

Michael Moldover

List of Publications by Year in descending order

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120
papers

6,375
citations

44069

48
h-index

71685

76
g-index

123
all docs

123
docs citations

123
times ranked

1835
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | The Boltzmann project. Metrologia, 2018, 55, R1-R20. | 1.2 | 49 |
| 2 | Determination of the molar mass of argon from high-precision acoustic comparisons. Metrologia, 2017, 54, 339-347. | 1.2 | 2 |
| 3 | Determination of the Boltzmann constant with cylindrical acoustic gas thermometry: new and previous results combined. Metrologia, 2017, 54, 748-762. | 1.2 | 25 |
| 4 | New measurement of the Boltzmann constant k by acoustic thermometry of helium-4 gas. Metrologia, 2017, 54, 856-873. | 1.2 | 59 |
| 5 | Detecting leaks in gas-filled pressure vessels using acoustic resonances. Review of Scientific Instruments, 2016, 87, 054901. | 1.3 | 3 |
| 6 | Advances in thermometry. Nature Physics, 2016, 12, 7-11. | 16.7 | 49 |
| 7 | Towards implementing the new kelvin. Measurement: Journal of the International Measurement Confederation, 2015, 74, 113-115. | 5.0 | 1 |
| 8 | Microwave determination of the volume of a pressure vessel. Measurement Science and Technology, 2015, 26, 015304. | 2.6 | 8 |
| 9 | “Weighing” a gas with microwave and acoustic resonances. Metrologia, 2015, 52, 337-352. | 1.2 | 8 |
| 10 | Correlations among acoustic measurements of the Boltzmann constant. Metrologia, 2015, 52, S376-S384. | 1.2 | 14 |
| 11 | Test of a virtual cylindrical acoustic resonator for determining the Boltzmann constant. Metrologia, 2015, 52, S343-S352. | 1.2 | 14 |
| 12 | Acoustic gas thermometry. Metrologia, 2014, 51, R1-R19. | 1.2 | 142 |
| 13 | Dimension Optimization for a Sapphire Rod Resonator Cavity. , 2013, , . | | 0 |
| 14 | Room temperature acoustic transducers for high-temperature thermometry. , 2013, , . | | 3 |
| 15 | Investigation on Sapphire Rod Resonator Perturbation. , 2013, , . | | 2 |
| 16 | Improved determination of the Boltzmann constant using a single, fixed-length cylindrical cavity. Metrologia, 2013, 50, 417-432. | 1.2 | 53 |
| 17 | Present Estimates of the Differences Between Thermodynamic Temperatures and the ITS-90. International Journal of Thermophysics, 2011, 32, 12-25. | 2.1 | 115 |
| 18 | Progress Toward Redetermining the Boltzmann Constant with a Fixed-Path-Length Cylindrical Resonator. International Journal of Thermophysics, 2011, 32, 1297-1329. | 2.1 | 59 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | Cylindrical Acoustic Resonator for the Re-determination of the Boltzmann Constant. International Journal of Thermophysics, 2010, 31, 1273-1293. | 2.1 | 28 |
| 20 | Perturbations From Ducts on the Modes of Acoustic Thermometers. Journal of Research of the National Institute of Standards and Technology, 2009, 114, 263. | 1.2 | 28 |
| 21 | Polarizability of Helium and Gas Metrology. Physical Review Letters, 2007, 98, 254504. | 7.8 | 124 |
| 22 | Reference Viscosities of H ₂ , CH ₄ , Ar, and Xe at Low Densities. International Journal of Thermophysics, 2007, 28, 1085-1110. | 2.1 | 90 |
| 23 | Preparative Steps Towards the New Definition of the Kelvin in Terms of the Boltzmann Constant. International Journal of Thermophysics, 2007, 28, 1753-1765. | 2.1 | 58 |
| 24 | Acoustic Thermometry Results from 271 to 552 ÅK. International Journal of Thermophysics, 2007, 28, 1789-1799. | 2.1 | 46 |
| 25 | Bulk Viscosity, Thermoacoustic Boundary Layers, and Adsorption near the Critical Point of Xenon. Physical Review Letters, 2006, 97, 104502. | 7.8 | 7 |
| 26 | Transport properties of argon at zero density from viscosity-ratio measurements. Metrologia, 2006, 43, 247-258. | 1.2 | 43 |
| 27 | Acoustic thermometry: new results from 273 ÅK to 77 ÅK and progress towards 4 ÅK. Metrologia, 2006, 43, 142-162. | 1.2 | 119 |
| 28 | The Dielectric Permittivity of Saturated Liquid Carbon Dioxide and Propane Measured Using Cross Capacitors. International Journal of Thermophysics, 2005, 26, 563-576. | 2.1 | 12 |
| 29 | Bulk viscosity of stirred xenon near the critical point. Physical Review E, 2005, 72, 051201. | 2.1 | 15 |
| 30 | Comment on "Molecular Dynamics Simulations of a Fluid near Its Critical Point". Physical Review Letters, 2005, 94, 069601. | 7.8 | 8 |
| 31 | Quasi-spherical cavity resonators for metrology based on the relative dielectric permittivity of gases. Review of Scientific Instruments, 2004, 75, 3307-3317. | 1.3 | 66 |
| 32 | Designing quasi-spherical resonators for acoustic thermometry. Metrologia, 2004, 41, 295-304. | 1.2 | 58 |
| 33 | Thermoacoustic boundary layers near the liquid-vapor critical point. Physical Review E, 2004, 70, 021201. | 2.1 | 36 |
| 34 | The Viscosity of Seven Gases Measured with a Greenspan Viscometer. International Journal of Thermophysics, 2003, 24, 1441-1474. | 2.1 | 50 |
| 35 | Dielectric Permittivity of Eight Gases Measured with Cross Capacitors. International Journal of Thermophysics, 2003, 24, 375-403. | 2.1 | 94 |
| 36 | Theory of the Greenspan viscometer. Journal of the Acoustical Society of America, 2003, 114, 166-173. | 1.1 | 20 |

