aligned carbon nanotube film nanocomposites. 2018 , 10, 14938-14946	31
454	Mechanical behaviors of T-carbon: A molecular dynamics study. 2018 , 138, 357-362	20
453	Imperceptible electrooculography graphene sensor system for human-robot interface. 2018 , 2,	72
452	Nano-kirigami with giant optical chirality. 2018 , 4, eaat4436	131
451	Hollow-Out Patterning Ultrathin Acoustic Metasurfaces for Multifunctionalities Using Soft fiber/Rigid Bead Networks. 2018 , 28, 1801127	35
450	Assembly of Advanced Materials into 3D Functional Structures by Methods Inspired by Origami and Kirigami: A Review. 2018 , 5, 1800284	129
449	Origami and 4D printing of elastomer-derived ceramic structures. 2018 , 4, eaat0641	97
448	Kirigami-Inspired Highly Stretchable Nanoscale Devices Using Multidimensional Deformation of Monolayer MoS ₂ . 2018 , 30, 6063-6070	49
447	Stretchable micro-doughnuts Kirigami bioprobe. 2018 ,	1
446	Assessment of the mechanical properties of monolayer graphene using the energy and strain-fluctuation methods.. 2018 , 8, 27283-27292	23
445	Defect-Driven Shape Instabilities of Bundles. 2018 , 8,	3
444	Structural Control of Graphene-Based Materials for Unprecedented Performance. 2018 , 12, 5085-5092	35
443	Biomechano-Interactive Materials and Interfaces. 2018 , 30, e1800572	75
442	Fabricating 3D Structures by Combining 2D Printing and Relaxation of Strain. 2019 , 4, 1800299	26

441	Mechanoresponsive Polymerized Liquid Metal Networks. 2019 , 31, e1903864	85
440	Monolayer Graphene Coating of Intracortical Probes for Long-Lasting Neural Activity Monitoring. 2019 , 8, e1801331	16
439	Programming shape using kirigami tessellations. 2019 , 18, 999-1004	100
438	Capillary Origami with Atomically Thin Membranes. 2019 , 19, 6221-6226	21
437	Stretchable and Transparent Kirigami Conductor of Nanowire Percolation Network for Electronic Skin Applications. 2019 , 19, 6087-6096	136
436	Symmetry breaking and lattice kirigami: Finite temperature effects. 2019 , 99,	9
435	Recent progress in stretchable organic field-effect transistors. 2019 , 62, 1255-1276	11
434	Highly stable kirigami-structured stretchable strain sensors for perdurable wearable electronics. 2019 , 7, 9609-9617	67
433	Laser-Processed Nature-Inspired Deformable Structures for Breathable and Reusable Electrophysiological Sensors toward Controllable Home Electronic Appliances and Psychophysiological Stress Monitoring. 2019 , 11, 28387-28396	27
432	A Hexanuclear Niobium Cluster Compound Crystallizing as Macroscopic Tubes. 2019 , 25, 13905-13910	1
431	Carbon Nanomaterials and Two-Dimensional Transition Metal Dichalcogenides (2D TMDCs). 2019 , 165-245	2
430	Harnessing the Day-Night Rhythm of Humidity and Sunlight into Mechanical Work Using Recyclable and Reprogrammable Soft Actuators. 2019 , 11, 29290-29297	18
429	Snap-through and stiffness adaptation of a multi-stable Kirigami composite module. 2019 , 182, 107750	9
428	Geometrically Enabled Soft Electroactuators via Laser Cutting. 2019 , 21, 1900664	2
427	Surface Micro-/Nanotextured Hybrid PEDOT:PSS-Silicon Photovoltaic Cells Employing Kirigami Graphene. 2019 , 11, 29901-29909	16
426	Paper-Cut Flexible Multifunctional Electronics Using MoS Nanosheet. 2019 , 9,	10
425	Giant Poisson's Effect for Wrinkle-Free Stretchable Transparent Electrodes. 2019 , 31, e1902955	25
424	Intrinsic Low Thermal Conductivity and Phonon Renormalization Due to Strong Anharmonicity of Single-Crystal Tin Selenide. 2019 , 19, 4941-4948	22

423	Terahertz circular dichroism spectroscopy of biomaterials enabled by kirigami polarization modulators. 2019 , 18, 820-826	63
422	Structural Evolutions of Vertically Aligned Two-Dimensional MoS ₂ Layers Revealed by in Situ Heating Transmission Electron Microscopy. 2019 , 123, 27843-27853	7
421	Smart Windows: Electro-, Thermo-, Mechano-, Photochromics, and Beyond. 2019 , 9, 1902066	216
420	Topological Design of Graphene. 2019 , 1-44	2
419	Tunable In Situ Stress and Spontaneous Microwrinkling of Multiscale Heterostructures. 2019 , 123, 26041-26046	
418	Devices for promising applications. 2019 , 247-314	
417	. 2019 ,	5
416	Design and applications of stretchable and self-healable conductors for soft electronics. 2019 , 6, 25	51
415	Flexible and Stretchable Devices from 2D Nanomaterials. 2019 , 149-164	
414	Folding pathways to crumpling in thermalized elastic frames. 2019 , 100, 042112	3
413	Kirigami-Liquid Structure for Electroluminescent Array Attachable onto Three-Dimensional Surfaces. 2019 ,	0
412	Reversible MoS ₂ Origami with Spatially Resolved and Reconfigurable Photosensitivity. 2019 , 19, 7941-7949	33
411	The MoSeS dynamic omnigami paradigm for smart shape and composition programmable 2D materials. 2019 , 10, 5210	10
410	Developable Rotationally Symmetric Kirigami-Based Structures as Sensor Platforms. 2019 , 4, 1900563	10
409	Pulsed Laser-Assisted Helium Ion Nanomachining of Monolayer Graphene-Direct-Write Kirigami Patterns. 2019 , 9,	5
408	3D Mapping of the Structural Transitions in Wrinkled 2D Membranes: Implications for Reconfigurable Electronics, Memristors, and Bioelectronic Interfaces. 2019 , 2, 5779-5786	2
407	Suspended Graphene Membranes with Attached Silicon Proof Masses as Piezoresistive Nanoelectromechanical Systems Accelerometers. 2019 , 19, 6788-6799	18
406	Graphene ribbons with suspended masses as transducers in ultra-small nanoelectromechanical accelerometers. 2019 , 2, 394-404	38

