

Wei-Hsin Liao

List of Publications by Year in descending order

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316
papers

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citations

28274

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40979

93
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all docs

318
docs citations

318
times ranked

7553
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetorheological fluid dampers: a review of parametric modelling. <i>Smart Materials and Structures</i> , 2011, 20, 023001.	3.5	326
2	Anticorrosive, Ultralight, and Flexible Carbon- Wrapped Metallic Nanowire Hybrid Sponges for Highly Efficient Electromagnetic Interference Shielding. <i>Small</i> , 2018, 14, e1800534.	10.0	310
3	Recent developments and challenges of lower extremity exoskeletons. <i>Journal of Orthopaedic Translation</i> , 2016, 5, 26-37.	3.9	308
4	Sensitivity Analysis and Energy Harvesting for a Self-Powered Piezoelectric Sensor. <i>Journal of Intelligent Material Systems and Structures</i> , 2005, 16, 785-797.	2.5	271
5	Construction of a 3D-BaTiO ₃ network leading to significantly enhanced dielectric permittivity and energy storage density of polymer composites. <i>Energy and Environmental Science</i> , 2017, 10, 137-144.	30.8	265
6	Improved Design and Analysis of Self-Powered Synchronized Switch Interface Circuit for Piezoelectric Energy Harvesting Systems. <i>IEEE Transactions on Industrial Electronics</i> , 2012, 59, 1950-1960.	7.9	252
7	Significantly Enhanced Electrostatic Energy Storage Performance of Flexible Polymer Composites by Introducing Highly Insulating Ferroelectric Microhybrids as Fillers. <i>Advanced Energy Materials</i> , 2019, 9, 1803204.	19.5	250
8	Ultralight, super-elastic and volume-preserving cellulose fiber/graphene aerogel for high-performance electromagnetic interference shielding. <i>Carbon</i> , 2017, 115, 629-639.	10.3	228
9	Magnetic-spring based energy harvesting from human motions: Design, modeling and experiments. <i>Energy Conversion and Management</i> , 2017, 132, 189-197.	9.2	226
10	Adaptive metamaterials by functionally graded 4D printing. <i>Materials and Design</i> , 2017, 135, 26-36.	7.0	209
11	Graphene paper for exceptional EMI shielding performance using large-sized graphene oxide sheets and doping strategy. <i>Carbon</i> , 2017, 122, 74-81.	10.3	195
12	Impedance Modeling and Analysis for Piezoelectric Energy Harvesting Systems. <i>IEEE/ASME Transactions on Mechatronics</i> , 2012, 17, 1145-1157.	5.8	189
13	Vibration Control of a Suspension System via a Magnetorheological Fluid Damper. <i>JVC/Journal of Vibration and Control</i> , 2002, 8, 527-547.	2.6	184
14	Design and analysis of a piezoelectric energy harvester for rotational motion system. <i>Energy Conversion and Management</i> , 2016, 111, 239-244.	9.2	183
15	Modeling and control of magnetorheological fluid dampers using neural networks. <i>Smart Materials and Structures</i> , 2005, 14, 111-126.	3.5	181
16	Covalent polymer functionalization of graphene for improved dielectric properties and thermal stability of epoxy composites. <i>Composites Science and Technology</i> , 2016, 122, 27-35.	7.8	171
17	On the efficiencies of piezoelectric energy harvesting circuits towards storage device voltages. <i>Smart Materials and Structures</i> , 2007, 16, 498-505.	3.5	158
18	Self-expanding/shrinking structures by 4D printing. <i>Smart Materials and Structures</i> , 2016, 25, 105034.	3.5	147

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19	Lightweight, flexible MXene/polymer film with simultaneously excellent mechanical property and high-performance electromagnetic interference shielding. <i>Composites Part A: Applied Science and Manufacturing</i> , 2020, 130, 105764.	7.6	145
20	Multistability phenomenon in signal processing, energy harvesting, composite structures, and metamaterials: A review. <i>Mechanical Systems and Signal Processing</i> , 2022, 166, 108419.	8.0	136
21	Triple shape memory polymers by 4D printing. <i>Smart Materials and Structures</i> , 2018, 27, 065010.	3.5	121
22	Design, testing and control of a magnetorheological actuator for assistive knee braces. <i>Smart Materials and Structures</i> , 2010, 19, 035029.	3.5	114
23	A self-sensing magnetorheological damper with power generation. <i>Smart Materials and Structures</i> , 2012, 21, 025014.	3.5	109
24	Energy flow in piezoelectric energy harvesting systems. <i>Smart Materials and Structures</i> , 2011, 20, 015005.	3.5	104
25	Semi-active control of automotive suspension systems with magneto-rheological dampers. <i>International Journal of Vehicle Design</i> , 2003, 33, 50.	0.3	103
26	Semi-active suspension systems for railway vehicles using magnetorheological dampers. Part I: system integration and modelling. <i>Vehicle System Dynamics</i> , 2009, 47, 1305-1325.	3.7	103
27	Dynamic and energetic characteristics of a bistable piezoelectric vibration energy harvester with an elastic magnifier. <i>Mechanical Systems and Signal Processing</i> , 2018, 105, 427-446.	8.0	102
28	Knee exoskeletons for gait rehabilitation and human performance augmentation: A state-of-the-art. <i>Mechanism and Machine Theory</i> , 2019, 134, 499-511.	4.5	101
29	Energy absorption of thin walled tube filled with gradient auxetic structures-theory and simulation. <i>International Journal of Mechanical Sciences</i> , 2021, 201, 106475.	6.7	99
30	Design and experimental investigation of a low-voltage thermoelectric energy harvesting system for wireless sensor nodes. <i>Energy Conversion and Management</i> , 2017, 138, 30-37.	9.2	93
31	4D printed tunable mechanical metamaterials with shape memory operations. <i>Smart Materials and Structures</i> , 2019, 28, 045019.	3.5	93
32	Piezoelectric Energy Harvesting and Dissipation on Structural Damping. <i>Journal of Intelligent Material Systems and Structures</i> , 2009, 20, 515-527.	2.5	92
33	Large deformations of soft metamaterials fabricated by 3D printing. <i>Materials and Design</i> , 2017, 131, 81-91.	7.0	90
34	Barium titanate coated and thermally reduced graphene oxide towards high dielectric constant and low loss of polymeric composites. <i>Composites Science and Technology</i> , 2017, 141, 48-55.	7.8	87
35	A music-box-like extended rotational plucking energy harvester with multiple piezoelectric cantilevers. <i>Applied Physics Letters</i> , 2019, 114, .	3.3	84
36	Increasing dimension of structures by 4D printing shape memory polymers via fused deposition modeling. <i>Smart Materials and Structures</i> , 2017, 26, 125023.	3.5	82

