

Katia Bertoldi

List of Publications by Year in descending order

Source: [//exaly.com/author-pdf/2413210/publications.pdf](https://exaly.com/author-pdf/2413210/publications.pdf)

Version: 2024-02-01

133
papers

12,979
citations

38552

50
h-index

24106

111
g-index

146
all docs

146
docs citations

146
times ranked

14370
citing authors

#	ARTICLE	IF	CITATIONS
1	Pneumatic Networks for Soft Robotics that Actuate Rapidly. <i>Advanced Functional Materials</i> , 2014, 24, 2163-2170.	16.5	1,215
2	Flexible mechanical metamaterials. <i>Nature Reviews Materials</i> , 2017, 2, .	40.2	1,110
3	Topological Phononic Crystals with One-Way Elastic Edge Waves. <i>Physical Review Letters</i> , 2015, 115, 104302.	8.0	678
4	Multistable Architected Materials for Trapping Elastic Strain Energy. <i>Advanced Materials</i> , 2015, 27, 4296-4301.	24.3	666
5	A cold-atom Fermi-Hubbard antiferromagnet. <i>Nature</i> , 2017, 545, 462-466.	36.2	551
6	Harnessing Buckling to Design Tunable Locally Resonant Acoustic Metamaterials. <i>Physical Review Letters</i> , 2014, 113, 014301.	8.0	494
7	Dielectric Elastomer Based Grippers for Soft Robotics. <i>Advanced Materials</i> , 2015, 27, 6814-6819.	24.3	400
8	Mechanical Programming of Soft Actuators by Varying Fiber Angle. <i>Soft Robotics</i> , 2015, 2, 26-32.	8.1	400
9	The dynamic kinetochore-microtubule interface. <i>Journal of Cell Science</i> , 2004, 117, 5461-5477.	2.1	351
10	A three-dimensional actuated origami-inspired transformable metamaterial with multiple degrees of freedom. <i>Nature Communications</i> , 2016, 7, 10929.	13.2	331
11	Stable propagation of mechanical signals in soft media using stored elastic energy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 9722-9727.	7.6	270
12	Rational design of reconfigurable prismatic architected materials. <i>Nature</i> , 2017, 541, 347-352.	36.2	250
13	Octopus Arm-Inspired Tapered Soft Actuators with Suckers for Improved Grasping. <i>Soft Robotics</i> , 2020, 7, 639-648.	8.1	205
14	Buckling-Induced Kirigami. <i>Physical Review Letters</i> , 2017, 118, 084301.	8.0	198
15	Amplifying the response of soft actuators by harnessing snap-through instabilities. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 10863-10868.	7.6	191
16	Harnessing instabilities for design of soft reconfigurable auxetic/chiral materials. <i>Soft Matter</i> , 2013, 9, 8198.	2.8	186
17	Harnessing Multiple Folding Mechanisms in Soft Periodic Structures for Tunable Control of Elastic Waves. <i>Advanced Functional Materials</i> , 2014, 24, 4935-4942.	16.5	176
18	Guided transition waves in multistable mechanical metamaterials. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 2319-2325.	7.6	163