405	Bending of Multilayer van der Waals Materials. 2019 , 123, 116101	76
404	Tuning the graphene mechanical anisotropy via defect engineering. 2019 , 155, 697-705	19
403	Unusual Sonochemical Assembly between Carbon Allotropes for High Strain-Tolerant Conductive Nanocomposites. 2019 , 13, 12062-12069	
402	3D Printer-Based Encapsulated Origami Electronics for Extreme System Stretchability and High Areal Coverage. 2019 , 13, 12500-12510	15
401	Proactively modulating mechanical behaviors of materials at multiscale for mechano-adaptable devices. 2019 , 48, 1434-1447	20
400	A Review on Hierarchical Origami and Kirigami Structure for Engineering Applications. 2019 , 6, 147-161	31
399	Harnessing uniaxial tension to tune Poisson's ratio and wave propagation in soft porous phononic crystals: an experimental study. 2019 , 15, 2921-2927	30
398	Kirigami Mechanics as Stress Relief by Elastic Charges. 2019 , 122, 048001	18
397	Strained Bubbles in van der Waals Heterostructures as Local Emitters of Photoluminescence with Adjustable Wavelength. 2019 , 6, 516-524	59
396	Nonlinear mechanics of thin frames. 2019 , 99, 013002	12
395	Highly stretchable graphene nanoribbon springs by programmable nanowire lithography. 2019 , 3,	13
394	Multifunctional Two-Dimensional PtSe-Layer Kirigami Conductors with 2000% Stretchability and Metallic-to-Semiconducting Tunability. 2019 , 19, 7598-7607	41
393	Nanoindentation on Monolayer MoS Kirigami. 2019 , 4, 9952-9956	4
392	Buffering by buckling as a route for elastic deformation. 2019 , 1, 425-436	20
391	Atomic Layer Deposition for Membranes, Metamaterials, and Mechanisms. 2019 , 31, e1901944	15
390	Mechanical anisotropy of two-dimensional metamaterials: a computational study. 2019 , 1, 2891-2900	3
389	Forming Weakly Interacting Multilayers of Graphene Using Atomic Force Microscope Tip Scanning and Evidence of Competition between Inner and Outer Raman Scattering Processes Piloted by Structural Defects. 2019 , 10, 3571-3579	3
388	Dynamic structure-properties characterization and manipulation in advanced nanodevices. 2019 , 7, 100042	12

387	Effects of welding on energy absorption of kirigami cruciform under axial crushing. 2019 , 142, 297-310	1
386	Soft Three-Dimensional Robots with Hard Two-Dimensional Materials. 2019 , 13, 4883-4892	36
385	Effect of Angle, Temperature and Vacancy Defects on Mechanical Properties of PSI-Graphene. 2019 , 9, 238	8
384	Assembly and applications of 3D conformal electronics on curvilinear surfaces. 2019 , 6, 642-683	90
383	Energy absorption of thin-walled square tubes designed by kirigami approach. 2019 , 157-158, 150-164	25
382	Strain- and Strain-Rate-Invariant Conductance in a Stretchable and Compressible 3D Conducting Polymer Foam. 2019 , 1, 205-218	33
381	Materials and Design Strategies of Stretchable Electrodes for Electronic Skin and its Applications. 2019 , 107, 2185-2197	41
380	Scalable Synthesis of Ultrathin Mn ₃ N ₂ Exhibiting Room-Temperature Antiferromagnetism. 2019 , 29, 1809001	37
379	Nanoporous graphene: A 2D semiconductor with anisotropic mechanical, optical and thermal conduction properties. 2019 , 147, 377-384	33
378	Elasticity and stability of shape-shifting structures. 2019 , 40, 118-137	48
377	Programmable super elastic kirigami metallic glasses. 2019 , 169, 107687	13
376	New frontiers for the materials genome initiative. 2019 , 5,	171
375	Propagation of pop ups in kirigami shells. 2019 , 116, 8200-8205	51
374	Programmable three-dimensional advanced materials based on nanostructures as building blocks for flexible sensors. 2019 , 26, 176-198	44
373	Lateral heterostructures and one-dimensional interfaces in 2D transition metal dichalcogenides. 2019 , 31, 213001	17
372	Stretchable Piezoelectric Sensing Systems for Self-Powered and Wireless Health Monitoring. 2019 , 4, 1900100	50
371	Mechanical Metamaterials and Their Engineering Applications. 2019 , 21, 1800864	234
370	Nanomechanical Unfolding of Self-Folded Graphene on Flat Substrate. 2019 , 59, 381-386	3

369	Adaptive Thermochromic Windows from Active Plasmonic Elastomers. 2019 , 3, 858-871	76
368	Spreading patterns of high velocity nanodroplets impacting on suspended graphene. 2019 , 292, 110429	3
367	Additive manufacturing of patterned 2D semiconductor through recyclable masked growth. 2019 , 116, 3437-3442	25
366	Sensing Ability and Formation Criterion of Fluid Supported Lipid Bilayer Coated Graphene Field-Effect Transistors. 2019 , 4, 892-899	4
365	Ripples and Wrinkles in Graphene: Beyond Continuum Mechanics. 2019 , 229-252	2
364	Wrapping Liquids, Solids, and Gases in Thin Sheets. 2019 , 10, 431-450	25
363	Encoding kirigami bi-materials to morph on target in response to temperature. 2019 , 9, 19499	11
362	Mechanical properties of monolayer ternary transitional metal dichalogenides MoS ₂ xTe ₂ (1-x): A molecular dynamics study. 2019 , 126, 215105	7
361	Programmable active kirigami metasheets with more freedom of actuation. 2019 ,	52
360	Elastic kirigami patch for electromyographic analysis of the palm muscle during baseball pitching. 2019 , 11,	13
359	Strain-controlled Graphene-Polymer Angular Actuator. 2019 , 4, 2161-2167	1
358	Reconfigurable electronic devices enabled by laser-sintered liquid metal nanoparticles. 2019 , 4, 015004	19
357	Flexible Electronics: Stretchable Electrodes and Their Future. 2019 , 29, 1805924	305
356	Self-Folding Hybrid Graphene Skin for 3D Biosensing. 2019 , 19, 1409-1417	36
355	Adhesion of Partially and Fully Collapsed Nanotubes. 2019 , 86,	5
354	Monolayer MoS ₂ Strained to 1.3% With a Microelectromechanical System. 2019 , 28, 254-263	25
353	Flexible and stretchable metal oxide gas sensors for healthcare. 2019 , 62, 209-223	27
352	Graphene kirigami as reinforcement and interfacial bonding effect for toughness and strength of silicon-based nanocomposites. 2019 , 159, 306-315	3