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37	Exploiting the advantages of the centrifugal softening effect in rotational impact energy harvesting. Applied Physics Letters, 2020, 116, .	3.3	82
38	Modeling of Granular Particle Damping Using Multiphase Flow Theory of Gas-Particle. Journal of Vibration and Acoustics, Transactions of the ASME, 2004, 126, 196-201.	1.6	76
39	Design and Modeling of a Magnetorheological Valve with Both Annular and Radial Flow Paths. Journal of Intelligent Material Systems and Structures, 2006, 17, 327-334.	2.5	75
40	A device capable of customizing nonlinear forces for vibration energy harvesting, vibration isolation, and nonlinear energy sink. Mechanical Systems and Signal Processing, 2021, 147, 107101.	8.0	74
41	On the low-velocity impact responses of auxetic double arrowed honeycomb. Aerospace Science and Technology, 2020, 98, 105698.	4.8	73
42	ON THE ANALYSIS OF VISCOELASTIC MATERIALS FOR ACTIVE CONSTRAINED LAYER DAMPING TREATMENTS. Journal of Sound and Vibration, 1997, 207, 319-334.	3.9	71
43	Optimal design of a magnetorheological damper used in smart prosthetic knees. Smart Materials and Structures, 2017, 26, 035034.	3.5	69
44	Comprehensive theoretical and experimental investigation of the rotational impact energy harvester with the centrifugal softening effect. Nonlinear Dynamics, 2020, 101, 123-152.	5.2	68
45	A wearable exoskeleton suit for motion assistance to paralysed patients. Journal of Orthopaedic Translation, 2017, 11, 7-18.	3.9	67
46	Harmonic analysis of a magnetorheological damper for vibration control. Smart Materials and Structures, 2002, 11, 288-296.	3.5	66
47	Characteristics of Energy Storage Devices in Piezoelectric Energy Harvesting Systems. Journal of Intelligent Material Systems and Structures, 2008, 19, 671-680.	2.5	66
48	An auxetic nonlinear piezoelectric energy harvester for enhancing efficiency and bandwidth. Applied Energy, 2021, 298, 117274.	10.1	65
49	Semiactive Controllers for Magnetorheological Fluid Dampers. Journal of Intelligent Material Systems and Structures, 2005, 16, 983-993.	2.5	63
50	A magnetorheological valve with both annular and radial fluid flow resistance gaps. Smart Materials and Structures, 2009, 18, 115001.	3.5	63
51	Semi-active suspension systems for railway vehicles using magnetorheological dampers. Part II: simulation and analysis. Vehicle System Dynamics, 2009, 47, 1439-1471.	3.7	63
52	Nonlinear magnetic force and dynamic characteristics of a tri-stable piezoelectric energy harvester. Nonlinear Dynamics, 2019, 97, 2371-2397.	5.2	63
53	Tuned bistable nonlinear energy sink for simultaneously improved vibration suppression and energy harvesting. International Journal of Mechanical Sciences, 2021, 212, 106838.	6.7	62
54	Recent Advances in Human Motion Excited Energy Harvesting Systems for Wearables. Energy Technology, 2020, 8, 2000533.	3.8	61

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55	Theoretical predictions of dynamic responses of cylindrical sandwich filled with auxetic structures under impact loading. <i>Aerospace Science and Technology</i> , 2020, 107, 106270.	4.8	59
56	Design and Analysis of Magnetorheological Dampers for Train Suspension. <i>Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit</i> , 2005, 219, 261-276.	2.0	58
57	Analytical and experimental investigation of the centrifugal softening and stiffening effects in rotational energy harvesting. <i>Journal of Sound and Vibration</i> , 2020, 488, 115643.	3.9	57
58	Tuneable cellular-structured 3D graphene aerogel and its effect on electromagnetic interference shielding performance and mechanical properties of epoxy composites. <i>RSC Advances</i> , 2016, 6, 56589-56598.	3.6	56
59	Metamaterial and Helmholtz coupled resonator for high-density acoustic energy harvesting. <i>Nano Energy</i> , 2021, 82, 105693.	16.0	56
60	On the Active-Passive Hybrid Control Actions of Structures With Active Constrained Layer Treatments. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 1997, 119, 563-572.	1.6	55
61	Self-powered smart watch and wristband enabled by embedded generator. <i>Applied Energy</i> , 2020, 263, 114682.	10.1	55
62	A new active constrained layer configuration with enhanced boundary actions. <i>Smart Materials and Structures</i> , 1996, 5, 638-648.	3.5	51
63	Macro fiber composite-based energy harvester for human knee. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	51
64	Toward high-performance all-solid-state supercapacitors using facilely fabricated graphite nanosheet-supported CoMoS ₄ as electrode material. <i>Chemical Engineering Journal</i> , 2019, 355, 891-900.	12.7	50
65	Exploiting bi-stable magneto-piezoelectric absorber for simultaneous energy harvesting and vibration mitigation. <i>International Journal of Mechanical Sciences</i> , 2021, 207, 106618.	6.7	50
66	Vibration control of structures with self-sensing piezoelectric actuators incorporating adaptive mechanisms. <i>Smart Materials and Structures</i> , 2003, 12, 720-730.	3.5	49
67	Vibration analysis of simply supported beams with enhanced self-sensing active constrained layer damping treatments. <i>Journal of Sound and Vibration</i> , 2005, 280, 329-357.	3.9	49
68	Asymmetric plucking bistable energy harvester: Modeling and experimental validation. <i>Journal of Sound and Vibration</i> , 2019, 459, 114852.	3.9	49
69	An Empirical Method for Particle Damping Design. <i>Shock and Vibration</i> , 2004, 11, 647-664.	0.6	48
70	Enhanced breakdown strength of polymer composites by low filler loading and its mechanisms. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	47
71	Human Gait Modeling and Analysis Using a Semi-Markov Process With Ground Reaction Forces. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2017, 25, 597-607.	4.9	45
72	Effective elastic properties of irregular auxetic structures. <i>Composite Structures</i> , 2022, 287, 115269.	5.8	45