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|----|--|-----|-----------|
| 37 | Techniques for Primary Acoustic Thermometry to 800 K. AIP Conference Proceedings, 2003, , . | 0.4 | 5 |
| 38 | Progress in Primary Acoustic Thermometry at NIST: 273 K to 505 K. AIP Conference Proceedings, 2003, , . | 0.4 | 17 |
| 39 | Title is missing!. International Journal of Thermophysics, 2001, 22, 859-885. | 2.1 | 29 |
| 40 | The Kelvin and temperature measurements. Journal of Research of the National Institute of Standards and Technology, 2001, 106, 105. | 1.2 | 15 |
| 41 | Thermodynamic Properties of Sulfur Hexafluoride. International Journal of Thermophysics, 2000, 21, 739-765. | 2.1 | 48 |
| 42 | An Improved Greenspan Acoustic Viscometer. International Journal of Thermophysics, 2000, 21, 983-997. | 2.1 | 20 |
| 43 | Toroidal cross capacitor for measuring the dielectric constant of gases. Review of Scientific Instruments, 2000, 71, 2914-2921. | 1.3 | 21 |
| 44 | Ab initio values of the thermophysical properties of helium as standards. Journal of Research of the National Institute of Standards and Technology, 2000, 105, 667. | 1.2 | 139 |
| 45 | Electrostriction of Near-Critical SF ₆ in Microgravity. Physical Review Letters, 1999, 82, 5253-5256. | 7.8 | 12 |
| 46 | Frequency-dependent viscosity of xenon near the critical point. Physical Review E, 1999, 60, 4079-4098. | 2.1 | 63 |
| 47 | Viscoelasticity of Xenon near the Critical Point. Physical Review Letters, 1999, 82, 920-923. | 7.8 | 56 |
| 48 | Electrostriction of a near-critical fluid in microgravity. Physical Review E, 1999, 59, 5862-5869. | 2.1 | 22 |
| 49 | Thermodynamic temperatures of the triple points of mercury and gallium and in the interval 217 K to 303 K. Journal of Research of the National Institute of Standards and Technology, 1999, 104, 11. | 1.2 | 64 |
| 50 | Title is missing!. International Journal of Thermophysics, 1998, 19, 1359-1380. | 2.1 | 40 |
| 51 | Measurement of Microkelvin Temperature Differences in a Critical-Point Thermostat. International Journal of Thermophysics, 1998, 19, 481-490. | 2.1 | 10 |
| 52 | Resonators for accurate dielectric measurements in conducting liquids. Review of Scientific Instruments, 1998, 69, 255-260. | 1.3 | 29 |
| 53 | Equilibration near the liquid-vapor critical point in microgravity. Physical Review E, 1998, 57, 436-448. | 2.1 | 47 |
| 54 | Thermodynamic Properties of HFC-338mccq, CF ₃ CF ₂ CF ₂ CH ₂ F, 1,1,1,2,2,3,3,4-Octafluorobutane. Journal of Chemical & Engineering Data, 1997, 42, 488-496. | 1.9 | 22 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 55 | Compressed and Saturated Liquid Densities for 18 Halogenated Organic Compounds. Journal of Chemical & Engineering Data, 1997, 42, 160-168. | 1.9 | 87 |
| 56 | Virial equation of state of helium, xenon, and helium-xenon mixtures from speed-of-sound and Burnett-PVT measurements. International Journal of Thermophysics, 1997, 18, 579-634. | 2.1 | 40 |
