Andrew Alderson

List of Publications by Year
in descending order

62	3,201	159585 30	155660 55
papers	citations	h-index	g-index

64	64	64	1741
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Auxetic Materials for Sports Applications. Procedia Engineering, 2014, 72, 453-458.	1.2	241
2	An Auxetic Filter:Â A Tuneable Filter Displaying Enhanced Size Selectivity or Defouling Properties. Industrial & Engineering Chemistry Research, 2000, 39, 654-665.	3.7	209
3	Doubleâ€Negative Mechanical Metamaterials Displaying Simultaneous Negative Stiffness and Negative Poisson's Ratio Properties. Advanced Materials, 2016, 28, 10323-10332.	21.0	206
4	Review of Auxetic Materials for Sports Applications: Expanding Options in Comfort and Protection. Applied Sciences (Switzerland), 2018, 8, 941.	2.5	188
5	Molecular Origin of Auxetic Behavior in Tetrahedral Framework Silicates. Physical Review Letters, 2002, 89, 225503.	7.8	141
6	Auxetic two-dimensional polymer networks. An example of tailoring geometry for specific mechanical properties. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 2671.	1.7	131
7	NEGATIVE POISSON'S RATIOS FROM ROTATING RECTANGLES. Computational Methods in Science and Technology, 2004, 10, 137-145.	0.3	114
8	Manufacturing, characteristics and applications of auxetic foams: A state-of-the-art review. Composites Part B: Engineering, 2022, 235, 109733.	12.0	111
9	Negative Poisson's ratios in cellular foam materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 423, 214-218.	5.6	109
10	Auxetic warp knit textile structures. Physica Status Solidi (B): Basic Research, 2012, 249, 1322-1329.	1.5	109
11	The sensitisation of thermal decomposition of ammonium polyphosphate by selected metal ions and their potential for improved cotton fabric flame retardancy. Polymer Degradation and Stability, 2005, 88, 114-122.	5.8	108
12	Natrolite: A zeolite with negative Poissonâ€™s ratios. Journal of Applied Physics, 2007, 101, 086102.	2.5	107
13	On the Auxetic Properties of `Rotating Rectangles' with Different Connectivity. Journal of the Physical Society of Japan, 2005, 74, 2866-2867.	1.6	88
14	Negative Poissonâ€™s Ratio Polyester Fibers. Textile Reseach Journal, 2006, 76, 540-546.	2.2	82
15	The use of auxetic materials in tissue engineering. Biomaterials Science, 2020, 8, 2074-2083.	5.4	78
16	Application of Auxetic Foam in Sports Helmets. Applied Sciences (Switzerland), 2018, 8, 354.	2.5	72
17	An Alternative Explanation for the Negative Poisson's Ratios in Auxetic Foams. Journal of the Physical Society of Japan, 2005, 74, 1341-1342.	1.6	62
18	On the origin of auxetic behaviour in the silicate Î±-cristobalite. Journal of Materials Chemistry, 2005, 15, 4003.	6.7	62

#	Article	IF	Citations
19	An alternative explanation for the negative Poisson's ratios in Î±-cristobalite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 423, 219-224.	5.6	61
20	Quasi-static characterisation and impact testing of auxetic foam for sports safety applications. Smart Materials and Structures, 2016, 25, 054014.	3.5	54
21	In situ 3D Xâ€ray microtomography study comparing auxetic and nonâ€auxetic polymeric foams under tension. Physica Status Solidi (B): Basic Research, 2011, 248, 45-51.	1.5	53
22	Modelling the influence of the orientation and fibre reinforcement on the Negative Poisson's ratio in composite laminates. Physica Status Solidi (B): Basic Research, 2007, 244, 883-892.	1.5	52
23	Manufacture and characterisation of thin flat and curved auxetic foam sheets. Physica Status Solidi (B): Basic Research, 2012, 249, 1315-1321.	1.5	50
24	Fabrication, characterisation and modelling of uniform and gradient auxetic foam sheets. Acta Materialia, 2017, 126, 426-437.	7.9	49
25	Fabrication of Auxetic Foam Sheets for Sports Applications. Physica Status Solidi (B): Basic Research, 2017, 254, 1700596.	1.5	46
26	Preface: phys. stat. sol. (b) 242/3. Physica Status Solidi (B): Basic Research, 2005, 242, 497-497.	1.5	43
27	A Comparison of Novel and Conventional Fabrication Methods for Auxetic Foams for Sports Safety Applications. Procedia Engineering, 2016, 147, 384-389.	1.2	41
28	Auxetic Foams for Sport Safety Applications. Procedia Engineering, 2015, 112, 104-109.	1.2	37
29	Validation of a Finite Element Modeling Process for Auxetic Structures under Impact. Physica Status Solidi (B): Basic Research, 2020, 257, 1900197.	1.5	34
30	Can nanotubes display auxetic behaviour?. Physica Status Solidi (B): Basic Research, 2008, 245, 2373-2382.	1.5	32
31	Shear modulus of conventional and auxetic open-cell foam. Mechanics of Materials, 2021, 157, 103818.	3.2	30
32	Piezomorphic Materials. Macromolecular Materials and Engineering, 2013, 298, 318-327.	3.6	27
33	Preface: phys. stat. sol. (b) 244/3. Physica Status Solidi (B): Basic Research, 2007, 244, 813-816.	1.5	26
34	Auxetic Materials and Related Systems. Physica Status Solidi (B): Basic Research, 2014, 251, 263-266.	1.5	26
35	Auxetics and other systems of â€œnegativeâ€•characteristics. Physica Status Solidi (B): Basic Research, 2015, 252, 1421-1425.	1.5	24
36	Largeâ€scale extrusion of auxetic polypropylene fibre. Physica Status Solidi (B): Basic Research, 2016, 253, 1279-1287.	1.5	24