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73	A systematic study on electrical properties of the BaTiO ₃ epoxy composite with different sized BaTiO ₃ as fillers. <i>Journal of Alloys and Compounds</i> , 2015, 620, 315-323.	5.5	44
74	Characteristics of Enhanced Active Constrained Layer Damping Treatments With Edge Elements, Part 1: Finite Element Model Development and Validation. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 1998, 120, 886-893.	1.6	43
75	Wireless Monitoring of Cable Tension of Cable-Stayed Bridges Using PVDF Piezoelectric Films. <i>Journal of Intelligent Material Systems and Structures</i> , 2001, 12, 331-339.	2.5	43
76	Design and testing of a regenerative magnetorheological actuator for assistive knee braces. <i>Smart Materials and Structures</i> , 2017, 26, 035013.	3.5	41
77	A smart harvester for capturing energy from human ankle dorsiflexion with reduced user effort. <i>Smart Materials and Structures</i> , 2019, 28, 015026.	3.5	41
78	An analytical model of cylindrical double-arrowed honeycomb with negative Poisson's ratio. <i>International Journal of Mechanical Sciences</i> , 2020, 173, 105400.	6.7	41
79	Acoustic energy harvesting enhanced by locally resonant metamaterials. <i>Smart Materials and Structures</i> , 2020, 29, 075025.	3.5	39
80	A knee-mounted biomechanical energy harvester with enhanced efficiency and safety. <i>Smart Materials and Structures</i> , 2017, 26, 065027.	3.5	38
81	Enhanced electromagnetic wrist-worn energy harvester using repulsive magnetic spring. <i>Mechanical Systems and Signal Processing</i> , 2021, 150, 107251.	8.0	38
82	Precision Positioning of Hard Disk Drives Using Piezoelectric Actuators With Passive Damping. <i>IEEE/ASME Transactions on Mechatronics</i> , 2008, 13, 147-151.	5.8	37
83	On the Influence of Transducer Internal Loss in Piezoelectric Energy Harvesting with SSHI Interface. <i>Journal of Intelligent Material Systems and Structures</i> , 2011, 22, 503-512.	2.5	37
84	Attaining the high-energy orbit of nonlinear energy harvesters by load perturbation. <i>Energy Conversion and Management</i> , 2019, 192, 30-36.	9.2	36
85	IMU-Based Locomotion Mode Identification for Transtibial Prostheses, Orthoses, and Exoskeletons. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2020, 28, 1334-1343.	4.9	36
86	Characteristics of a tri-stable piezoelectric vibration energy harvester by considering geometric nonlinearity and gravitation effects. <i>Mechanical Systems and Signal Processing</i> , 2020, 138, 106571.	8.0	35
87	A novel multifunctional rotary actuator with magnetorheological fluid. <i>Smart Materials and Structures</i> , 2012, 21, 065012.	3.5	34
88	Ankle-foot orthoses for rehabilitation and reducing metabolic cost of walking: Possibilities and challenges. <i>Mechatronics</i> , 2018, 53, 241-250.	3.3	34
89	Modeling and experimental validation on the interference of mechanical plucking energy harvesting. <i>Mechanical Systems and Signal Processing</i> , 2019, 134, 106317.	8.0	34
90	Modulated ultrasonic elliptical vibration cutting for ductile-regime texturing of brittle materials with 2-D combined resonant and non-resonant vibrations. <i>International Journal of Mechanical Sciences</i> , 2020, 170, 105347.	6.7	34

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91	Design of Powered Ankle-Foot Prosthesis With Nonlinear Parallel Spring Mechanism. Journal of Mechanical Design, Transactions of the ASME, 2018, 140, .	2.9	33
92	A nonlinear M-shaped tri-directional piezoelectric energy harvester. Smart Materials and Structures, 2021, 30, 045017.	3.5	33
93	Investigations on magnetic bistable PZT-based absorber for concurrent energy harvesting and vibration mitigation: Numerical and analytical approaches. Energy, 2022, 239, 122376.	8.8	33
94	Studies on the circuit models of piezoelectric ceramics. , 0, , .		32
95	On the Equivalent Circuit Models of Piezoelectric Ceramics. Ferroelectrics, 2009, 386, 77-87.	0.6	32
96	An integrated relative displacement self-sensing magnetorheological damper: prototyping and testing. Smart Materials and Structures, 2010, 19, 105008.	3.5	32
97	A bistable piezoelectric oscillator with an elastic magnifier for energy harvesting enhancement. Journal of Intelligent Material Systems and Structures, 2017, 28, 392-407.	2.5	32
98	Design and characterization of a magneto-rheological series elastic actuator for a lower extremity exoskeleton. Smart Materials and Structures, 2017, 26, 105008.	3.5	31
99	Reference Joint Trajectories Generation of CUHK-EXO Exoskeleton for System Balance in Walking Assistance. IEEE Access, 2019, 7, 33809-33821.	4.2	31
100	Enhanced modeling of nonlinear restoring force in multi-stable energy harvesters. Journal of Sound and Vibration, 2021, 494, 115890.	3.9	31
101	Modeling and Analysis of Piezoelectric Energy Harvesting With Dynamic Plucking Mechanism. Journal of Vibration and Acoustics, Transactions of the ASME, 2019, 141, .	1.6	30
102	Design of vibration energy harvesters with customized nonlinear forces. Mechanical Systems and Signal Processing, 2021, 153, 107526.	8.0	30
103	Bistable energy harvesting backpack: Design, modeling, and experiments. Energy Conversion and Management, 2022, 259, 115441.	9.2	30
104	Feasibility study of a self-powered piezoelectric sensor. , 2004, 5389, 377.		28
105	Steady-State Simulation and Optimization of Class-E Power Amplifiers With Extended Impedance Method. IEEE Transactions on Circuits and Systems I: Regular Papers, 2011, 58, 1433-1445.	5.4	28
106	Dielectric loss against piezoelectric power harvesting. Smart Materials and Structures, 2014, 23, 092001.	3.5	28
107	Wireless Transmission for Health Monitoring of Large Structures. IEEE Transactions on Instrumentation and Measurement, 2006, 55, 972-981.	4.7	26
108	A Leg Exoskeleton Utilizing a Magnetorheological Actuator. , 2006, , .		25

