Martin Maldovan

List of Publications by Year
in descending order

45	3,013	361413 20	361022 35
papers	citations	h-index	g-index
46	46	46	3545
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Sound and heat revolutions in phononics. Nature, 2013, 503, 209-217.	27.8	963
2	Diamond-structured photonic crystals. Nature Materials, 2004, 3, 593-600.	27.5	330
3	Phonon wave interference and thermal bandgap materials. Nature Materials, 2015, 14, 667-674.	27.5	239
4	Simultaneous localization of photons and phonons in two-dimensional periodic structures. Applied Physics Letters, 2006, 88, 251907.	3.3	207
5	25th Anniversary Article: Ordered Polymer Structures for the Engineering of Photons and Phonons. Advanced Materials, 2014, 26, 532-569.	21.0	205
6	Photonic crystals through holographic lithography: Simple cubic, diamond-like, and gyroid-like structures. Applied Physics Letters, 2004, 84, 5434-5436.	3.3	185
7	Narrow Low-Frequency Spectrum and Heat Management by Thermocrystals. Physical Review Letters, 2013, 110, 025902.	7.8	182
8	Exploring for 3D photonic bandgap structures in the 11 f.c.c. space groups. Nature Materials, 2003, 2, 664-667.	27.5	87
9	Impact of Phonon Surface Scattering on Thermal Energy Distribution of Si and SiGe Nanowires. Scientific Reports, 2016, 6, 25818.	3.3	51
10	Micro to nano scale thermal energy conduction in semiconductor thin films. Journal of Applied Physics, 2011, 110, .	2.5	44
11	Thermal energy transport model for macro-to-nanograin polycrystalline semiconductors. Journal of Applied Physics, 2011, 110, 114310.	2.5	40
12	Transition between ballistic and diffusive heat transport regimes in silicon materials. Applied Physics Letters, 2012, 101, 113110.	3.3	37
13	Colloidal crystals go hypersonic. Nature Materials, 2006, 5, 773-774.	27.5	36
14	Phonon Surface Scattering and Thermal Energy Distribution in Superlattices. Scientific Reports, 2017, 7, 5625.	3.3	32
15	Surface scattering controlled heat conduction in semiconductor thin films. Journal of Applied Physics, 2016, 120, .	2.5	31
16	Layer-by-layer diamond-like woodpile structure with a large photonic band gap. Applied Physics Letters, 2004, 84, 362-364.	3.3	28
17	Thermal conductivity of semiconductor nanowires from micro to nano length scales. Journal of Applied Physics, 2012, 111, 024311.	2.5	28
18	Breaking separation limits in membrane technology. Journal of Membrane Science, 2018, 566, 301-306.	8.2	28

#	Article	IF	Citations
19	Mass Separation by Metamaterials. Scientific Reports, 2016, 6, 21971.	3.3	26
20	Mass diffusion cloaking and focusing with metamaterials. Applied Physics Letters, 2017, 111, .	3.3	24
21	Three-dimensional dielectric network structures with large photonic band gaps. Applied Physics Letters, 2003, 83, 5172-5174.	3.3	18
22	Metamaterial membranes. Journal Physics D: Applied Physics, 2017, 50, 025104.	2.8	17
23	Phononic pathways towards rational design of nanowire heat conduction. Nanotechnology, 2019, 30, 372002.	2.6	14
24	Layer-by-layer photonic crystal with a repeating two-layer sequence. Applied Physics Letters, 2004, 85, 911-913.	3.3	12
25	Cross-plane thermal conduction in superlattices: Impact of multiple length scales on phonon transport. Journal of Applied Physics, 2019, 125, .	2.5	12
26	Rational design of mass diffusion metamaterial concentrators based on coordinate transformations. Journal of Applied Physics, 2016, 120, 084902.	2.5	11
27	Enhancing Thermal Transport in Layered Nanomaterials. Scientific Reports, 2018, 8, 1880.	3.3	11
28	Cross-plane heat conduction in IIIâ€"V semiconductor superlattices. Journal of Physics Condensed Matter, 2019, 31, 345301.	1.8	8
29	Specular reflection leads to maximum reduction in cross-plane thermal conductivity. Journal of Applied Physics, 2019, 125, 224301.	2.5	5
30	Spatial Manipulation of Thermal Flux in Nanoscale Films. Nanoscale and Microscale Thermophysical Engineering, 2017, 21, 145-158.	2.6	4
31	Analysis of in-plane thermal phonon transport in IIIâ€"V compound semiconductor superlattices. Nanoscale and Microscale Thermophysical Engineering, 2018, 22, 239-253.	2.6	4
32	Permeabilities and selectivities in anisotropic planar membranes for gas separations. Separation and Purification Technology, 2019, 228, 115762.	7.9	4
33	Anisotropic membrane materials for gas separations. AICHE Journal, 2019, 65, e16599.	3.6	4
34	Thermal transport in semiconductor nanotubes. International Journal of Heat and Mass Transfer, 2019, 130, 368-374.	4.8	4
35	Phononic crystals at various frequencies. APL Materials, 2022, 10, .	5.1	3
36	Periodic Structures and Interference Lithography. , 0, , 97-112.		1

#	Article	IF	Citations
37	Fabrication of Periodic Structures. , 0, , 113-137.		1
38	Photonic Crystals. , 0, , 139-181.		0
39	Appendix C: MATLAB Program to Calculate Reflectance versus Frequency for One-dimensional Phononic Crystals. , 0, , 297-304.		0
40	Phononic Crystals. , 0, , 183-213.		0
41	Structural Periodicity. , 0, , 1-28.		0
42	Modulating thermal conduction via phonon spectral coupling. Journal of Applied Physics, 2018, 124, 124302.	2.5	0
43	Unconventional thermal transport in thin film-on-substrate systems. Journal Physics D: Applied Physics, 2018, 51, 365302.	2.8	0
44	Backscattering limit of nanoscale heat conduction. Journal of Physics Condensed Matter, 2021, 33, 395301.	1.8	0
45	Impact of Porosity and Boundary Scattering on Thermal Transport in Diameter-Modulated Nanowires. ACS Applied Materials & Interfaces, 2022, 14, 1740-1746.	8.0	0