#	ARTICLE	IF	CITATIONS
19	Highly selective electrochemical nitrate reduction using copper phosphide self-supported copper foam electrode: Performance, mechanism, and application. <i>Water Research</i> , 2021, 193, 116881.	11.4	151
20	Hierarchical honeycomb auxetic metamaterials. <i>Scientific Reports</i> , 2016, 5, 18306.	3.4	149
21	Harnessing Deformation to Switch On and Off the Propagation of Sound. <i>Advanced Materials</i> , 2016, 28, 1631-1635.	24.3	148
22	Effects of geometric and material nonlinearities on tunable band gaps and low-frequency directionality of phononic crystals. <i>Physical Review B</i> , 2013, 88, .	3.3	147
23	Evidence for a Retroviral Insertion in TRPM1 as the Cause of Congenital Stationary Night Blindness and Leopard Complex Spotting in the Horse. <i>PLoS ONE</i> , 2013, 8, e78280.	2.5	115
24	Complex Ordered Patterns in Mechanical Instability Induced Geometrically Frustrated Triangular Cellular Structures. <i>Physical Review Letters</i> , 2014, 112, 098701.	8.0	114
25	Harnessing Buckling to Design Architected Materials that Exhibit Effective Negative Swelling. <i>Advanced Materials</i> , 2016, 28, 6619-6624.	24.3	114
26	Harnessing Instabilities to Design Tunable Architected Cellular Materials. <i>Annual Review of Materials Research</i> , 2017, 47, 51-61.	9.8	114
27	Honeycomb phononic crystals with self-similar hierarchy. <i>Physical Review B</i> , 2015, 92, .	3.3	108
28	Extreme learning machine model for water network management. <i>Neural Computing and Applications</i> , 2019, 31, 157-169.	5.7	104
29	Discontinuous Buckling of Wide Beams and Metabeams. <i>Physical Review Letters</i> , 2015, 115, 044301.	8.0	102
30	Metamaterials with amplitude gaps for elastic solitons. <i>Nature Communications</i> , 2018, 9, 3410.	13.2	101
31	Global Impact of COVID-19 on Stroke Care and IV Thrombolysis. <i>Neurology</i> , 2021, 96, e2824-e2838.	1.1	101
32	Propagation of pop ups in kirigami shells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 8200-8205.	7.6	100
33	Liquid-induced topological transformations of cellular microstructures. <i>Nature</i> , 2021, 592, 386-391.	36.2	92
34	Self-regulated non-reciprocal motions in single-material microstructures. <i>Nature</i> , 2022, 605, 76-83.	36.2	86
35	Reconfigurable soft body trajectories using unidirectionally stretchable composite laminae. <i>Nature Communications</i> , 2019, 10, 3464.	13.2	81
36	Structure, biomimetics, and fluid dynamics of fish skin surfaces. <i>Physical Review Fluids</i> , 2016, 1, .	2.6	81

#	ARTICLE	IF	CITATIONS
37	Harnessing Viscous Flow to Simplify the Actuation of Fluidic Soft Robots. <i>Soft Robotics</i> , 2020, 7, 1-9.	8.1	77
38	Programmable Hierarchical Kirigami. <i>Advanced Functional Materials</i> , 2020, 30, 1906711.	16.5	76
39	Phase Engineering of Transition Metal Dichalcogenides with Unprecedentedly High Phase Purity, Stability, and Scalability via Molten-Metal-Assisted Intercalation. <i>Advanced Materials</i> , 2020, 32, e2001889.	24.3	73
40	Locally resonant band gaps in periodic beam lattices by tuning connectivity. <i>Physical Review B</i> , 2015, 91, .	3.3	67
41	Collagen Type XI Alpha 1 (COL11A1): A Novel Biomarker and a Key Player in Cancer. <i>Cancers</i> , 2021, 13, 935.	3.8	64
42	Osmotic collapse of a void in an elastomer: breathing, buckling and creasing. <i>Soft Matter</i> , 2010, 6, 5770.	2.8	63
43	Motion microscopy for visualizing and quantifying small motions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 11639-11644.	7.6	62
44	Structural Transition from Helices to Hemihelices. <i>PLoS ONE</i> , 2014, 9, e93183.	2.5	59
45	Architected Materials with Ultra-Low Porosity for Vibration Control. <i>Advanced Materials</i> , 2016, 28, 5943-5948.	24.3	58
46	Harnessing transition waves to realize deployable structures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 4015-4020.	7.6	58
47	Spontaneous and deterministic three-dimensional curling of pre-strained elastomeric bi-strips. <i>Soft Matter</i> , 2012, 8, 6291.	2.8	57
48	Rapamycin Is a Potent Inhibitor of Skin Tumor Promotion by 12-O-Tetradecanoylphorbol-13-Acetate. <i>Cancer Prevention Research</i> , 2011, 4, 1011-1020.	1.6	56
49	Dimpled elastic sheets: a new class of non-porous negative Poisson's ratio materials. <i>Scientific Reports</i> , 2016, 5, 18373.	3.4	53
50	Architected Multimaterial Lattices with Thermally Programmable Mechanical Response. <i>Advanced Functional Materials</i> , 2022, 32, 2105128.	16.5	51
51	Unfolding Textile-Based Pneumatic Actuators for Wearable Applications. <i>Soft Robotics</i> , 2022, 9, 163-172.	8.1	48
52	Characterization of a Mechanically Tunable Gyroid Photonic Crystal Inspired by the Butterfly <i>Parides Sesostris</i> . <i>Advanced Optical Materials</i> , 2016, 4, 99-105.	7.9	47
53	A Biologically Inspired, Functionally Graded End Effector for Soft Robotics Applications. <i>Soft Robotics</i> , 2017, 4, 317-323.	8.1	43
54	Inflatable Origami: Multimodal Deformation via Multistability. <i>Advanced Functional Materials</i> , 2022, 32, .	16.5	42