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109	An enhanced nonlinear piezoelectric energy harvester with multiple rotating square unit cells. <i>Mechanical Systems and Signal Processing</i> , 2022, 173, 109065.	8.0	25
110	Analysis and design of a self-powered piezoelectric microaccelerometer. , 2005, 5763, 233.		24
111	Nondimensional model and parametric studies of impact piezoelectric energy harvesting with dissipation. <i>Journal of Sound and Vibration</i> , 2018, 429, 78-95.	3.9	24
112	Self-Powered Smart Insole for Monitoring Human Gait Signals. <i>Sensors</i> , 2019, 19, 5336.	3.8	24
113	A modified magnetic force model and experimental validation of a tri-stable piezoelectric energy harvester. <i>Journal of Intelligent Material Systems and Structures</i> , 2020, 31, 967-979.	2.5	24
114	Piezoelectric autoparametric vibration energy harvesting with chaos control feature. <i>Mechanical Systems and Signal Processing</i> , 2021, 161, 107989.	8.0	24
115	Design and control of a Magnetorheological actuator for leg exoskeleton. , 2007, , .		23
116	Molten pool characteristics of a nickel-titanium shape memory alloy for directed energy deposition. <i>Optics and Laser Technology</i> , 2021, 142, 107215.	4.6	23
117	Severity level diagnosis of Parkinson's disease by ensemble K-nearest neighbor under imbalanced data. <i>Expert Systems With Applications</i> , 2022, 189, 116113.	7.6	23
118	Medical applications of magnetorheological fluid: a systematic review. <i>Smart Materials and Structures</i> , 2022, 31, 043002.	3.5	23
119	Tuning dielectric properties and energy density of poly(vinylidene fluoride) nanocomposites by quasi core-shell structured BaTiO ₃ @graphene oxide hybrids. <i>Journal of Materials Science: Materials in Electronics</i> , 2018, 29, 1082-1092.	2.2	22
120	Design, Modeling, and Experiments of Electromagnetic Energy Harvester Embedded in Smart Watch and Wristband as Power Source. <i>IEEE/ASME Transactions on Mechatronics</i> , 2021, 26, 2104-2114.	5.8	22
121	A Snake Robot Using Shape Memory Alloys. , 0, , .		21
122	Identification of ankle sprain motion from common sporting activities by dorsal foot kinematics data. <i>Journal of Biomechanics</i> , 2010, 43, 1965-1969.	2.1	21
123	Design of a multi-stable piezoelectric energy harvester with programmable equilibrium point configurations. <i>Applied Energy</i> , 2021, 302, 117585.	10.1	21
124	An improved self-powered switching interface for piezoelectric energy harvesting. , 2009, , .		20
125	Vibration control and analysis of a rotating flexible FGM beam with a lumped mass in temperature field. <i>Composite Structures</i> , 2019, 208, 244-260.	5.8	20
126	High-Power Density Inertial Energy Harvester Without Additional Proof Mass for Wearables. <i>IEEE Internet of Things Journal</i> , 2021, 8, 297-308.	8.7	20

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127	Broadband energy harvester for low-frequency rotations utilizing centrifugal softening piezoelectric beam array. <i>Energy</i> , 2022, 241, 122833.	8.8	20
128	Characteristics of Enhanced Active Constrained Layer Damping Treatments With Edge Elements, Part 2: System Analysis. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 1998, 120, 894-900.	1.6	19
129	Impedance matching for improving piezoelectric energy harvesting systems. <i>Proceedings of SPIE</i> , 2010, , .	0.8	19
130	Self-powered magnetorheological dampers for motorcycle suspensions. <i>Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering</i> , 2018, 232, 921-935.	1.9	19
131	Contact/impact modeling and analysis of 4D printed shape memory polymer beams. <i>Smart Materials and Structures</i> , 2020, 29, 085016.	3.5	19
132	A finite-strain constitutive model for anisotropic shape memory alloys. <i>Mechanics of Materials</i> , 2017, 112, 129-142.	3.2	18
133	Multivariate Multiscale Symbolic Entropy Analysis of Human Gait Signals. <i>Entropy</i> , 2017, 19, 557.	2.2	18
134	Theoretical modeling and experimental verification of circular Halbach electromagnetic energy harvesters for performance enhancement. <i>Smart Materials and Structures</i> , 2018, 27, 095019.	3.5	18
135	Implementation and Testing of Ankle-Foot Prosthesis With a New Compensated Controller. <i>IEEE/ASME Transactions on Mechatronics</i> , 2019, 24, 1775-1784.	5.8	18
136	On ductile-regime elliptical vibration cutting of silicon with identifying the lower bound of practicable nominal cutting velocity. <i>Journal of Materials Processing Technology</i> , 2020, 283, 116720.	6.3	18
137	Experimental Studies for Particle Damping on a Bond Arm. <i>JVC/Journal of Vibration and Control</i> , 2006, 12, 297-312.	2.6	17
138	Magnetorheological damper with multi-grooves on piston for damping force enhancement. <i>Smart Materials and Structures</i> , 2021, 30, 025007.	3.5	17
139	A rotational hybrid energy harvester utilizing bistability for low-frequency applications: Modelling and experimental validation. <i>International Journal of Mechanical Sciences</i> , 2022, 222, 107235.	6.7	17
140	A Bidirectional Energy Conversion Circuit Toward Multifunctional Piezoelectric Energy Harvesting and Vibration Excitation Purposes. <i>IEEE Transactions on Power Electronics</i> , 2021, 36, 12889-12897.	7.9	16
141	A study of semi-rigid support on ankle supination sprain kinematics. <i>Scandinavian Journal of Medicine and Science in Sports</i> , 2010, 20, 822-826.	2.9	15
142	A self-powered, self-sensing magnetorheological damper. , 2010, , .		15
143	Sit-to-stand and stand-to-sit assistance for paraplegic patients with CUHK-EXO exoskeleton. <i>Robotica</i> , 2018, 36, 535-551.	1.9	15
144	Experimentally validated multi-scale modeling of 3D printed hyper-elastic lattices. <i>International Journal of Non-Linear Mechanics</i> , 2019, 108, 87-110.	2.6	15