351	Elastomer-Free, Stretchable, and Conformable Silver Nanowire Conductors Enabled by Three-Dimensional Buckled Microstructures. 2019 , 11, 6541-6549	22
350	Quasi-static experimental path-following. 2019 ,	2
349	Materials design for robotic platforms enabling unique mechanisms of projectile protection. 2019 , 493-521	
348	Continuum Mechanics and Its Practical Applications at the Level of Scaling Laws. 2019 , 111-118	
347	Enhancing the adhesion of graphene to polymer substrates by controlled defect formation. 2019 , 30, 015704	10
346	Modeling and Kinematic Path Selection of Retractable Kirigami Roof Structures. 2019 , 34, 352-363	28
345	Rubbery Electronics Fully Made of Stretchable Elastomeric Electronic Materials. 2020 , 32, e1902417	58
344	Geometry-dependent stretchability and stiffness of ribbon kirigami based on large curvature curved beam model. 2020 , 182-183, 236-253	3
343	Mechanically-Guided Structural Designs in Stretchable Inorganic Electronics. 2020 , 32, e1902254	104
342	Kirigami-inspired strain-insensitive sensors based on atomically-thin materials. 2020 , 34, 58-65	33
341	Ultrasoft slip-mediated bending in few-layer graphene. 2020 , 19, 305-309	85
340	Thermal conductivity and thermal rectification of nanoporous graphene: A molecular dynamics simulation. 2020 , 146, 118884	33
339	Exploration and mechanism analysis: The maximum ultraviolet luminescence limits of ZnO/few-layer graphene composite films. 2020 , 503, 144169	3
338	Selective stamping of laser scribed rGO nanofilms: from sensing to multiple applications. 2020 , 7, 024006	5
337	Reviews of wearable healthcare systems: Materials, devices and system integration. 2020 , 140, 100523	107
336	Nanofabrication approaches for functional three-dimensional architectures. 2020 , 30, 100825	20
335	. 2020 , 67, 8808-8816	21
334	Substrate-directed synthesis of MoS nanocrystals with tunable dimensionality and optical properties. 2020 , 15, 29-34	55

333	Quantifying the rigidity of 2D carbides (MXenes). 2020 , 22, 2115-2121	15
332	2D semiconducting materials for electronic and optoelectronic applications: potential and challenge. 2020 , 7, 022003	73
331	Mechanical behaviour of kirigami graphene under shear loading. 2020 , 173, 109462	4
330	Longitudinal stiffness and thermal conductivity of twisted carbon nanoribbons. 2020 , 80, 103920	9
329	Soft Crawling Robots: Design, Actuation, and Locomotion. 2020 , 5, 1900837	61
328	Effect of temperature difference on the mechanical responses of ribbon kirigami: Toward the highly stretchable conductors. 2020 , 168, 105301	2
327	Responsive and Foldable Soft Materials. 2020 , 2, 107-122	22
326	Novel phenomena in two-dimensional semiconductors. 2020 , 25-79	
325	Modulating mechanical anisotropy of two-dimensional materials by controlling their defects. 2020 , 158, 77-88	6
324	Phase Transition in a Memristive Suspended MoS Monolayer Probed by Opto- and Electro-Mechanics. 2020 , 14, 13611-13618	5
323	Super- and Ferroelastic Organic Semiconductors for Ultraflexible Single-Crystal Electronics. 2020 , 132, 13104-13112	1
322	Nanomechanics of few-layer materials: do individual layers slide upon folding?. 2020 , 11, 1801-1808	3
321	Atomic origami. 2020 , 24, 100882	1
320	In situ monitoring of electrical and optoelectronic properties of suspended graphene ribbons during laser-induced morphological changes. 2020 , 2, 4034-4040	1
319	Graphene gets bent. 2020 , 73, 46-52	4
318	Supramolecular Multilayered Templates for Fabricating Nanometer-Precise Spacings: Implications for the Next-Generation of Devices Integrating Nanogap/Nanochannel Components. 2020 , 3, 10586-10590	0
317	Progress and Prospects in Transition-Metal Dichalcogenide Research Beyond 2D. 2020 , 120, 12563-12591	50
316	An origami-inspired dynamically actuated binary switch. 2020 , 117, 081901	10

315	Kirigami-Enabled Microwave Resonator Arrays for Wireless, Flexible, Passive Strain Sensing. 2020 , 12, 44256-44264	18
314	Bioelectronics-Related 2D Materials Beyond Graphene: Fundamentals, Properties, and Applications. 2020 , 30, 2003732	14
313	Rippling of two-dimensional materials by line defects. 2020 , 102,	3
312	2D Nanomaterials with Hierarchical Architecture for Flexible Sensor Application. 2020 , 93-116	2
311	Clay nanolayer encapsulation, evolving from origins of life to future technologies. 2020 , 229, 2863-2879	3
310	Growth and Interlayer Engineering of 2D Layered Semiconductors for Future Electronics. 2020 ,	13
309	Thermal ripples in bilayer graphene. 2020 , 102,	2
308	Graphene origami structures with superflexibility and highly tunable auxeticity. 2020 , 102,	4
307	On the elastic rod models for mechanical tests of one-dimensional nanostructures under transverse loads. 2020 , 128, 164303	2
306	Fabrication of a wrinkled structure made of wearable polyacrylonitrile/polyurethane composite fibers with elastic sensing properties suitable for human movement detection. 2020 , 41, 3491-3500	3
305	An Origami-Structured Flexible Electronic Substrate with Faces Parallel to Target-of-Attachment Surfaces. 2020 ,	
304	Bioinspired kirigami metasurfaces as assistive shoe grips. 2020 , 4, 778-786	35
303	The electronic structure of ideal graphene. 2020 , 1-23	
302	Etching mechanisms, kinetics, and pattern formation in multilayered WSe ₂ . 2020 , 7, 100075	3
301	Assembly of Foldable 3D Microstructures Using Graphene Hinges. 2020 , 32, e2001303	19
300	Preface to the second edition. 2020 , ix-x	
299	Preface to the first edition. 2020 , xi-xiv	
298	Electron states in a magnetic field. 2020 , 24-62	0