#	ARTICLE	IF	CITATIONS
55	A Modeling Framework for Jamming Structures. <i>Advanced Functional Materials</i> , 2021, 31, 2007554.	16.5	40
56	Focusing and Mode Separation of Elastic Vector Solitons in a 2D Soft Mechanical Metamaterial. <i>Physical Review Letters</i> , 2019, 123, 024101.	8.0	39
57	Characterization, stability, and application of domain walls in flexible mechanical metamaterials. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 31002-31009.	7.6	36
58	Asymmetric Dearomatization of the Furan Ring Promoted by Conjugate Organolithium Addition to (Menthylxy)(3-furyl)carbene Complexes of Chromium. <i>Chemistry - A European Journal</i> , 2003, 9, 5725-5736.	3.9	34
59	Harnessing fluid-structure interactions to design self-regulating acoustic metamaterials. <i>Journal of Applied Physics</i> , 2014, 115, 034907.	2.3	34
60	Anomalous Collisions of Elastic Vector Solitons in Mechanical Metamaterials. <i>Physical Review Letters</i> , 2019, 122, 044101.	8.0	34
61	A novel induction motor control scheme using IDA-PBC. <i>Journal of Control Theory and Applications</i> , 2008, 6, 59-68.	0.8	33
62	Low-temperature solution-processed alumina as gate dielectric for reducing the operating-voltage of organic field-effect transistors. <i>Applied Physics Letters</i> , 2013, 103, .	3.2	33
63	Potential of Magnetic Resonance Plaque Imaging Using Superparamagnetic Particles of Iron Oxide for the Detection of Carotid Plaque. <i>Neurologia Medico-Chirurgica</i> , 2008, 48, 157-162.	2.3	30
64	High mobility group box 1 (HMGB1) is implicated in preimplantation embryo development in the mouse. <i>Molecular Reproduction and Development</i> , 2008, 75, 1290-1299.	2.0	29
65	Spectroscopic Evidence for the Structure Directing Role of the Solvent in the Synthesis of Two Iron Carboxylates. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 12490-12494.	14.8	27
66	Mass spectrometry-based lipidomics of oral squamous cell carcinoma tissue reveals aberrant cholesterol and glycerophospholipid metabolism – A Pilot study. <i>Translational Oncology</i> , 2020, 13, 100807.	3.8	27
67	Controlling Liquid Crystal Orientations for Programmable Anisotropic Transformations in Cellular Microstructures. <i>Advanced Materials</i> , 2021, 33, e2105024.	24.3	27
68	Enzyme-Mediated Controlled Release Systems by Anchoring Peptide Sequences on Mesoporous Silica Supports. <i>Angewandte Chemie</i> , 2011, 123, 2186-2188.	2.1	26
69	Harnessing Geometric Frustration to Form Band Gaps in Acoustic Channel Lattices. <i>Physical Review Letters</i> , 2017, 118, 084302.	8.0	26
70	Manipulating acoustic wave reflection by a nonlinear elastic metasurface. <i>Journal of Applied Physics</i> , 2018, 123, .	2.3	26
71	Microstructural design for mechanical-optical multifunctionality in the exoskeleton of the flower beetle <i>Torynorrhina flammea</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.6	26
72	Relationship between the plasma acylcarnitine profile and cardiometabolic risk factors in adults diagnosed with cardiovascular diseases. <i>Clinica Chimica Acta</i> , 2020, 507, 250-256.	1.6	26