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145	A dual-effect solution for broadband piezoelectric energy harvesting. Applied Physics Letters, 2020, 116, .	3.3	15
146	A hybrid piezoelectric device combining a tri-stable energy harvester with an elastic base for low-orbit vibration energy harvesting enhancement. Smart Materials and Structures, 2021, 30, 075028.	3.5	15
147	Crashworthiness optimization of cylindrical negative Poisson's ratio structures with inner liner tubes. Structural and Multidisciplinary Optimization, 2021, 64, 4271-4286.	3.5	15
148	Lightweight Piezoelectric Bending Beam-Based Energy Harvester for Capturing Energy From Human Knee Motion. IEEE/ASME Transactions on Mechatronics, 2022, 27, 1256-1266.	5.8	15
149	Enhancing power output of piezoelectric energy harvesting by gradient auxetic structures. Applied Physics Letters, 2022, 120, .	3.3	15
150	Neural network modeling and controllers for magnetorheological fluid dampers. , 0, , .		14
151	Precision Positioning of Hard Disk Drives Using Piezoelectric Actuators with Passive Damping. , 2006, , .		14
152	Fabrication of structurally colored basso-relievo with modulated elliptical vibration texturing. Precision Engineering, 2020, 64, 113-121.	3.4	14
153	Spatial characteristics of nickel-titanium shape memory alloy fabricated by continuous directed energy deposition. Journal of Manufacturing Processes, 2021, 71, 417-428.	5.9	14
154	A flexible and lead-free BCZT thin film nanogenerator for biocompatible energy harvesting. Materials Chemistry Frontiers, 2021, 5, 4682-4689.	5.9	14
155	Design and optimization of a magnetorheological damper based on B-spline curves. Mechanical Systems and Signal Processing, 2022, 178, 109279.	8.0	14
156	Snap buckling of NiTi tubes. International Journal of Solids and Structures, 2018, 146, 29-42.	2.7	13
157	Online Adaptive and LSTM-Based Trajectory Generation of Lower Limb Exoskeletons for Stroke Rehabilitation. , 2018, , .		13
158	Vibration suppression of a rotating functionally graded beam with enhanced active constrained layer damping treatment in temperature field. Thin-Walled Structures, 2021, 161, 107522.	5.3	13
159	Design of a lower extremity exoskeleton for motion assistance in paralyzed individuals. , 2015, , .		12
160	Insole plantar pressure systems in the gait analysis of post-stroke rehabilitation. , 2015, , .		12
161	Numerical/experimental assessment of 3D-printed shape-memory polymeric beams. Journal of Applied Polymer Science, 2019, 136, 47422.	2.6	12
162	Vibration analysis of a free moving thin plate with fully covered active constrained layer damping treatment. Composite Structures, 2020, 235, 111742.	5.8	12

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163	New insight into piezoelectric energy harvesting with mechanical and electrical nonlinearities. Smart Materials and Structures, 2020, 29, 04LT01.	3.5	12
164	Hybridizing piezoelectric and electromagnetic mechanisms with dynamic bistability for enhancing low-frequency rotational energy harvesting. Applied Physics Letters, 2021, 119, .	3.3	12
165	<title>Semi-active control of automotive suspension systems with magnetorheological dampers</title>. , 2001, 4327, 125.		11
166	Fabrication, Testing, and Modeling of Carbon Nanotube Composites for Vibration Damping. Journal of Vibration and Acoustics, Transactions of the ASME, 2009, 131, .	1.6	11
167	Optimization of a multifunctional actuator utilizing magnetorheological fluids. , 2011, , .		11
168	Design of powered ankle-foot prosthesis driven by parallel elastic actuator. , 2015, , .		11
169	User-Adaptive Assistance of Assistive Knee Braces for Gait Rehabilitation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1994-2005.	4.9	11
170	Dynamic modeling and analysis of rotating beams with partially covered enhanced active constrained layer damping treatment. Journal of Sound and Vibration, 2019, 455, 46-68.	3.9	11
171	Knee energy harvester with variable transmission to reduce the effect on the walking gait. Smart Materials and Structures, 0, , .	3.5	11
172	Synergy-based knee angle estimation using kinematics of thigh. Gait and Posture, 2021, 89, 25-30.	1.4	11
173	A centrifugal softening impact energy harvester with the bistability using flextensional transducers for low rotational speeds. Smart Materials and Structures, 2020, 29, 115024.	3.5	11
174	A feasibility study of a microaccelerometer with magnetorheological fluids. , 0, , .		10
175	A High Efficiency Boost Converter with MPPT Scheme for Low Voltage Thermoelectric Energy Harvesting. Journal of Electronic Materials, 2016, 45, 5514-5520.	2.2	10
176	Cam Profile Generation for Cam-Spring Mechanism With Desired Torque. Journal of Mechanisms and Robotics, 2018, 10, .	2.2	10
177	Vibration control of a rotating hub-plate with enhanced active constrained layer damping treatment. Aerospace Science and Technology, 2021, 118, 107081.	4.8	10
178	Modulated vibration texturing of hierarchical microchannels with controllable profiles and orientations. CIRP Journal of Manufacturing Science and Technology, 2020, 30, 58-67.	4.5	10
179	Design of a quad-stable piezoelectric energy harvester capable of programming the coordinates of equilibrium points. Nonlinear Dynamics, 2022, 108, 857-871.	5.2	10
180	Design and fabrication of an integrated three-dimensional tactile sensor for space robotic applications. , 1999, , .		9