| 57 | Phase border and density determinations in the critical region of (carbon dioxide+ethane) determined from dielectric permittivity measurements. Journal of Chemical Thermodynamics, 1997, 29, 1481-1494. | 2.0 | 24 |
| 58 | Practical determination of gas densities from the speed of sound using square-well potentials. International Journal of Thermophysics, 1996, 17, 1305-1324. | 2.1 | 51 |
| 59 | Thermodynamic properties of CHF ₂ -CF ₂ -CH ₂ F, 1,1,2,2,3-pentafluoropropane. International Journal of Refrigeration, 1996, 19, 285-294. | 3.4 | 27 |
| 60 | Thermodynamic properties of CF ₃ -CHF-CHF ₂ , 1,1,1,2,3,3-hexafluoropropane. Fluid Phase Equilibria, 1996, 122, 131-155. | 2.5 | 32 |
| 61 | Partially halogenated hydrocarbons CHFCl-CH ₃ , CF ₃ -CH ₃ , CF ₃ -CHF-CHF ₂ , CF ₃ -CH ₂ -CF ₃ , CHF ₂ -CF ₂ -CH ₂ F, CF ₃ -CH ₂ -CHF ₂ , CF ₃ -O-CHF ₂ : critical temperature, refractive indices, surface tension and estimates of liquid, vapor and critical densities. Fluid Phase Equilibria, 1996, 122, 187-206. | 2.5 | 77 |
| 62 | Reentrant radio-frequency resonator for automated phase equilibria and dielectric measurements in fluids. Review of Scientific Instruments, 1996, 67, 4294-4303. | 1.3 | 48 |
| 63 | Greenspan acoustic viscometer for gases. Review of Scientific Instruments, 1996, 67, 1850-1857. | 1.3 | 24 |
| 64 | High-temperature high-pressure oscillating tube densimeter. Review of Scientific Instruments, 1996, 67, 251-256. | 1.3 | 24 |
| 65 | Ab Initio Calculations for Helium: A Standard for Transport Property Measurements. Physical Review Letters, 1995, 74, 1586-1589. | 7.8 | 324 |
| 66 | Alternative refrigerants difluoromethane and pentafluoroethane: critical temperature, refractive index, surface tension, and estimates of liquid, vapor, and critical densities. Journal of Chemical & Engineering Data, 1994, 39, 39-44. | 1.9 | 39 |
| 67 | Structure of the vapor-liquid interface near the critical point. Journal of Chemical Physics, 1993, 99, 582-589. | 3.0 | 17 |
| 68 | Thermodynamic properties of CHF ₂ -O-CHF ₂ , bis(difluoromethyl) ether. Fluid Phase Equilibria, 1992, 81, 285-305. | 2.5 | 25 |
| 69 | Thermophysical properties of gaseous refrigerants from speed-of-sound measurements. III. Results for 1,1-dichloro-2,2-trifluoroethane (CHCl ₂ CF ₃) and 1,2-dichloro-1,2,2-trifluoroethane (CHClF ₂ CCF ₃). Journal of Chemical Physics, 1991, 95, 5236-5242. | | 43 |
| 70 | Accurate acoustic measurements in gases under difficult conditions. Review of Scientific Instruments, 1991, 62, 2213-2217. | 1.3 | 31 |
| 71 | Thermophysical properties of gaseous refrigerants from speed-of-sound measurements. II. Results for 1,1-dichloro-1,1,1-fluoroethane (CCl ₂ FCH ₃). Journal of Chemical Physics, 1991, 95, 5230-5235. | 3.0 | 25 |
| 72 | Critical exponent for the viscosity of carbon dioxide and xenon. Journal of Chemical Physics, 1990, 93, 1926-1938. | 3.0 | 62 |