#	ARTICLE	IF	CITATIONS
73	Navigating the landscape of nonlinear mechanical metamaterials for advanced programmability. Physical Review B, 2020, 101, .	3.3	25
74	Entanglement Detection beyond Measuring Fidelities. Physical Review Letters, 2020, 124, 200502.	8.0	24
75	Geometric charges and nonlinear elasticity of two-dimensional elastic metamaterials. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 10195-10202.	7.6	24
76	Mechanical Valves for On-board Flow Control of Inflatable Robots. Advanced Science, 2021, 8, e2101941.	12.4	24
77	Peridynamic Modeling of Ruptures in Biomembranes. PLoS ONE, 2016, 11, e0165947.	2.5	23
78	Colonic obstruction due to giant inflammatory polyposis in a patient with ulcerative colitis. Journal of Gastroenterology, 2005, 40, 536-539.	5.1	22
79	Model of electron transport in dense plasmas spanning temperature regimes. Physical Review E, 2020, 101, 053204.	2.1	22
80	Structural properties in R_4O compounds	3.3	20
81	Tensile Instability in a Thick Elastic Body. Physical Review Letters, 2016, 117, 094301.	8.0	20
82	Frequency-doubling effect in acoustic reflection by a nonlinear, architected rotating-square metasurface. Physical Review E, 2019, 99, 052209.	2.1	20
83	Mechanical and hydrodynamic analyses of helical strake-like ridges in a glass sponge. Journal of the Royal Society Interface, 2021, 18, 20210559.	3.4	20
84	Further signatures of long-term changes in atmospheric electrical parameters observed in Europe. Annales Geophysicae, 2005, 23, 1987-1995.	1.6	18
85	Microfluidic Fabrication and Micromechanics of Permeable and Impermeable Elastomeric Microbubbles. Langmuir, 2015, 31, 3489-3493.	3.7	18
86	Additive Manufacturing of Nanostructures That Are Delicate, Complex, and Smaller than Ever. Small, 2019, 15, e1902370.	11.2	18
87	Mitochondrial function in glucocorticoid triggered T-ALL cells with transgenic bcl-2 expression. Molecular Biology Reports, 2002, 29, 97-101.	2.4	16
88	Some Remarks on the Effect of Interphases on the Mechanical Response and Stability of Fiber-Reinforced Elastomers. Journal of Applied Mechanics, Transactions ASME, 2012, 79, .	2.3	15
89	Elastic metamaterials for tuning circular polarization of electromagnetic waves. Scientific Reports, 2016, 6, 28273.	3.4	15
90	Polymorphic crystals selected in the nucleation stage. Europhysics Letters, 2014, 107, 46002.	2.0	14