#	ARTICLE	IF	CITATIONS
181	On the energy storage devices in piezoelectric energy harvesting. , 2006, , .		9
182	An Efficient Finite Element Algorithm in Elastography. International Journal of Applied Mechanics, 2016, 08, 1650037.	2.2	9
183	A new powered ankle-foot prosthesis with compact parallel spring mechanism. , 2016, , .		9
184	Accurate identification of Parkinsonâ€™s disease by distinctive features and ensemble decision trees. Biomedical Signal Processing and Control, 2021, 69, 102860.	5.7	9
185	A New Two-Axis Optical Scanner Actuated by Piezoelectric Bimorphs. International Journal of Optomechatronics, 2012, 6, 336-349.	6.6	8
186	Design and control of a powered knee orthosis for gait assistance. , 2013, , .		8
187	Lower Limb Exoskeleton Control via Linear Quadratic Regulator and Disturbance Observer. , 2018, , .		8
188	Design of a broadband piezoelectric energy harvester with piecewise nonlinearity. Smart Materials and Structures, 2021, 30, 085040.	3.5	8
189	Optimization algorithm-based approach for modeling large deflection of cantilever beam subject to tip load. Mechanism and Machine Theory, 2022, 167, 104522.	4.5	8
190	Design of a high-performance piecewise bi-stable piezoelectric energy harvester. Energy, 2022, 241, 122514.	8.8	8
191	Microstructure and phase transformation of nickel-titanium shape memory alloy fabricated by directed energy deposition with in-situ heat treatment. Journal of Alloys and Compounds, 2022, 898, 162896.	5.5	8
192	Shape optimization of magnetorheological damper piston based on parametric curve for damping force augmentation. Smart Materials and Structures, 2022, 31, 015027.	3.5	8
193	Comparative analysis of piezoelectric power harvesting circuits for rechargeable batteries. , 0, , .		7
194	Design and control of multifunctional magnetorheological actuators for assistive knee braces. Proceedings of SPIE, 2010, , .	0.8	7
195	HIP-KNEE control for gait assistance with Powered Knee Orthosis. , 2013, , .		7
196	Electromechanical characteristics of discal piezoelectric transducers with spiral interdigitated electrodes. Smart Materials and Structures, 2014, 23, 125029.	3.5	7
197	A robust hyper-elastic beam model under bi-axial normal-shear loadings. International Journal of Non-Linear Mechanics, 2017, 95, 287-295.	2.6	7
198	Large Deformation and Vibration Analysis of Microbeams by Absolute Nodal Coordinate Formulation. International Journal of Structural Stability and Dynamics, 2019, 19, 1950049.	2.4	7

#	ARTICLE	IF	CITATIONS
199	Power enhancement of a monostable energy harvester by orbit jumps. <i>Journal of Intelligent Material Systems and Structures</i> , 2021, 32, 2601-2614.	2.5	7
200	On the Active-Passive Hybrid Vibration Control Actions of Structures With Active Constrained Layer Treatments. , 1995, , .		7
201	<title>Vibration control of a suspension system via a magnetorheological fluid damper</title>. , 2000, , .		6
202	Shock Resistance of a Disk-Drive Assembly Using Piezoelectric Actuators With Passive Damping. <i>IEEE Transactions on Magnetics</i> , 2008, 44, 525-532.	2.1	6
203	Self-sensing actuators with passive damping for adaptive vibration control of hard disk drives. <i>Microsystem Technologies</i> , 2009, 15, 355-366.	2.0	6
204	Design and testing of assistive knee brace with magnetorheological actuator. , 2009, , .		6
205	A mechanical energy harvested magnetorheological damper with linear-rotary motion converter. , 2016, , .		6
206	Orbit Jumps of Monostable Energy Harvesters by a Bidirectional Energy Conversion Circuit. , 2019, , .		6
207	Being gradually softened approach for solving large deflection of cantilever beam subjected to distributed and tip loads. <i>Mechanism and Machine Theory</i> , 2022, 174, 104879.	4.5	6
208	Gait Synergy Analysis and Modeling on Amputees and Stroke Patients for Lower Limb Assistive Devices. <i>Sensors</i> , 2022, 22, 4814.	3.8	6
209	<title>Experimental investigation of an enhanced self-sensing active constrained layer damping treatment</title>. , 2001, , .		5
210	Damping Characteristics of Beams with Enhanced Self-Sensing Active Constrained Layer Treatments Under Various Boundary Conditions. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2005, 127, 173-187.	1.6	5
211	Magnetorheological fluids based multifunctional actuator for assistive knee braces. , 2009, , .		5
212	Regenerative magnetorheological dampers for vehicle suspensions. , 2015, , .		5
213	A Low-Power Thermoelectric Energy Harvesting System for High Internal Resistance Thermoelectric Generators. <i>Journal of Electronic Materials</i> , 2019, 48, 5375-5389.	2.2	5
214	Concurrent energy harvesting and vibration suppression utilizing PZT-based dynamic vibration absorber. <i>Archive of Applied Mechanics</i> , 2022, 92, 363-382.	2.2	5
215	<title>Analysis and design of viscoelastic materials for active constrained layer damping treatments</title>. , 1996, , .		4
216	Design and analysis of a magnetorheological damper for train suspension. , 2004, , .		4

