

Vito Antonio Cimmelli

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

84
papers

1,188
citations

20
h-index

30
g-index

90
ext. papers

1,296
ext. citations

2.6
avg. IF

5.04
L-index

#	Paper	IF	Citations
84	The Role of the Second Law of Thermodynamics in Continuum Physics: A Muschik and Ehrentraut Theorem Revisited. <i>Symmetry</i> , 2022 , 14, 763	2.7	1
83	Local versus nonlocal constitutive theories of nonequilibrium thermodynamics: the Guyer-Krumhansl equation as an example. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2021 , 72, 1	1.6	
82	Gradient-dependent heat rectification in thermoelastic solids. <i>Journal of Thermal Stresses</i> , 2021 , 44, 919-934	2.4	1
81	Thermoelectric Efficiency of Silicon-Germanium Alloys in Finite-Time Thermodynamics. <i>Entropy</i> , 2020 , 22,	2.8	7
80	Weakly nonlocal thermodynamics of binary mixtures of Korteweg fluids with two velocities and two temperatures. <i>European Journal of Mechanics, B/Fluids</i> , 2020 , 83, 58-65	2.4	5
79	Thermal conductivity and enhanced thermoelectric efficiency of composition-graded ($\text{Si}_c\text{Ge}_{1-c}$) alloys. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2020 , 71, 1	1.6	1
78	Nonlinear thermoelastic waves in functionally graded materials: Application to Si $\bar{1}$ Ge \bar{c} nanowires. <i>Journal of Thermal Stresses</i> , 2020 , 43, 612-628	2.2	2
77	Heat transport with phonon-electron energy exchange in Bi $\bar{2}$ Te $\bar{3}$ circular thin layers. <i>Journal of Applied Physics</i> , 2020 , 127, 064301	2.5	
76	Enhanced thermal rectification in graded Si Ge $\bar{1-c}$ alloys. <i>Mechanics Research Communications</i> , 2020 , 103, 103472	2.2	5
75	Fitting thermal conductivity and optimizing thermoelectric efficiency in Si \bar{c} Ge $\bar{1-c}$ nanowires. <i>Mathematics and Computers in Simulation</i> , 2020 , 176, 279-291	3.3	5
74	Tunable heat rectification by applied mechanical stress. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2020 , 384, 126905	2.3	3
73	Nonlinear Propagation of Coupled First- and Second-Sound Waves in Thermoelastic Solids. <i>Journal of Elasticity</i> , 2020 , 138, 93-109	1.5	3
72	Differential consequences of balance laws in extended irreversible thermodynamics of rigid heat conductors. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2019 , 475, 20180482	2.4	9
71	Phonon-electron coupling and nonlocal heat transport in Bi $\bar{2}$ Te $\bar{3}$ nanowires. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2019 , 108, 421-427	3	4
70	Heat-pulse propagation in thermoelastic systems: application to graphene. <i>Acta Mechanica</i> , 2019 , 230, 121-136	2.1	7
69	Generalized heat-transport equations: parabolic and hyperbolic models. <i>Continuum Mechanics and Thermodynamics</i> , 2018 , 30, 1245-1258	3.5	17
68	Thermoelectric efficiency of graded Si \bar{c} Ge $\bar{1-c}$ alloys. <i>Journal of Applied Physics</i> , 2018 , 124, 094301	2.5	9