#	ARTICLE	IF	CITATIONS
91	Understanding the New Clinical Landscape for Psoriasis: A Comparative Review of Biologics. <i>Journal of Cutaneous Medicine and Surgery</i> , 2004, 8, 205-212.	1.3	13
92	The level and clinical significance of 5-hydroxymethylcytosine in oral squamous cell carcinoma: An immunohistochemical study in 95 patients. <i>Pathology Research and Practice</i> , 2017, 213, 969-974.	2.3	13
93	President Trump vs. CEOs: a comparison of presidential and corporate agenda building. <i>Journal of Public Relations Research</i> , 2020, 32, 30-46.	2.9	13
94	The effect of maleic anhydride grafting efficiency on the flexural properties of polyethylene composites. <i>Journal of Applied Polymer Science</i> , 2012, 124, 4799-4808.	2.7	12
95	<i>MotifAnalyzer&PDZ</i>: A computational program to investigate the evolution of PDZ&binding target specificity. <i>Protein Science</i> , 2019, 28, 2127-2143.	7.8	12
96	A Modular and Self&Contained Fluidic Engine for Soft Actuators. <i>Advanced Intelligent Systems</i> , 2022, 4, 2100094.	6.7	12
97	Multiple instance learning detects peripheral arterial disease from high-resolution color fundus photography. <i>Scientific Reports</i> , 2022, 12, 1389.	3.4	12
98	The use of clay minerals and microfossils in palaeoenvironmental reconstructions: The Holocene littoral strand of Las Nuevas (Do&ana National Park) SW Spain. <i>Clay Minerals</i> , 2002, 37, 93-103.	0.8	11
99	Deployable Structures Based on Buckling of Curved Beams Upon a Rotational Input. <i>Advanced Functional Materials</i> , 2021, 31, 2101144.	16.5	11
100	Preparation of mechanically strong poly (ether block amide)/Mercaptoethanol breathable membranes for biomedical applications. <i>Journal of Polymer Research</i> , 2018, 25, 1.	2.5	10
101	Genome-wide studies of time of day in the brain: Design and analysis. <i>Brain Science Advances</i> , 2020, 6, 92-105.	0.9	10
102	Are asymmetric stretch Raman spectra by centrosymmetric molecules depolarized?: The 2&1/2 overtone of CO2. <i>Journal of Chemical Physics</i> , 2011, 134, 044318.	3.1	9
103	Curvilinear Kirigami Skins Let Soft Bending Actuators Slither Faster. <i>Frontiers in Robotics and AI</i> , 2022, 9, 872007.	3.4	9
104	Comparative Genome Analyses of <i>Lactobacillus crispatus</i> Isolates from Different Ecological Niches Reveal an Adaptation of This Species to the Human Vaginal Environment. <i>Applied and Environmental Microbiology</i> , 2021, 87, .	3.2	8
105	A Soft, Modular, and Bi-stable Dome Actuator for Programmable Multi-Modal Locomotion. , 2020, , .		8
106	A Stochastic Second-Order Generalized Estimating Equations Approach for Estimating Association Parameters. <i>Journal of Computational and Graphical Statistics</i> , 2020, 29, 547-561.	1.8	7
107	Increasing Opportunities for Trainees to Engage in Global Health Radiology: Radiology In Training. <i>Radiology</i> , 2021, 300, E320-E322.	8.8	7
108	Optimal turbine blade design enabled by auxetic honeycomb. <i>Smart Materials and Structures</i> , 2020, 29, 125004.	3.5	7