#	ARTICLE	IF	CITATIONS
217	Modeling of carbon nanotube composites for vibration damping. , 2007, , .		4
218	Integrated design and analysis of smart actuators for hybrid assistive knee brace-fla. , 2009, , .		4
219	Experimental studies on kinematics and kinetics of walking with an assistive knee brace. , 2011, , .		4
220	Gait analysis for designing a new assistive knee brace. , 2011, , .		4
221	Triple band-notched UWB antenna with tapered microstrip feed line and slot coupling for bandwidth enhancement. , 2015, , .		4
222	Kinematics Modeling and Gait Trajectory Tracking for Lower Limb Exoskeleton Robot based on PD Control with Gravity Compensation. , 2019, , .		4
223	State-space based discretize-then-differentiate adjoint sensitivity method for transient responses of non-viscously damped systems. Computers and Structures, 2021, 250, 106540.	4.4	4
224	A high sensitivity piezoelectric MEMS accelerometer based on aerosol deposition method. , 2019, , .		4
225	Disturbance rejection and performance enhancement of perturbed tri-stable energy harvesters by adaptive finite-time disturbance observer. Acta Mechanica Sinica/Lixue Xuebao, 2022, 38, .	3.4	4
226	Instrumentation of a wireless transmission system for health monitoring of large infrastructures. , 0, , .		3
227	Ride quality improvement ability of semi-active, active, and passive suspension systems for railway vehicles. , 2003, , .		3
228	Self-sensing actuators for adaptive vibration control of hard disk drives. , 2008, , .		3
229	Carbon Nanotube Composites for Vibration Damping. Advanced Materials Research, 2008, 47-50, 817-820.	0.3	3
230	Development and testing of a magnetorheological actuator for an assistive knee brace. , 2008, , .		3
231	Impedance analysis for piezoelectric energy harvesting devices under displacement and force excitations. , 2010, , .		3
232	Design and analysis of a self-powered, self-sensing magnetorheological damper. Proceedings of SPIE, 2011, , .	0.8	3
233	Active-passive hybrid actuators for tracking and focusing motions in optical pickup devices. , 2011, , .		3
234	Design and analysis of a regenerative magnetorheological actuator for gait assistance in knee joint. , 2014, , .		3

#	ARTICLE	IF	CITATIONS
235	Design optimization of a magnetorheological brake in powered knee orthosis. , 2015, , .		3
236	A robust macroscopic model for normal shear coupling, asymmetric and anisotropic behaviors of polycrystalline SMAs. Smart Materials and Structures, 2016, 25, 075019.	3.5	3
237	Modeling and analysis of reversible shape memory adaptive panels. Journal of Intelligent Material Systems and Structures, 2016, 27, 1624-1649.	2.5	3
238	Design sensitivity analysis for transient responses of viscoelastically damped systems using model order reduction techniques. Structural and Multidisciplinary Optimization, 2021, 64, 1501-1526.	3.5	3
239	DESIGN AND MODELING OF A MAGNETORHEOLOGICAL VALVE WITH BOTH ANNULAR AND RADIAL FLOW PATHS. , 2005, , .		3
240	A bidirectional energy conversion circuit for piezoelectric energy harvesting and vibration exciting purposes. , 2019, , .		3
241	Adaptive body fitness equipment using magnetorheological fluids. , 2005, , .		2
242	Energy harvesting and dissipation with piezoelectric materials. , 2008, , .		2
243	Experimental evaluation of an assistive knee brace with magnetorheological actuator. , 2010, , .		2
244	Modeling of Vertically Aligned Carbon Nanotube Composites for Vibration Damping. Journal of Computational and Theoretical Nanoscience, 2011, 8, 1784-1791.	0.4	2
245	Torsional piezoelectric fiber for viscosity measurement of Newtonian fluids. , 2012, , .		2
246	Feasibility study of self-powered magnetorheological damper systems. , 2012, , .		2
247	A regenerative damper with MR fluids working between gear transmissions. , 2013, , .		2
248	Human level walking gait modeling and analysis based on semi-Markov process. , 2014, , .		2
249	Flexible Integration Points Coupled with Smoothed Strain in Elasticity Problems. International Journal of Applied Mechanics, 2017, 09, 1750079.	2.2	2
250	Modeling of plucking piezoelectric energy harvesters with contact theory. Proceedings of SPIE, 2017, , .	0.8	2
251	Motion planning of lower limb exoskeleton with passive ankle for paraplegics. , 2017, , .		2
252	Motion Adaption and Trajectory Generation of Stair Ascent and Descent with a Lower Limb Exoskeleton for Paraplegics. , 2019, , .		2

#	ARTICLE	IF	CITATIONS
253	Trajectory Tracking for Swing Phase of the Lower Limb Exoskeleton. , 2019, , .		2
254	Analysis of the interference in typical rotational plucking energy harvester. , 2019, , .		2
255	Model and Experiments of a Broadband Piezoelectric Vibration Energy Harvester. Jixie Gongcheng Xuebao/Chinese Journal of Mechanical Engineering, 2015, 51, 155.	0.5	2
256	Vibration and stability analysis of drivelines with self-excitation of non-constant velocity couplings. Mechanics Based Design of Structures and Machines, 0, , 1-24.	4.7	2
257	<title>Synthesis and control of active constrained layers with enhanced boundary actions</title>. , 1996, 2715, 269.		1
258	<title>Analysis of edge elements for a new active constrained layer treatment</title>. , 1997, , .		1
259	Implementation of adaptive structures with enhanced self-sensing piezoelectric actuators. , 0, , .		1
260	<title>Pressurized magnetorheological dampers for train suspension</title>. , 2005, , .		1
261	Active-passive hybrid piezoelectric actuators for high-precision hard disk drive servo systems. , 2006, 6173, 24.		1
262	Shock Resistance of a Disk-Drive Assembly Using Piezoelectric Actuators with Passive Damping. , 2007, , .		1
263	EXPERIMENTAL VALIDATION OF A SIGNUM FUNCTION BASED DAMPER CONTROLLER FOR MR FLUID DAMPERS. , 2007, , .		1
264	Simulation and optimization of class-E power amplifiers with extended impedance method. , 2009, , .		1
265	Smart materials, multifunctional composites, and morphing structures: selected papers from the 20th International Conference on Adaptive Structures and Technologies (ICAST 2009). Smart Materials and Structures, 2010, 19, 120201.	3.5	1
266	Temporal gait parameters captured by Surface Electromyography measurement. , 2012, , .		1
267	Design considerations in medium-power biomechanical energy harvesting circuits. , 2014, , .		1
268	Embedded filter based on the BaTiO ₃ -epoxy composite film. , 2014, , .		1
269	Vibration characteristics of a discal piezoelectric transducer with spiral interdigitated electrodes. , 2014, , .		1
270	SMA bellows as reversible thermal sensors/actuators. Smart Materials and Structures, 2015, 24, 065013.	3.5	1

