Muamer Kadic

List of Publications by Citations

91 papers	4,789 citations	29 h-index	68 g-index
103 ext. papers	5,985 ext. citations	6.8 avg, IF	6.12 L-index

#	Paper	IF	Citations
91	Tailored 3D mechanical metamaterials made by dip-in direct-laser-writing optical lithography. *Advanced Materials*, **2012**, 24, 2710-4	24	455
90	Three-dimensional mechanical metamaterials with a twist. *Science*, **2017**, 358, 1072-1074	33.3	394
89	Experiments on transformation thermodynamics: molding the flow of heat. *Physical Review Letters*, **2013**, 110, 195901	7.4	388
88	An elasto-mechanical unfeelability cloak made of pentamode metamaterials. *Nature Communications*, **2014**, 5, 4130	17.4	334
87	On the practicability of pentamode mechanical metamaterials. *Applied Physics Letters*, **2012**, 100, 191901	3.4	301
86	3D metamaterials. *Nature Reviews Physics*, **2019**, 1, 198-210	23.6	288
85	Metamaterials beyond electromagnetism. *Reports on Progress in Physics*, **2013**, 76, 126501	14.4	269
84	Tailored Buckling Microlattices as Reusable Light-Weight Shock Absorbers. *Advanced Materials*, **2016**, 28, 5865-70	24	186
83	Vibrant times for mechanical metamaterials. *MRS Communications*, **2015**, 5, 453-462	2.7	162
82	Metamaterials. Invisibility cloaking in a diffusive light scattering medium. *Science*, **2014**, 345, 427-9	33.3	149
81	On three-dimensional dilational elastic metamaterials. *New Journal of Physics*, **2014**, 16, 033032	2.9	122
80	Micro-Structured Two-Component 3D Metamaterials with Negative Thermal-Expansion Coefficient from Positive Constituents. *Scientific Reports*, **2017**, 7, 40643	4.9	98
79	Three-dimensional labyrinthine acoustic metamaterials. *Applied Physics Letters*, **2013**, 103, 061907	3.4	92
78	Polymerization kinetics in three-dimensional direct laser writing. *Advanced Materials*, **2014**, 26, 6566-71	24	86
77	Mechanical cloak design by direct lattice transformation. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 4930-4	11.5	85
76	Pentamode Metamaterials with Independently Tailored Bulk Modulus and Mass Density. *Physical Review Applied*, **2014**, 2,	4.3	84
75	Phonon band structures of three-dimensional pentamode metamaterials. *Physical Review B*, **2012**, 86,	3.3	76

74	On anisotropic versions of three-dimensional pentamode metamaterials. *New Journal of Physics*, **2013**, 15, 023029	2.9	74
73	Elastic measurements on macroscopic three-dimensional pentamode metamaterials. *Applied Physics Letters*, **2013**, 103, 231905	3.4	71
72	Characteristics of mechanical metamaterials based on buckling elements. *Journal of the Mechanics and Physics of Solids*, **2017**, 102, 151-164	5	70
71	Hidden progress: broadband plasmonic invisibility. *Optics Express*, **2010**, 18, 15757-68	3.3	69
70	New Twists of 3D Chiral Metamaterials. *Advanced Materials*, **2019**, 31, e1807742	24	67
69	Light-weight shell-lattice metamaterials for mechanical shock absorption. *International Journal of Mechanical Sciences*, **2020**, 169, 105288	5.5	56
68	Transformational plasmonics: cloak, concentrator and rotator for SPPs. *Optics Express*, **2010**, 18, 12027-32	3.3	52
67	Roadmap on transformation optics. *Journal of Optics (United Kingdom)*, **2018**, 20, 063001	1.7	40
66	Plasmonic space folding: focusing surface plasmons via negative refraction in complementary media. *ACS Nano*, **2011**, 5, 6819-25	16.7	37
65	Experimental Evidence for Sign Reversal of the Hall Coefficient in Three-Dimensional Metamaterials. *Physical Review Letters*, **2017**, 118, 016601	7.4	35
64	Ultrasound experiments on acoustical activity in chiral mechanical metamaterials. *Nature Communications*, **2019**, 10, 3384	17.4	35
63	Transformation plasmonics. *Nanophotonics*, **2012**, 1, 51-64	6.3	29
62	Three-dimensional waveguide interconnects for scalable integration of photonic neural networks. *Optica*, **2020**, 7, 640	8.6	29
61	Poroelastic metamaterials with negative effective static compressibility. *Applied Physics Letters*, **2017**, 110, 171901	3.4	28
60	Mechanical metamaterials with anisotropic and negative effective mass-density tensor made from one constituent material. *Physica Status Solidi (B): Basic Research*, **2015**, 252, 1671-1674	1.3	26
59	On the Schwarzschild Effect in 3D Two-Photon Laser Lithography. *Advanced Optical Materials*, **2019**, 7, 1901040	8.1	25
58	Optical Pulling and Pushing Forces in Bilayer PT-Symmetric Structures. *Physical Review Applied*, **2018**, 9,	4.3	24
57	Mapping acoustical activity in 3D chiral mechanical metamaterials onto micropolar continuum elasticity. *Journal of the Mechanics and Physics of Solids*, **2020**, 137, 103877	5	22