297	Quantum transport via evanescent waves. 2020 , 63-76	
296	The Klein paradox and chiral tunneling. 2020 , 77-107	
295	Edges, nanoribbons, and quantum dots. 2020 , 108-140	
294	Point defects. 2020 , 141-167	
293	Optics and response functions. 2020 , 168-192	
292	The Coulomb problem. 2020 , 193-212	
291	Crystal lattice dynamics, structure, and thermodynamics. 2020 , 213-256	
290	Gauge fields and strain engineering. 2020 , 257-278	
289	Scattering mechanisms and transport properties. 2020 , 279-325	
288	Spin effects and magnetism. 2020 , 326-350	
287	Graphene on hexagonal boron nitride. 2020 , 351-378	
286	Twisted bilayer graphene. 2020 , 379-388	
285	Many-body effects in graphene. 2020 , 389-400	
284	References. 2020 , 401-420	
283	Index. 2020 , 421-426	
282	Bidirectional Self-Folding with Atomic Layer Deposition Nanofilms for Microscale Origami. 2020 , 20, 4850-4856	12
281	Recent Progress in 3D Printing of 2D Material-Based Macrostructures. 2020 , 5, 1901066	13
280	Development and Characterization of Freestanding Poly (Methyl Methacrylate)/Monolayer Graphene Membrane. 2020 , 8, 29702-29710	1

279	Mechanical on-off gates for regulation of drug release in cutaneous or musculoskeletal tissue repairs. 2020 , 115, 111048	1
278	Electron Irradiation Driven Nanohands for Sequential Origami. 2020 , 20, 4975-4984	7
277	Strain-invariant conductance in an elastomeric nanocomposite mesh conductor for stretchable electronics. 2020 , 8, 9440-9448	8
276	Numerical study of the rippling instability driven by electron-phonon coupling in graphene. 2020 , 101,	3
275	Stress Field Characteristics and Collective Mechanical Properties of Defective Graphene. 2020 , 124, 7421-7431	5
274	Foldable Kirigami Paper Electronics. 2020 , 217, 1900891	2
273	Multidimensional graphene structures and beyond: Unique properties, syntheses and applications. 2020 , 113, 100665	37
272	Topological Elasticity of Flexible Structures. 2020 , 10,	4
271	Folding 2D Graphene Nanoribbons into 3D Nanocages Induced by Platinum Nanoclusters. 2020 , 124, 10495-10501	1
270	3D Manipulation of 2D Materials Using Microdome Polymer. 2020 , 20, 2486-2492	19
269	Mechanical properties of two-dimensional materials: atomistic modeling and future directions. 2020 , 9-35	3
268	Introduction. 2020 , 1-3	1
267	Heterogeneous deformation of two-dimensional materials for emerging functionalities. 2020 , 35, 1369-1385	5
266	Adsorption and Diffusion of Hydrogen in Carbon Honeycomb. 2020 , 10,	8
265	Biofunctional Silk Kirigami With Engineered Properties. 2020 , 12, 12436-12444	9
264	Bending with slip. 2020 , 19, 259-260	3
263	Kirigami-Inspired Self-Assembly of 3D Structures. 2020 , 30, 1909888	16
262	Material-Dependent Evolution of Mechanical Folding Instabilities in Two-Dimensional Atomic Membranes. 2020 , 12, 10801-10808	8

261	Deterministic and stochastic control of kirigami topology. 2020 , 117, 4511-4517	10
260	Fluidic Flow Assisted Deterministic Folding of Van der Waals Materials. 2020 , 30, 1908691	4
259	Microbial carbon and nitrogen processes in high-Arctic riparian soils. 2020 , 31, 223-236	3
258	Stochastic Stress Jumps Due to Soliton Dynamics in Two-Dimensional van der Waals Interfaces. 2020 , 20, 1201-1207	10
257	Multiaxially-stretchable kirigami-patterned mesh design for graphene sensor devices. 2020 , 13, 1406-1412	11
256	Controllable growth of transition metal dichalcogenide multilayer flakes with kirigami structures. 2020 , 22, 1858-1864	2
255	Production and processing of graphene and related materials. 2020 , 7, 022001	179
254	Uniaxial stretching mechanics of cellular flexible metamaterials. 2020 , 35, 100637	10
253	Keeping It Together: Interleaved Kirigami Extension Assembly. 2020 , 10,	5
252	Anomalous Thermal Response of Graphene Kirigami Induced by Tailored Shape to Uniaxial Tensile Strain: A Molecular Dynamics Study. 2020 , 10,	2
251	Cyber-Physiochemical Interfaces. 2020 , 32, e1905522	37
250	Stretchable graphene electrodes. 2020 , 175-204	2
249	Kirigami-Based Highly Stretchable Thin Film Solar Cells That Are Mechanically Stable for More than 1000 Cycles. 2020 , 14, 1560-1568	22
248	Super- and Ferroelastic Organic Semiconductors for Ultraflexible Single-Crystal Electronics. 2020 , 59, 13004-13012	21
247	Kirigami/origami: unfolding the new regime of advanced 3D microfabrication/nanofabrication with "folding". 2020 , 9, 75	58
246	Complex three-dimensional graphene structures driven by surface functionalization. 2020 , 12, 10172-10179	9
245	Crumpled Graphene Decorated with Manganese Ferrite Nanoparticles for Hydrogen Peroxide Sensing and Electrochemical Supercapacitors. 2020 , 3, 4859-4869	21
244	Manufacture and characterization of graphene membranes with suspended silicon proof masses for MEMS and NEMS applications. 2020 , 6, 17	18

243	Profile of Paul L. McEuen. 2020 , 117, 9142-9144	
242	Large-area 2D TMD layers for mechanically reconfigurable electronic devices. 2020 , 53, 313002	11
241	Structural configurations and Raman spectra of carbon nanoscrolls. 2020 , 31, 315707	2
240	Design and Fabrication of a Kirigami-Inspired Electrothermal MEMS Scanner with Large Displacement. 2020 , 11,	5
239	Functional epoxy vitrimers and composites. 2021 , 120, 100710	33
238	Critical transitions in the shape morphing of kirigami metallic glass. 2021 , 61, 204-212	7
237	Topological structures of transition metal dichalcogenides: A review on fabrication, effects, applications, and potential. 2021 , 3, 133-154	10
236	3D Interfacing between Soft Electronic Tools and Complex Biological Tissues. 2021 , 33, e2004425	25
235	Programmable mechanical metastructures from locally bistable domes. 2021 , 42, 101081	4
234	The buckling behavior of single-layer MoS ₂ sheets with kirigami-inspired structures under compression. 2021 , 188, 110188	3
233	Programmable 3D structures via Kirigami engineering and controlled stretching. 2021 , 43, 101146	4
232	Kirigami-Based Compliant Mechanism for Multiaxis Optical Tracking and Energy-Harvesting Applications. 2021 , 23, 2001079	6
231	Nanospring from partly hydrogenated graphene ribbon: A molecular dynamics study. 2021 , 541, 148507	4
230	Kirigami Engineering-Nanoscale Structures Exhibiting a Range of Controllable 3D Configurations. 2021 , 33, e2005275	12
229	Artificial Skin Perception. 2021 , 33, e2003014	78
228	Energetics of graphene origami and their spatial resolution. 2021 , 46, 481-486	
227	Fully transient stretchable fruit-based battery as safe and environmentally friendly power source for wearable electronics. 2021 , 3, e12073	17
226	Tunable ductility of a nano-network from few-layered graphene bonded with benzene: a molecular dynamics study.. 2021 , 11, 1794-1803	