#	ARTICLE	IF	CITATIONS
271	Micro-“macro thermo-mechanical analysis of axisymmetric shape memory alloy composite cylinders. Composite Structures, 2015, 131, 1001-1016.	5.8	1
272	A dimensionless model of impact piezoelectric energy harvesting with dissipation. Proceedings of SPIE, 2016, , .	0.8	1
273	Design of smart prosthetic knee utilizing magnetorheological damper. Proceedings of SPIE, 2017, , .	0.8	1
274	Shape Adaptive Structures by 4D Printing. , 2017, , .		1
275	Impulsively-Excited Bistable Energy Harvester Combined With Electromagnetic Mechanism. , 2018, , .		1
276	Slender structure of nickel-titanium shape memory alloy fabricated by continuous directed energy deposition. , 2021, , .		1
277	Sensitivity and Hessian matrix analysis of power spectrum density function for non-classically damped systems subject to stationary stochastic excitations. Mechanical Systems and Signal Processing, 2021, 161, 107895.	8.0	1
278	Development of a Multi-Directional Metal 3D Printing System Based on Direct Metal Deposition. , 2019, , .		1
279	Triggering the high-energy orbit oscillation of bistable energy harvesters using electrical coupling. , 2018, , .		1
280	Evaluating Fretting Wear on 3D-Printed $\hat{1}\pm$, $\hat{1}^2$, $\hat{1}^3$ - Additives Hybridized NiTi Shape Memory Alloy. , 2019, , .		1
281	A low-noise three-axis piezoelectric MEMS accelerometer for condition monitoring. , 2020, , .		1
282	Refined Weighted-Permutation Entropy: A Complexity Measure for Human Gait and Physiologic Signals with Outliers and Noise. , 2020, , 223-231.		1
283	Continuous finite-time sliding mode control for synchronization of perturbed bistable electrostatic and piezoelectric transducers with external disturbances. JVC/Journal of Vibration and Control, 2023, 29, 2392-2410.	2.6	1
284	<title>Damping and isolation of the GHM mini-oscillators</title>. , 2000, , .		0
285	<title>Harmonic analysis of semi-active control with MR dampers</title>. , 2002, 4697, 370.		0
286	<title>Implementation of structures with self-sensing piezoelectric actuators incorporating adaptive mechanisms</title>. , 2002, 4701, 304.		0
287	Location and coverage of enhanced self-sensing piezoelectric actuators for active-passive hybrid vibration control of beam structures. , 0, , .		0
288	Analytical Formulation and Damping Analysis of Beams With Enhanced Active Constrained Layer Treatments Under Various Boundary Conditions. , 2005, , 2269.		0

#	ARTICLE	IF	CITATIONS
289	Transmissibilities of Two-Degree-of-Freedom Systems for Semi-Active Vibration Control. , 2006, , 339.		0
290	Shock Performance of a Disk-Drive Assembly Using Active-Passive Piezoelectric Actuators. , 2006, , .		0
291	Semi-Active Suspension Systems for Railway Vehicles Based on Magnetorheological Fluid Dampers. , 2007, , 137.		0
292	Finite Element Modeling of Carbon Nanotube Composites for Vibration Damping. , 2008, , .		0
293	Modeling of Vertically Aligned Carbon Nanotube Composites for Vibration Damping. , 2009, , .		0
294	Shock test and analysis of assembled suspension with microactuators in hard disk drives. , 2009, , .		0
295	System identification and control of piezo-based actuators for optical pickup devices. , 2010, , .		0
296	Nano-Scale and Atomistic-Scale Modeling of Advanced Materials. , 2010, , 719-758.		0
297	Continuous variable transmission and regenerative braking devices in bicycles utilizing magnetorheological fluids. Proceedings of SPIE, 2013, , .	0.8	0
298	Embedded compact BaTiO ₃ -polymer film VHF band-pass filter. , 2014, , .		0
299	Embedded band pass filter designed using embedded capacitor material. , 2014, , .		0
300	On the counteractive effect of dielectric loss in piezoelectric energy harvesting. , 2014, , .		0
301	Enhanced piezoelectric energy harvesting of a bistable oscillator with an elastic magnifier. Proceedings of SPIE, 2015, , .	0.8	0
302	A Strategy for Magnifying Vibration in High-Energy Orbits of a Bistable Oscillator at Low Excitation Levels. Chinese Physics Letters, 2015, 32, 068503.	3.3	0
303	Low loss CCTO@Fe ₃ O ₄ /epoxy composites with matched permeability and permittivity for high frequency applications. , 2015, , .		0
304	The Cu@SiO ₂ core-shell nanoparticles filled polyvinylidene fluoride nanocomposites film: Fabrication, characterization and dielectric property analysis. , 2017, , .		0
305	Dielectric properties of epoxy nanocomposites filled with copper oxides. , 2017, , .		0
306	Message from the Conference Co-Chair. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
307	Nano-scale and Atomistic-Scale Modeling of Advanced Materials. , 2021, , 555-577.		0
308	A knee energy harvester with variable transmission ratio. , 2021, , .		0
309	CHAPTER 15. Magnetorheological Devices with Multiple Functions. RSC Smart Materials, 2013, , 342-362.	0.1	0
310	Characteristics of Enhanced Active Constrained Layer Damping Treatments With Edge Elements: Part I " Finite Element Model Development and Validation. , 1997, , .		0
311	Characteristics of Enhanced Active Constrained Layer Damping Treatments With Edge Elements: Part II " System Analysis. , 1997, , .		0
312	A simple and efficient 1-D macroscopic model for shape memory alloys considering ferro-elasticity effect. Smart Structures and Systems, 2015, 16, 641-665.	1.9	0
313	Design of smart harvester for capturing energy from human ankle dorsiflexion to reduce user effort. , 2018, , .		0
314	Modeling and Analysis of Rotary Mechanical Systems Linked Through a U-joint. International Journal of Mechanical Engineering and Robotics Research, 2019, , 459-465.	1.0	0
315	A rotational impact energy harvester utilizing the centrifugal softening effect. , 2020, , .		0
316	Embedded band pass filter designed using embedded capacitor material. , 2014, , .		0