56	Invisibility cloaking in light-scattering media. *Laser and Photonics Reviews*, **2016**, 10, 382-408	8.3	22
55	Three-dimensional poroelastic metamaterials with extremely negative or positive effective static volume compressibility. *Extreme Mechanics Letters*, **2018**, 22, 165-171	3.9	21
54	Experiments on cloaking in optics, thermodynamics and mechanics. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2015**, 373,	3	20
53	Transient behavior of invisibility cloaks for diffusive light propagation. *Optica*, **2015**, 2, 84	8.6	18
52	Plasmonic interaction of visible light with gold nanoscale checkerboards. *Physical Review B*, **2011**, 84,	3.3	18
51	Diffuse-light all-solid-state invisibility cloak. *Optics Letters*, **2015**, 40, 4202-5	3	17
50	Static chiral Willis continuum mechanics for three-dimensional chiral mechanical metamaterials. *Physical Review B*, **2019**, 99,	3.3	16
49	Controlling surface plasmon polaritons in transformed coordinates. *Journal of Modern Optics*, **2011**, 58, 994-1003	1.1	16
48	Scattering problems in elastodynamics. *Physical Review B*, **2016**, 94,	3.3	15
47	Isotropic Chiral Acoustic Phonons in 3D Quasicrystalline Metamaterials. *Physical Review Letters*, **2020**, 124, 235502	7.4	14
46	Optimal isotropic, reusable truss lattice material with near-zero Poisson□ ratio. *Extreme Mechanics Letters*, **2020**, 41, 101048	3.9	14
45	Hall-Effect Sign Inversion in a Realizable 3D Metamaterial. *Physical Review X*, **2015**, 5,	9.1	12
44	Experimental observations of topologically guided water waves within non-hexagonal structures. *Applied Physics Letters*, **2020**, 116, 131603	3.4	12
43	Invisible waveguides on metal plates for plasmonic analogs of electromagnetic wormholes. *Physical Review A*, **2014**, 90,	2.6	12
42	Topologically Protected Twist Edge States for a Resonant Mechanical Laser-Beam Scanner. *Physical Review Applied*, **2019**, 11,	4.3	11
41	3D printed multimode-splitters for photonic interconnects. *Optical Materials Express*, **2020**, 10, 2952	2.6	11
40	Designing thermal energy harvesting devices with natural materials through optimized microstructures. *International Journal of Heat and Mass Transfer*, **2021**, 169, 120948	4.9	10
39	Elastodynamic behavior of mechanical cloaks designed by direct lattice transformations. *Wave Motion*, **2020**, 92, 102419	1.8	10