#	Article	IF	Citations
37	MOLECULAR MODELLING OF THE DEFORMATION MECHANISMS ACTING IN AUXETIC SILICA. Computational Methods in Science and Technology, 2004, 10, 117-126.	0.3	24
38	Numerical and analytical modelling of multiâ€layer adhesiveâ€“film interface systems. Physica Status Solidi (B): Basic Research, 2009, 246, 2072-2082.	1.5	23
39	Effects of Heat Exposure and Volumetric Compression on Poisson's Ratios, Young's Moduli, and Polymeric Composition During Thermoâ€Mechanical Conversion of Auxetic Open Cell Polyurethane Foam. Physica Status Solidi (B): Basic Research, 2019, 256, 1800393.	1.5	23
40	Models for the prediction of Poisson's ratio in the â€˜Î±â€cristobaliteâ€™ tetrahedral framework. Physica Status Solidi (B): Basic Research, 2015, 252, 1465-1478.	1.5	21
41	Modelling and testing of a foldable macrostructure exhibiting auxetic behaviour. Physica Status Solidi (B): Basic Research, 2011, 248, 117-122.	1.5	20
42	Modeling of negative Poissonâ€™s ratio (auxetic) crystalline cellulose Iβ. Cellulose, 2016, 23, 3429-3448.	4.9	14
43	The Application of Auxetic Material for Protective Sports Apparel. Proceedings (mdpi), 2018, 2, .	0.2	13
44	Auxetics and other systems of â€œnegativeâ€•characteristics. Physica Status Solidi (B): Basic Research, 2016, 253, 1241-1242.	1.5	12
45	Fabrication, characterization and analytical modeling of gradient auxetic closed cell foams. Smart Materials and Structures, 2021, 30, 035014.	3.5	12
46	Auxetic Foam for Snow-Sport Safety Devices. , 2017, , 145-159.		12
47	Effect of steam conversion on the cellular structure, Youngâ€™s modulus and negative Poissonâ€™s ratio of closed-cell foam. Smart Materials and Structures, 2021, 30, 015031.	3.5	11
48	Auxetics and Other Systems with â€œNegativeâ€•Characteristics. Physica Status Solidi (B): Basic Research, 2020, 257, 2000496.	1.5	10
49	Effect of Compressive Strain Rate on Auxetic Foam. Applied Sciences (Switzerland), 2021, 11, 1207.	2.5	10
50	Auxetic Cellular Materials and Structures. , 2005, , 489.		8
51	Auxetics and Other Systems of Anomalous Characteristics. Physica Status Solidi (B): Basic Research, 2019, 256, 1800736.	1.5	8
52	Auxetic orthotropic materials: Numerical determination of a phenomenological spline-based stored density energy and its implementation for finite element analysis. Computer Methods in Applied Mechanics and Engineering, 2020, 371, 113300.	6.6	8
53	The Effects of Processing on the Topology and Mechanical Properties of Negative Poissonâ€™s Ratio Foams. , 2005, , 503.		7
54	Controlling Density and Modulus in Auxetic Foam Fabricationsâ€”Implications for Impact and Indentation Testing. Proceedings (mdpi), 2018, 2, 250.	0.2	6

#	Article	IF	Citations
55	Auxetics in smart systems and structures 2015. Smart Materials and Structures, 2016, 25, 050301.	3.5	5
56	Auxetics in smart systems and structures 2013. Smart Materials and Structures, 2013, 22, 080201.	3.5	4
57	In Vivo Measurement of Surface Pressures and Retraction Distances Applied on Abdominal Organs During Surgery. Surgical Innovation, 2018, 25, 50-56.	0.9	3
58	Plantar Pressure Distribution under Uniform and Gradient Foam during Running and Jumping. Proceedings (mdpi), 2020, 49, .	0.2	1
59	Molecular modelling of structure and deformation mechanisms of auxetic behaviour in the Î±-quartz structures. Proceedings of SPIE, 2012, , .	0.8	0
60	Towards auxetic nanofibres: molecular modelling of auxetic behaviour in cellulose II. , 2012, , .		0
61	Modelling of the Structure-Property Relationships in Auxetic Nanotube. , 2012, , .		0
62	Modelling of the structure-property relationships in theÎ±-quartz structures. Proceedings of SPIE, 2013, , .	0.8	0