225	Designing the Bending Stiffness of 2D Material Heterostructures. 2021 , 33, e2007269	13
224	Probing interface strength in nanocomposites and hybrid nanomaterials. 2021 , 209-240	0
223	Controllable preparation and photoelectric applications of two-dimensional in-plane and van der Waals heterostructures. 2021 , 70, 027901-027901	5
222	How Good Are the Performances of Graphene and Boron Nitride Against the Wear of Copper?. 2021 , 14,	
221	Bistability-based foldable origami mechanical logic gates. 2021 , 43, 101180	14
220	The morphology of doubly-clamped graphene nanoribbons. 2021 , 8, 025035	1
219	Structural Defects, Mechanical Behaviors, and Properties of Two-Dimensional Materials. 2021 , 14,	7
218	Lattice model for self-folding at the microscale. 2021 , 44, 46	
217	Buckling of ultrastretchable kirigami metastructures for mechanical programmability and energy harvesting. 2021 , 213, 93-102	4
216	Hybridized Radial and Edge Coupled 3D Plasmon Modes in Self-Assembled Graphene Nanocylinders. 2021 , 17, e2100079	2
215	Highly anisotropic and flexible piezoceramic kirigami for preventing joint disorders. 2021 , 7,	30
214	Highly Strain-Tunable Interlayer Excitons in MoS/WSe Heterobilayers. 2021 , 21, 3956-3964	16
213	Buckling of thermalized elastic sheets. 2021 , 149, 104296	8
212	Thermal buckling and symmetry breaking in thin ribbons under compression. 2021 , 44, 101270	6
211	Pathways to controlled 3D deformation of graphene: Manipulating the motion of topological defects. 2021 , 25, 100893	2
210	Kirigami-Inspired Highly Stretchable, Conductive, and Hierarchical TiCT MXene Films for Efficient Electromagnetic Interference Shielding and Pressure Sensing. 2021 , 15, 7668-7681	72
209	Interlayer configurations of self-assembled folded graphene. 2021 , 118, 173101	1
208	Poking and bulging of suspended thin sheets: Slippage, instabilities, and metrology. 2021 , 149, 104320	8

207	Biaxially-Stretchable Kirigami-Patterned Mesh Structures for Motion Artifact-Free Wearable Devices. 2021 ,	
206	Self-healing flexible/stretchable energy storage devices. 2021 , 44, 78-104	23
205	Anomalous Flexural Elasticities of Graphene Membranes Unveiled by Manipulating Topology. 2021 , 126, 146101	0
204	Mechanically sensing and tailoring electronic properties in two-dimensional atomic membranes. 2021 , 25, 100900	3
203	Indentation of solid membranes on rigid substrates with van der Waals attraction. 2021 , 103, 043002	2
202	Exceptional piezoelectricity, high thermal conductivity and stiffness and promising photocatalysis in two-dimensional MoSi ₂ N ₄ family confirmed by first-principles. 2021 , 82, 105716	70
201	Structural transition from a ring to a folded structure of a seamless nanobelt. 2021 , 2, 020020	
200	Carbon-nanotube Nanomotor Driven by Graphene Origami. 2021 , 15,	2
199	Grasping with kirigami shells. 2021 , 6,	24
198	The effect of rippling on the mechanical properties of graphene. 2021 ,	7
197	Atomic understanding of structural deformations upon ablation of graphene.	0
196	Kirigami Structures of Shape Memory Polymer by Femtosecond Laser Scribing and Constrained Heating. 2021 , 6, 2100200	2
195	Photo-Triggered Shape Reconfiguration in Stretchable Reduced Graphene Oxide-Patterned Azobenzene-Functionalized Liquid Crystalline Polymer Networks. 2021 , 31, 2102106	4
194	Ultrastiff graphene. 2021 , 5,	3
193	Review of flexible microelectromechanical system sensors and devices. 2021 , 4, 025001	7
192	Thermal Buckling Transition of Crystalline Membranes in a Field. 2021 , 127, 015702	5
191	Synthesis and mechanical analysis of conductive polyurethane foams containing graphene and nanotube particles. 2021 , 44, 1	
190	Kirigami-inspired synthesis of functional mesoporous nanospheres through spray drying of holey nanosheets. 2021 , 178, 382-390	2

189	Mechanical properties of graphene. 2021 , 8, 021310	12
188	Curvy, shape-adaptive imagers based on printed optoelectronic pixels with a kirigami design. 2021 , 4, 513-521	38
187	Strain-tuning of the electronic, optical, and vibrational properties of two-dimensional crystals. 2021 , 8, 021318	15
186	On local kirigami mechanics I: Isometric conical solutions. 2021 , 151, 104370	5
185	Shaping and structuring 2D materials via kirigami and origami. 2021 , 145, 100621	5
184	Effective Toughness of Heterogeneous Materials with Rate-Dependent Fracture Energy. 2021 , 127, 035501	4
183	3D Transformable Modular Kirigami Based Programmable Metamaterials. 2021 , 31, 2105641	8
182	Controlling Movement at Nanoscale: Curvature Driven Mechanotaxis. 2021 , 17, e2100909	1
181	Mechanomaterials: A Rational Deployment of Forces and Geometries in Programming Functional Materials. 2021 , 33, e2007977	10
180	Autonomous reinforcement learning agent for stretchable kirigami design of 2D materials. 2021 , 7,	2
179	Tunable Metasurfaces: The Path to Fully Active Nanophotonics. 2021 , 2, 2000205	16
178	Precise measurement of the configurational energy of bent graphene membranes via three-dimensional force field spectroscopy. 2021 , 104,	0
177	Wallpaper group kirigami. 2021 , 477, 20210161	4
176	Hierarchical kirigami-inspired graphene and carbon nanotube metamaterials: Tunability of thermo-mechanic properties. 2021 , 206, 109811	4
175	Graphene kirigami membrane with superior theoretical permeability and adjustable selection capability. 2021 , 181, 398-407	0
174	Pneumatic Soft Actuators With Kirigami Skins. 2021 , 8, 749051	2
173	Kirigami-processed cellulose nanofiber films for smart heat dissipation by convection. 2021 , 13,	1
172	Limits of lateral expansion in two-dimensional materials with line defects. 2021 , 5,	0