67	Phonon and electron temperature and non-Fourier heat transport in thin layers. <i>Physica B: Condensed Matter</i> , 2017 , 511, 61-67	2.8	5
66	Minimal Entropy Production and Efficiency of Energy Conversion in Nonlinear Thermoelectric Systems with Two Temperatures. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2017 , 42,	3.8	5
65	Heat flux rectification in graded Si c Ge 1 \bar{b} : Longitudinal and radial heat flows. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2017 , 90, 149-157	3	10
64	Phase-field evolution in Cahn-Hilliard-Korteweg fluids. <i>Acta Mechanica</i> , 2016 , 227, 2111-2124	2.1	3
63	Computational analysis of heat rectification in composition-graded systems: From macro-to-nanoscale. <i>Physica B: Condensed Matter</i> , 2016 , 481, 244-251	2.8	12
62	Linear and Nonlinear Heat-Transport Equations. <i>SEMA SIMAI Springer Series</i> , 2016 , 31-51	0.2	1
61	Mesoscopic Theories of Heat Transport in Nanosystems. <i>SEMA SIMAI Springer Series</i> , 2016 ,	0.2	45
60	Nonequilibrium Thermodynamics and Heat Transport at Nanoscale. <i>SEMA SIMAI Springer Series</i> , 2016 , 1-30	0.2	
59	Heat Transport with Phonons and Electrons and Efficiency of Thermoelectric Generators. <i>SEMA SIMAI Springer Series</i> , 2016 , 133-166	0.2	
58	Weakly Nonlocal and Nonlinear Heat Transport. <i>SEMA SIMAI Springer Series</i> , 2016 , 109-132	0.2	
57	Mesoscopic Description of Boundary Effects and Effective Thermal Conductivity in Nanosystems: Phonon Hydrodynamics. <i>SEMA SIMAI Springer Series</i> , 2016 , 53-89	0.2	0
56	A nonlinear model of thermoelectricity with two temperatures: Application to quasicrystalline nanowires. <i>Journal of Mathematical Physics</i> , 2016 , 57, 043507	1.2	1
55	Rectification of low-frequency thermal waves in graded Si c Ge 1 \bar{b} . <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2016 , 380, 1824-1829	2.3	13
54	Dynamical temperature and generalized heat-conduction equation. <i>International Journal of Non-Linear Mechanics</i> , 2016 , 79, 76-82	2.8	4
53	Constitutive equations for heat conduction in nanosystems and nonequilibrium processes: an overview. <i>Communications in Applied and Industrial Mathematics</i> , 2016 , 7, 196-222	0.5	20
52	Influence of nonlinear effects on the efficiency of a thermoelectric generator. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2015 , 66, 2829-2842	1.6	10
51	Influence of the electron and phonon temperature and of the electric-charge density on the optimal efficiency of thermoelectric nanowires. <i>Mechanics Research Communications</i> , 2015 , 68, 77-82	2.2	8
50	Influence of electron and phonon temperature on the efficiency of thermoelectric conversion. <i>International Journal of Heat and Mass Transfer</i> , 2015 , 80, 344-352	4.9	19

49	A nonlocal phase-field model of Ginzburg-Landau-Korteweg fluids. <i>Continuum Mechanics and Thermodynamics</i> , 2015 , 27, 367-378	3.5	6
48	Non-Fourier Heat Transfer with Phonons and Electrons in a Circular Thin Layer Surrounding a Hot Nanodevice. <i>Entropy</i> , 2015 , 17, 5157-5170	2.8	8
47	A thermodynamic model for heat transport and thermal wave propagation in graded systems. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2015 , 73, 242-249	3	17
46	Multi-temperature mixture of phonons and electrons and nonlocal thermoelectric transport in thin layers. <i>International Journal of Heat and Mass Transfer</i> , 2014 , 71, 459-468	4.9	18
45	Flux Limiters in Radial Heat Transport in Silicon Nanolayers. <i>Journal of Heat Transfer</i> , 2014 , 136,	1.8	16
44	Entropy Principle and Recent Results in Non-Equilibrium Theories. <i>Entropy</i> , 2014 , 16, 1756-1807	2.8	74
43	A nonlinear thermodynamic model for a breakdown of the Onsager symmetry and the efficiency of thermoelectric conversion in nanowires. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2014 , 470, 20140265	2.4	10
42	Entropy flux and anomalous axial heat transport at the nanoscale. <i>Physical Review B</i> , 2013 , 87,	3.3	23
41	Thermodynamical setting for gradient continuum theories with vectorial internal variables: Application to granular materials. <i>International Journal of Non-Linear Mechanics</i> , 2013 , 49, 72-76	2.8	6
40	Thermoelectric effects and size dependency of the figure-of-merit in cylindrical nanowires. <i>International Journal of Heat and Mass Transfer</i> , 2013 , 57, 109-116	4.9	28
39	Mesosopic approach to inviscid gas dynamics with thermal lag. <i>Annalen Der Physik</i> , 2013 , 525, 921-933	2.6	1
38	Interpretation of Second Law of Thermodynamics in the presence of interfaces. <i>Continuum Mechanics and Thermodynamics</i> , 2012 , 24, 165-174	3.5	6
37	A Phenomenological Study of Pore-Size Dependent Thermal Conductivity of Porous Silicon. <i>Acta Applicandae Mathematicae</i> , 2012 , 122, 435	1.1	10
36	Heat Transport Equations with Phonons and Electrons. <i>Acta Applicandae Mathematicae</i> , 2012 , 122, 117	1.1	0
35	Mesosopic description of boundary effects in nanoscale heat transport. <i>The Nanoscale Systems: Mathematical Modeling and Applications</i> , 2012 , 1, 112-142		4
34	Analysis of three nonlinear effects in a continuum approach to heat transport in nanosystems. <i>Physica D: Nonlinear Phenomena</i> , 2012 , 241, 1344-1350	3.3	27
33	Entropy principle, non-regular processes, and generalized exploitation procedures. <i>Journal of Mathematical Physics</i> , 2012 , 53, 063509	1.2	5
32	A Continuum Approach to Thermomass Theory. <i>Journal of Heat Transfer</i> , 2012 , 134,	1.8	25