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| 73 | Thermophysical properties of gaseous refrigerants from speed of sound measurements. I. Apparatus, model, and results for 1,1,1,2-tetrafluoroethane R134a. <i>Journal of Chemical Physics</i> , 1990, 93, 2741-2753. | 3.0 | 97 |
| 74 | Surface tension of refrigerants R123 and R134a. <i>Journal of Chemical & Engineering Data</i> , 1990, 35, 6-8. | 1.9 | 35 |
| 75 | Spherical acoustic resonators in the undergraduate laboratory. <i>American Journal of Physics</i> , 1989, 57, 129-133. | 0.7 | 6 |
| 76 | Spherical Acoustic Resonators. <i>Topics in Current Physics</i> , 1989, , 61-83. | 0.5 | 4 |
| 77 | Measurement of the Universal Gas Constant Using a Spherical Acoustic Resonator. <i>Physical Review Letters</i> , 1988, 60, 249-252. | 7.8 | 133 |
| 78 | Critical exponent for the viscosity of four binary liquids. <i>Journal of Chemical Physics</i> , 1988, 89, 3694-3704. | 3.0 | 101 |
| 79 | Interfacial tension and vapor-liquid equilibria in the critical region of mixtures. <i>Journal of Chemical Physics</i> , 1988, 88, 7772-7780. | 3.0 | 51 |
| 80 | Accurate Acoustic Thermometry I: The Triple Point of Gallium. <i>Metrologia</i> , 1988, 25, 165-187. | 1.2 | 45 |
| 81 | Microwave Measurements of the Thermal Expansion of a Spherical Cavity. <i>Metrologia</i> , 1988, 25, 211-219. | 1.2 | 26 |
| 82 | Viscosity and density of two alkali metal mixtures. <i>Journal of Physics F: Metal Physics</i> , 1987, 17, 1861-1866. | 1.6 | 11 |
| 83 | Quantitative characterization of the viscosity of a microemulsion. <i>Journal of Chemical Physics</i> , 1987, 87, 3687-3691. | 3.0 | 54 |
| 84 | Gas-filled spherical resonators: Theory and experiment. <i>Journal of the Acoustical Society of America</i> , 1986, 79, 253-272. | 1.1 | 167 |
| 85 | What controls the thicknesses of wetting layers?. <i>Journal of the Chemical Society, Faraday Transactions 2</i> , 1986, 82, 1701. | 1.1 | 52 |
| 86 | Measurement of the ratio of the speed of sound to the speed of light. <i>Physical Review A</i> , 1986, 34, 3341-3344. | 2.5 | 56 |
| 87 | Viscosity measurements near a critical point using a novel torsion oscillator. <i>International Journal of Thermophysics</i> , 1986, 7, 675-686. | 2.1 | 6 |
| 88 | Universal amplitude ratios and the interfacial tension near consolute points of binary liquid mixtures. <i>Journal of Chemical Physics</i> , 1986, 85, 418-427. | 3.0 | 100 |
| 89 | A search for the prewetting line. <i>Journal of Chemical Physics</i> , 1986, 84, 4563-4568. | 3.0 | 46 |
| 90 | The liquid-vapor interface of a binary liquid mixture near the consolute point. <i>Journal of Chemical Physics</i> , 1985, 83, 1829-1834. | 3.0 | 27 |