171	Reprogrammable optical metasurfaces by electromechanical reconfiguration. 2021 , 29, 30751-30760	4
170	Recent progress of flexible electronics by 2D transition metal dichalcogenides. 1	10
169	Dewetting assisted self-assembly of graphene nanoparticles by diverse approaches. 2021 , 44, 1	0
168	Mechanical behavior of single layer MoS2 sheets with aligned defects under uniaxial tension. 2021 , 130, 124302	2
167	Unconventional van der Waals heterostructures beyond stacking. 2021 , 24, 103050	0
166	Morphology of graphene flakes in Ni-graphene nanocomposites and its influence on hardness: an atomistic study. 2021 , 185, 660-660	0
165	Geometric design classification of kirigami-inspired metastructures and metamaterials. 2021 , 33, 3633-3643	8
164	Metamorphosis of three-dimensional kirigami-inspired reconfigurable and reprogrammable architected matter. 2021 , 21, 100511	4
163	Material and configuration design strategies towards flexible and wearable power supply devices: a review. 2021 , 9, 8950-8965	13
162	Mechanically and electrically durable, stretchable electronic textiles for robust wearable electronics.. 2021 , 11, 22327-22333	1
161	Buckling, crumpling, and tumbling of semiflexible sheets in simple shear flow. 2021 , 17, 4707-4718	10
160	Recent advances in stretchable field-effect transistors.	5
159	Resistive tactile sensors. 2021 , 13-30	1
158	Skin-Like Electronics for Perception and Interaction: Materials, Structural Designs, and Applications. 2021 , 3, 2000108	3
157	Nonlinear elasticity of monolayer hexagonal crystals: Theory and application to circular bulge test. 2018 , 68, 117-132	7
156	The Physics of Graphene. 2020 ,	16
155	Fundamental Insights into Graphene Strain Sensing. 2021 , 21, 833-839	6
154	Spontaneous Folding Growth of Graphene on h-BN. 2021 , 21, 2033-2039	6

153	Kirigami auxetic structure for high efficiency power harvesting in self-powered and wireless structural health monitoring systems. 2021 , 30, 015037	8
152	Bending rigidities and universality of flexural modes in 2D crystals. 2020 , 3, 02LT03	0
151	Twistons in graphene nanoribbons on a substrate. 2020 , 102,	3
150	Multistable kirigami for tunable architected materials. 2018 , 2,	33
149	Continuity and discontinuity of kirigami's high-extensibility transition: A statistical-physics viewpoint. 2019 , 1,	3
148	Forward and inverse design of kirigami via supervised autoencoder. 2020 , 2,	14
147	Mechanics of Buckled Kirigami Membranes for Stretchable Interconnects in Island-Bridge Structures. 2020 , 87,	10
146	Comparative Morphological Analysis of Graphene on Copper Substrate obtained by CVD from a Liquid Precursor. 2017 , 131, 1497-1506	4
145	Micro-structuring, ablation, and defect generation in graphene with femtosecond pulses. 2019 , 2, 2925	6
144	Cascaded multilayer nano-kirigami for extensible 3D nanofabrication and visible light manipulation. 2020 , 8, 1506	8
143	Active Plasmonics in Kirigami Configurations Toward High-Performance Smart Windows.	2
142	Nanoelectromechanical Sensors Based on Suspended 2D Materials. 2020 , 2020, 8748602	39
141	Investigation on the large tensile deformation and mechanical behaviors of graphene kirigami. 2017 , 66, 066201	3
140	Multi-order phononic frequency comb generation within a MoS ₂ electromechanical resonator. 2021 , 119, 173102	0
139	Anisotropic Particles through Multilayer Assembly. 2021 , e2100328	1
138	Compact reconfigurable kirigami. 2021 , 3,	8
137	Geometric mechanics of folded kirigami structures with tunable bandgap. 2021 , 49, 101483	0
136	Kirigami-based three-dimensional OLED concepts for architectural lighting. 2017 ,	

- 135 Focused ion beam based nano-kirigami/origami for three-dimensional micro/nanomanufacturing and photonic applications. **2019**, 68, 248101 0
- 134 Terahertz Circular Dichroism Spectroscopy of Biomaterials Enabled by Kirigami Polarization Modulators. 12
- 133 Permeable Conductors for Wearable and On-Skin Electronics. 2100135 12
- 132 Interfacial Mechanics Between van der Waals Materials. **2020**, 97-134
- 131 A method for designing tunable chiral mechanical carbon networks for energy storage. **2021**, 23, 26209-26218 0
- 130 Mechanics and Electromechanics of Two-Dimensional Atomic Membranes. **2020**, 1911-1947
- 129 Development of a Millimeter-Stroke Electrothermal Kirigami MEMS Actuator with Low Driving Power-Static and Dynamic Thermomechanical Characteristic of Film Bimorph-. **2020**, 34, 109-116
- 128 Mechanical behaviors of radial symmetric pyramid kirigami. **2020**, 69, 096102 0
- 127 4D printing with smart materials and structures. **2020**, 23, 27-37
- 126 Scalably Nanomanufactured Atomically Thin Materials-Based Wearable Health Sensors. 2100120 3
- 125 Graphene-enabled wearable sensors for healthcare monitoring. **2022**, 197, 113777 14
- 124 Thermalized buckling of isotropically compressed thin sheets.. **2021**, 104, 054141 3
- 123 Kirigami Reconfigurable Gradient Metasurface. 2107699 8
- 122 Mechanical metamaterials based on origami and kirigami. **2021**, 8, 041319 7
- 121 Graded Kirigami Composites for Programmed Strain Distributions. 2101241 0
- 120 Recent advances in curved image sensor arrays for bioinspired vision system. **2022**, 42, 101366 4
- 119 Nanomaterials: An alternative approach for Prevention and diagnosis of the emerging COVID-19 (Preprint).
- 118 Spontaneous Tilt of Single-Clamped Thermal Elastic Sheets.. **2022**, 128, 028006 0