31	Nonlocal heat transport with phonons and electrons: Application to metallic nanowires. <i>International Journal of Heat and Mass Transfer</i> , 2012 , 55, 2338-2344	4.9	42
30	On the Thermodynamics of Korteweg Fluids with Heat Conduction and Viscosity. <i>Journal of Elasticity</i> , 2011 , 104, 115-131	1.5	10
29	Exploitation of the entropy principle: Proof of Liu theorem if the gradients of the governing equations are considered as constraints. <i>Journal of Mathematical Physics</i> , 2011 , 52, 023511	1.2	18
28	Weakly nonlocal thermodynamics of anisotropic rigid heat conductors revisited. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2011 , 36,	3.8	9
27	Dynamical temperature and renormalized flux variable in extended thermodynamics of rigid heat conductors. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2011 , 36,	3.8	5
26	On the Thermodynamics of Korteweg Fluids with Heat Conduction and Viscosity 2011 , 115-131		2
25	A new perspective on the form of the first and second laws in rational thermodynamics: Korteweg fluids as an example. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2010 , 35,	3.8	17
24	Nonequilibrium temperatures, heat waves, and nonlinear heat transport equations. <i>Physical Review B</i> , 2010 , 81,	3.3	60
23	A generalized Coleman-Noll procedure for the exploitation of the entropy principle. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2010 , 466, 911-925	2.4	30
22	Propagation of temperature waves along core-shell nanowires. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2010 , 35,	3.8	2
21	Nonlinear evolution and stability of the heat flow in nanosystems: Beyond linear phonon hydrodynamics. <i>Physical Review B</i> , 2010 , 82,	3.3	52
20	A new thermodynamic framework for second-grade Korteweg-type viscous fluids. <i>Journal of Mathematical Physics</i> , 2009 , 50, 053101	1.2	28
19	Nonequilibrium temperatures and second-sound propagation along nanowires and thin layers. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2009 , 373, 4386-4392	2.3	36
18	Different Thermodynamic Theories and Different Heat Conduction Laws. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2009 , 34,	3.8	89
17	Nonlocal effects and second sound in a nonequilibrium steady state. <i>Physical Review B</i> , 2009 , 79,	3.3	73
16	Gradient generalization to the extended thermodynamic approach and diffusive-hyperbolic heat conduction. <i>Physica B: Condensed Matter</i> , 2007 , 400, 257-265	2.8	32
15	On the evolution of higher order fluxes in non-equilibrium thermodynamics. <i>Mathematical and Computer Modelling</i> , 2007 , 45, 126-136		12
14	An extension of Liu procedure in weakly nonlocal thermodynamics. <i>Journal of Mathematical Physics</i> , 2007 , 48, 113510	1.2	34

13	On the stability of the equilibrium states for Hamiltonian dynamical systems arising in non-equilibrium thermodynamics. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2007 , 58, 736-748	1.6	1
12	The effects of nonlocality on the evolution of higher order fluxes in nonequilibrium thermodynamics. <i>Journal of Mathematical Physics</i> , 2005 , 46, 112901	1.2	20
11	Nonlinear effects in thermal wave propagation near zero absolute temperature. <i>Physica B: Condensed Matter</i> , 2005 , 355, 147-157	2.8	26
10	On the causality requirement for diffusive-hyperbolic systems in non-equilibrium thermodynamics. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2004 , 29,	3.8	12
9	A diffusive-hyperbolic model for heat conduction. <i>Mathematical and Computer Modelling</i> , 2004 , 39, 1413-1422	4	
8	Boundary Conditions in the Presence of Internal Variables. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2002 , 27,	3.8	9
7	Causal Non-Stationary Thermodynamics of Non-Viscous Heat Conducting Fluids with Internal Variables. <i>General Relativity and Gravitation</i> , 2001 , 33, 1427-1447	2.3	
6	A Thermodynamic Theory of Thermoelastic and Viscoanelastic Solids with Non-Euclidean Structure. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2001 , 26,	3.8	3
5	On the Mathematical Structure of Thermodynamics with Internal Variables. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2001 , 26,	3.8	6
4	Thermodynamics of anisotropic solids near absolute zero. <i>Mathematical and Computer Modelling</i> , 1998 , 28, 79-89		7
3	Numerical reconstruction of heat pulse experiments. <i>International Journal of Engineering Science</i> , 1995 , 33, 209-215	5.7	21
2	Nonlocal variational theories for systems with an interface. <i>International Journal of Engineering Science</i> , 1990 , 28, 663-675	5.7	1
1	The Gibbs principle for the equilibrium of crystals. <i>International Journal of Engineering Science</i> , 1990 , 28, 677-688	5.7	5