#	ARTICLE	IF	CITATIONS
109	A 400 Gbps backplane switch with 10 Gbps/port optical I/O interfaces. , 2005, 6014, 158.		6
110	A merged presentation of clinical and radiographic data using probability plots in a clinical trial, the JESMR study. <i>Annals of the Rheumatic Diseases</i> , 2013, 72, 310-312.	7.6	6
111	Perceptions about Eclampsia, Birth Preparedness, and Complications Readiness among Antenatal Clients Attending a Specialist Hospital in Kano, Nigeria. <i>Journal of Tropical Medicine</i> , 2015, 2015, 1-7.	1.7	6
112	Increased acquired protease inhibitor drug resistance mutations in minor HIV-1 quasispecies from infected patients suspected of failing on national second-line therapy in South Africa. <i>BMC Infectious Diseases</i> , 2021, 21, 214.	3.0	6
113	Conventional versus reverse sequence of neoadjuvant epirubicin/cyclophosphamide and docetaxel: sequencing results from ABCSG-34. <i>British Journal of Cancer</i> , 2021, 124, 1795-1802.	6.6	6
114	Welcome to the year 2022. <i>Visual Computer</i> , 2022, 38, 27-28.	3.7	4
115	Association between <i>Chlamydia trachomatis</i> , <i>Neisseria gonorrhoea</i> , <i>Mycoplasma genitalium</i> , and <i>Trichomonas vaginalis</i> and Secondary Infertility in Cameroon: A case-control study. <i>PLoS ONE</i> , 2022, 17, e0263186.	2.5	4
116	Treatment of Medial Collateral Ligament Injuries of the Elbow with Use of the "Tommy John" Operation: Indications and Results. <i>JBJS Reviews</i> , 2014, 2, .	2.0	3
117	Spectroscopic Signatures of the Dynamical Hydrophobic Solvation Shell Formation. <i>Journal of Physical Chemistry B</i> , 2019, 123, 2106-2113.	2.7	3
118	Evaluation of Corrosion Phenomena of T91 Steel in Stagnant Liquid Lead at High Operational Temperatures. <i>Corrosion</i> , 2020, 76, .	1.1	3
119	Synchrotron X-ray studies of heavy metal mineral-microbe interactions. <i>Mineralogical Magazine</i> , 2008, 72, 169-173.	1.6	2
120	Stability of Lattice Materials. , 2017, , 139-153.		2
121	The importance of anesthesiological methods in the creation of arteriovenous fistulas. <i>International Surgery Journal</i> , 2021, 8, 1068.	0.1	2
122	Occurrence of a 16SrII subgroup D phytoplasma strain associated with leaf roll of greenhouse tomato in Iran. <i>Indian Phytopathology</i> , 0, , .	1.2	2
123	A Pilot Study of Allogeneic Hematopoietic Stem Cell Transplantation for Intermediated-risk Acute Myeloid Leukemia Patients. <i>In Vivo</i> , 2021, 35, 617-622.	1.4	1
124	William Howland Kenney, <i>Chicago Jazz: A Cultural History, 1904-1930</i> (New York & Oxford: Oxford University Press, 1993, £19.95). Pp. 536. ISBN 0 19 505410 5.. <i>Journal of American Studies</i> , 1995, 29, 110-112.	0.1	0
125	IMPLEMENTING A SUCCESSFUL METRICS PROGRAM. <i>Inco International Symposium</i> , 1996, 6, 1036-1042.	0.6	0
126	The Commerce Layer: A Framework for Commercial Transactions. <i>Lecture Notes in Computer Science</i> , 2000, , 121-153.	1.0	0

#	ARTICLE	IF	CITATIONS
127	Crystal Structure of 2,5-Bis(1-butyl-benzimidazol-2-yl)thiophene. Analytical Sciences: X-ray Structure Analysis Online, 2007, 23, X95-X96.	0.1	0
128	Dificultades en la elección de una ecuación de referencia para la interpretación de los resultados de capacidad de difusión de monóxido de carbono. Revista Chilena De Enfermedades Respiratorias, 2013, 29, 191-195.	0.1	0
129	Staple line reinforcement for adults undergoing bariatric surgery with gastric transection. The Cochrane Library, 2015, , .	2.8	0
130	Adenoviruses in Intestinal Transplantation; UNMC experience.. Transplantation, 2017, 101, S55.	1.1	0
131	Nonlinear elastic metasurface design achieving acoustic wave scattering control. , 2018, , .		0
132	Ontology: Introduction. , 2019, , 785-789.		0
133	Has adventitial arterial dissection for R0-pancreatic surgery an impact on the postoperative mortality?. Hpb, 2019, 21, S420-S421.	0.3	0