117	Mechanics prediction of 2D architected cellular structures using transfer learning. 1-11	1
116	Boundary curvature guided programmable shape-morphing kirigami sheets.. 2022 , 13, 530	8
115	Finite temperature mechanics of multilayer 2D materials. 2022 , 52, 101612	0
114	Theorem on the Compatibility of Spherical Kirigami Tessellations.. 2022 , 128, 035501	1
113	Recent advances in the stereolithographic three-dimensional printing of ceramic cores: Challenges and prospects. 2022 ,	1
112	Kirigami-inspired Biodesign for Applications in Healthcare.. 2022 , e2109550	3
111	Anomalously low electrostatic bending stiffness of graphene oxide 2D membranes regulates their environmental fate in aquatic ecosystems. 2022 , 10, 1414-1424	0
110	Characteristics, properties, synthesis and advanced applications of 2D graphdiyne versus graphene.	2
109	Four-dimensional nanofabrication for next-generation optical devices. 1	1
108	Research Progress of Graphene Nano-Electromechanical Resonant Sensors-A Review.. 2022 , 13,	
107	2D Heterostructures for Ubiquitous Electronics and Optoelectronics: Principles, Opportunities, and Challenges.. 2022 ,	28
106	Folding and Fracture of Single Crystal Graphene Grown on a Cu(111) Foil.. 2022 , e2110509	0
105	Mechanical Behavior of Blisters Spontaneously Formed by Multilayer 2D Materials. 2101939	1
104	Functionalized graphene origami metamaterials with tunable thermal conductivity. 2022 , 191, 610-610	2
103	Temperature-Dependent Bending Rigidity of AB-Stacked Bilayer Graphene.. 2021 , 127, 266102	0
102	Anomalous Thermal Expansion in Ising-like Puckered Sheets.. 2022 , 128, 075902	1
101	Auxetic Meta-Display: Stretchable Display without Image Distortion. 2113299	7
100	Flow-induced deformation of kirigami sheets. 2022 , 7,	1

99	Architected hierarchical kirigami metallic glass with programmable stretchability. 2022 , 12, 035305	0
98	Flexible Sensory Systems: Structural Approaches.. 2022 , 14,	2
97	Kirigami-Patterned Highly Stable and Strain Insensitive Sweat pH and Temperature Sensors for Long-term Wearable Applications. 2022 ,	0
96	Self-Folding PCB Kirigami: Rapid Prototyping of 3D Electronics via Laser Cutting and Forming.. 2022 ,	2
95	On local kirigami mechanics II: Stretchable creased solutions. 2022 , 161, 104812	1
94	Notch Flexure as Kirigami Cut for Tunable Mechanical Stretchability towards Metamaterial Application. 1-15	0
93	Geometric design, deformation mode, and energy absorption of patterned thin-walled structures. 2022 , 168, 104269	4
92	Materials for Smart Soft Actuator Systems.. 2021 ,	16
91	Nanomembrane folding origami: Geometry control and micro-machine applications. 2021 , 31, 865-871	0
90	Laser-Processed Stretchable-Gradient Interconnection-Based Temperature Sensor for a Real-Time Monitoring System. 2021 , 3, 5601-5607	1
89	Recent Progress in Shape-Transformable Materials and Their Applications. 1	
88	Strain-Insensitive Self-Powered Tactile Sensor Arrays Based on Intrinsically Stretchable and Patternable Ultrathin Conformal Wrinkled Graphene-Elastomer Composite. 2022 , 32, 2107281	7
87	Wafer-scale integration of stretchable semiconducting polymer microstructures via capillary gradient. 2021 , 12, 7038	4
86	Surface atomic manipulation of low-dimensional structures. 2022 ,	
85	Elastocaloric Kirigami Temperature Modulator. 2201116	1
84	The Magnetic Genome of Two-Dimensional van der Waals Materials.. 2022 ,	10
83	Graphene kirigami as an ultra-permeable water desalination membrane. 2022 , 195, 183-190	0
82	Guided Fractures in Graphene Mechanical Diode-like Structures.	

81	On-Demand Solar and Thermal Radiation Management Based on Switchable Interwoven Surfaces. 2022 , 7, 1758-1763	4
80	Folding-assisted plasmonically induced transparency in coupled graphene nanodisks.	1
79	Curvilinear Kirigami Skins Let Soft Bending Actuators Slither Faster.. 2022 , 9, 872007	
78	A smart ball sensor fabricated by laser kirigami of graphene for personalized long-term grip strength monitoring. 2022 , 6,	2
77	Recent advances of amorphous-phase-engineered metal-based catalysts for boosted electrocatalysis. 2022 , 127, 1-18	1
76	Perturbative renormalization and thermodynamics of quantum crystalline membranes. 2022 , 105,	0
75	Controlling and Monitoring Crack Propagation in Monolayer Graphene Single Crystals. 2202373	
74	Continuum Field Theory for the Deformations of Planar Kirigami. 2022 , 128,	4
73	NiCoB based in-plane energy storage textile with enhanced mechanical performance. 2022 , 120, 223901	
72	Bilayer Graphene Kirigami.	
71	Geometry, analysis, and morphogenesis: Problems and prospects. 2022 , 59, 331-369	0
70	Failure mechanism of graphene kirigami under nanoindentation. 2022 , 33, 375703	0
69	Effects of Tearing Conditions on the Crack Propagation in a Monolayer Graphene Sheet. 2022 , 23, 6471	1
68	2D Materials Nanomembrane. 2022 , 391-412	
67	A magnetic actuation scheme for nano-kirigami metasurfaces with reconfigurable circular dichroism. 2022 , 131, 233102	
66	Inorganic Flexible Electronics: Materials, Strategies, and Applications. 2022 , 85-104	
65	Flexible kirigami with local cylindrical shell design for stretchable microstrip antenna. 2022 , 296, 115879	
64	Electrically-driven robust tuning of lattice thermal conductivity.	1