38	Experimental observation of roton-like dispersion relations in metamaterials. *Science Advances*, **2021**, 7, eabm2189	14.3	9
37	Optical force rectifiers based on PT-symmetric metasurfaces. *Physical Review B*, **2018**, 97,	3.3	9
36	Stiffer, Stronger and Centrosymmetrical Class of Pentamodal Mechanical Metamaterials. *Materials*, **2019**, 12,	3.5	8
35	Experiments on Metamaterials with Negative Effective Static Compressibility. *Physical Review X*, **2017**, 7,	9.1	8
34	Roton-like acoustical dispersion relations in 3D metamaterials. *Nature Communications*, **2021**, 12, 3278	17.4	8
33	Observation of topological gravity-capillary waves in a water wave crystal. *New Journal of Physics*, **2019**, 21, 083031	2.9	7
32	Complex-Eigenfrequency Band Structure of Viscoelastic Phononic Crystals. *Applied Sciences (Switzerland)*, **2019**, 9, 2825	2.6	7
31	Direct (3+1)D laser writing of graded-index optical elements. *Optica*, **2021**, 8, 1281	8.6	7
30	Thermal cloaking of complex objects with the neutral inclusion and the coordinate transformation methods. *AIP Advances*, **2019**, 9, 045029	1.5	6
29	Cloaking In-Plane Elastic Waves with Swiss Rolls. *Materials*, **2020**, 13,	3.5	6
28	Theory of the Hall effect in three-dimensional metamaterials. *New Journal of Physics*, **2018**, 20, 083034	2.9	6
27	Photonic crystal carpet: Manipulating wave fronts in the near field at 1.55 □h. *Physical Review B*, **2013**, 88,	3.3	6
26	Experiments on the Parallel Hall Effect in Three-Dimensional Metamaterials. *Physical Review Applied*, **2017**, 7,	4.3	6
25	Parallel Hall effect from three-dimensional single-component metamaterials. *Applied Physics Letters*, **2015**, 107, 132103	3.4	5
24	Elastic wave near-cloaking. *Extreme Mechanics Letters*, **2021**, 44, 101262	3.9	5
23	Optically assisted trapping with high-permittivity dielectric rings: Towards optical aerosol filtration. *Applied Physics Letters*, **2016**, 109, 141102	3.4	4
22	Chiral triclinic metamaterial crystals supporting isotropic acoustical activity and isotropic chiral phonons. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2021**, 477, 20200764	2.4	4
21	Micro-Scale Auxetic Hierarchical Mechanical Metamaterials for Shape Morphing.. *Advanced Materials*, **2022**, e2110115	24	4

20	Three-dimensional phononic crystal with ultra-wide bandgap at megahertz frequencies. *Applied Physics Letters*, **2021**, 118, 063507	3.4	3
19	Cubic metamaterial crystal supporting broadband isotropic chiral phonons. *Physical Review Materials*, **2021**, 5,	3.2	3
18	Self-rotating 3D chiral mechanical metamaterials. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2021**, 477, 20200825	2.4	3
17	Hall-effect metamaterials and anti-Hall bars *Physics Today*, **2017**, 70, 14-15	0.9	2
16	Kern, Kadic, and Wegener Reply. *Physical Review Letters*, **2018**, 120, 149702	7.4	2
15	Acoustic Topological Circuitry in Square and Rectangular Phononic Crystals. *Physical Review Applied* , **2021**, 15,	4.3	2
14	4D Thermomechanical metamaterials for soft microrobotics. *Communications Materials*, **2021**, 2,	6	2
13	3D Optical Invisibility Cloak in the Diffusive-Light Limit **2014**,		1
12	From transformational optics to plasmonics **2010**,		1
11	Effective anisotropy of periodic acoustic and elastic composites. *Journal of Applied Physics*, **2021**, 129, 215106	2.5	1
10	Design of thermal cloaks with isotropic materials based on machine learning. *International Journal of Heat and Mass Transfer*, **2022**, 189, 122716	4.9	0
9	Transformation Optics of Surface Plasmon Polaritons. *Handbook of Surface Science*, **2014**, 4, 279-307		
8	Cloaking Liquid Surface Waves and Plasmon Polaritons. *Springer Series in Materials Science*, **2013**, 267-288	8.9	
7	Hall Effect Sign-inversion and Parallel Hall Effect in Single-constituent 3D Metamaterials. *NATO Science for Peace and Security Series B: Physics and Biophysics*, **2017**, 459-460	0.2	
6	An Introduction to Mathematics of Transformational Plasmonics **2012**, 235-277		
5	Chapter 10 Experiments on Cloaking in Electromagnetism, Mechanics, and Thermodynamics **2016**, 335-368		
4	Mechanical Activity: The Elastic Counterpart of Optical Activity. *NATO Science for Peace and Security Series B: Physics and Biophysics*, **2018**, 403-404	0.2	
3	3D Cubic Buckling Mechanical Metamaterials. *NATO Science for Peace and Security Series B: Physics and Biophysics*, **2018**, 421-422	0.2	

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2	3D Metamaterials with Negative Thermal Expansion and Negative Effective Compressibility. *NATO Science for Peace and Security Series B: Physics and Biophysics*, **2018**, 431-431	0.2
1	Introduction to mechanical metamaterials and their effective properties. *Comptes Rendus Physique*, **2020**, 21, 751-765	1.4