63	Kirigami Inspired Pressure Sensors for Wearable Dynamic Cardiovascular Monitoring. 2202478	6
62	Kirigami Engineering of Suspended Graphene Transducers. 2022 , 22, 5301-5306	0
61	Research progress in skin-like ultraflexible organic field-effect transistors. 2022 ,	
60	Thermal transport in porous graphene with coupling effect of nanopore shape and defect concentration.	
59	Bending-active kirigami. 2022 , 111864	
58	Atomic-Void van der Waals Channel Waveguides.	
57	On the Origin of Nonclassical Ripples in Draped Graphene Nanosheets: Implications for Straintronics. 2022 , 5, 10829-10838	0
56	Structural Analysis for Highly Aligned Graphene Fold on Cu(111) Substrate. 2022 , 28, 2512-2514	
55	Breathable Kirigami-Shaped Ionotronic e-Textile with Touch/Strain Sensing for Friendly Epidermal Electronics.	0
54	Modulating the Mass Sensitivity of Graphene Resonators via Kirigami.	
53	Bio-inspired programmable multi-stable origami. 2022 , 121, 051902	0
52	Shape Entropy of a Reconfigurable Ising Surface. 2022 , 129,	
51	100 years after Griffith: From brittle bulk fracture to failure in 2D materials.	0
50	Quasicrystal kirigami. 2022 , 4,	1
49	Molecular dynamics simulations for mechanical properties of the monolayer PtS ₂ with line defect. 2022 , 214, 111734	0
48	Commensurate stacking-induced ultrahigh yet discontinuous bending stiffness of the double-layer black phosphorus. 2022 , 605, 154729	0
47	Potential Applications of Epoxy Vitrimers. 2022 , 59-73	0
46	Study on the Shear Behaviour and Fracture Characteristic of Graphene Kirigami Membranes via Molecular Dynamics Simulation. 2022 , 12, 886	0

45	Two-Dimensional Mechanics of Atomically Thin Solids on Water. 2022 , 22, 7180-7186	0
44	A Comprehensive Review on Graphene Nanoparticles: Preparation, Properties, and Applications. 2022 , 14, 12336	0
43	Indirect Band Gap in Scrolled MoS ₂ Monolayers. 2022 , 12, 3353	1
42	Surface Wrinkling for Flexible and Stretchable Sensors. 2203491	8
41	Mucosa-interfacing electronics.	5
40	Bending and Stretching Behavior of Graphene Structures Using Continuum Models Calibrated with Modal Analysis. 2022 ,	1
39	The elastic response of graphene oxide gels as a crumpling phenomenon.	0
38	Bioinspired Strategies for Stretchable Conductors.	0
37	Robust and Multifunctional Kirigami Electronics with Tough and Permeable Aramid Nanofiber Framework. 2207350	0
36	Self-Bending Behavior and Varying Bending Stiffness of Black Phosphorus/Molybdenum Disulfide (BP/MoS ₂) Heterostructure. 2022 , 12, 3635	1
35	Understanding the size and chirality dependence of bending stiffness of single-layer MoS ₂ by a spring-driven method. 2022 , 106,	0
34	Hierarchical Slice Patterns Inhibit Crack Propagation in Brittle Sheets. 2022 , 18,	0
33	Engineering by Cuts: How Kirigami Principle Enables Unique Mechanical Properties and Functionalities. 2204733	1
32	Bilayer Graphene Kirigami. 2022 , 100227	0
31	Biaxial stretchable light-emitting device using kirigami-elastomer structure. 2022 , 12, 115207	0
30	Controlling the Thermal Conductivity of Monolayer Graphene with Kirigami Structure. 2022 , 12, 1128	0
29	Solar and Thermal Radiation-Modulation Materials for Building Applications. 2202932	0
28	Lessons from Nature for Carbon-Based Nanoarchitected Metamaterials. 2200039	1

- 27 Smart electronics based on 2D materials for wireless healthcare monitoring. **2022**, 9, 041308 ○
- 26 Stretchable conductors for stretchable field-effect transistors and functional circuits. ○
- 25 A unified framework of slip controlled bending and rippled superlattice design of few-layer graphene. **2023**, 613, 155979 ○
- 24 Kirigami-patterned IoT-enabled Smart Anklet to Aid Physiotherapy of Patients with Foot Injury. **2022**, ○
- 23 Energy evolution mechanism of nanonetwork from hydrogenated graphene scrolls. **2022**, 33, 104957 ○
- 22 Large-Scale Silver Sulfide Nanomesh Membranes with Ultrahigh Flexibility. ○
- 21 The modulation of electrothermal distribution by square spiral kirigami structure in graphite paper. **2022**, 56, 035503 ○
- 20 A Universal Size Design Principle for Stretchable Inorganic Electronics to Work Consistently under Different Interface Conditions. 2210880 ○
- 19 Highly Conductive and Compliant Silver Nanowire Nanocomposites by Direct Spray Deposition. ○
- 18 Inverse design of 3D reconfigurable curvilinear modular origami structures using geometric and topological reconstructions. **2022**, 13, ○
- 17 Magnetically Driven Modular Mechanical Metamaterials with High Programmability, Reconfigurability, and Multiple Applications. **2023**, 15, 3486-3496 ○
- 16 Crumpled Kirigami. **2023**, 19, 1081-1091 ○
- 15 Wearable chemical sensors based on 2D materials for healthcare applications. ○
- 14 Auxetic Kirigami Metamaterials upon Large Stretching. ○
- 13 Generating nano-incised graphene kirigami membrane via selective tearing. **2023**, 313, 123467 ○
- 12 High-sensitivity MEMS force and acceleration sensor based on graphene-induced non-radiative transition. **2023**, 118001 ○
- 11 Structural Engineering of Flexible Electronics. **2022**, 1-26 ○
- 10 Dynamic kirigami structures for wake flow control behind a circular cylinder. **2023**, 35, 011707 1

- 9 Theoretical investigation of graphene kirigami membrane for natural gas processing. **2023**, 23, 2881-2887 ○
- 8 Wrinkles, Ridges, Miura-Ori, and Moiré Patterns in MoSe₂ Using Neural Networks. **2023**, 14, 1732-1739 ○
- 7 Ultra-high thermal conductivity of two-dimensional C₂₃. **2023**, 34, 175704 ○
- 6 An origami shield with supporting frame structures optimized by a feature-driven topology optimization method. **2023**, ○
- 5 Kirigami-Inspired 3D Printable Soft Pneumatic Actuators with Multiple Deformation Modes for Soft Robotic Applications. ○
- 4 Technological Evolution of Image Sensing Designed by Nanostructured Materials. **2023**, 5, 1027-1060 ○
- 3 Stretchable and Flexible Snake Skin Patterned Electrodes for Wearable Electronics Inspired by Kirigami Structure. **2023**, 10, ○
- 2 Phononic Bandgap Programming in Kirigami By Unique Mechanical Input Sequencing. ○
- 1 Deterministically self-assembled 2D materials and electronics. **2023**, ○