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|-----|---|------|-----------|
| 91 | Wetting Layers and Dispersion Forces for a Fluid in Contact with a Vertical Wall. <i>Physical Review Letters</i> , 1985, 54, 707-710. | 7.8 | 33 |
| 92 | Interfacial tension of fluids near critical points and two-scale-factor universality. <i>Physical Review A</i> , 1985, 31, 1022-1033. | 2.5 | 170 |
| 93 | Capillary rise, wetting layers, and critical phenomena in confined geometry. <i>Journal of Chemical Physics</i> , 1984, 80, 528-535. | 3.0 | 48 |
| 94 | Wetting, multilayer adsorption, and interface phase transitions. <i>Physica D: Nonlinear Phenomena</i> , 1984, 12, 351-359. | 2.8 | 28 |
| 95 | Turbidity very near the critical point of methanol-cyclohexane mixtures. <i>Physical Review A</i> , 1984, 29, 2048-2053. | 2.5 | 30 |
| 96 | STUDIES OF THIN FILMS IN BINARY FLUID MIXTURES USING ELLIPSOMETRY. <i>Annals of the New York Academy of Sciences</i> , 1983, 404, 350-350. | 3.8 | 1 |
| 97 | First-order wetting transition at a liquid-vapor interface. <i>Journal of Chemical Physics</i> , 1983, 79, 379-387. | 3.0 | 108 |
| 98 | Thickness of the Liquid-Vapor Wetting Layer. <i>Physical Review Letters</i> , 1982, 48, 185-188. | 7.8 | 98 |
| 99 | Precondensation phenomena in acoustic measurements. <i>Journal of Chemical Physics</i> , 1982, 77, 455-465. | 3.0 | 62 |
| 100 | Thermodynamic Anomalies at Critical Points of Fluids. <i>Annual Review of Physical Chemistry</i> , 1981, 32, 233-265. | 10.8 | 178 |
| 101 | Precision acoustic measurements with a spherical resonator: Ar and C ₂ H ₄ . <i>Journal of Chemical Physics</i> , 1981, 74, 4062-4077. | 3.0 | 76 |
| 102 | An Interface Phase Transition: Complete to Partial Wetting. <i>Science</i> , 1980, 207, 1073-1075. | 12.6 | 276 |
| 103 | Gravity effects in fluids near the gas-liquid critical point. <i>Reviews of Modern Physics</i> , 1979, 51, 79-99. | 45.6 | 236 |
| 104 | Two-scale-factor universality near the critical point of fluids. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1978, 66, 44-46. | 2.1 | 54 |
| 105 | Universality, revisions of and corrections to scaling in fluids. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1978, 65, 223-225. | 2.1 | 36 |
| 106 | Critical points of mixtures: An analogy with pure fluids. <i>AIChE Journal</i> , 1978, 24, 267-278. | 3.6 | 83 |
| 107 | Implementation of scaling and extended scaling equations of state for the critical point of fluids. <i>Journal of Research of the National Bureau of Standards (United States)</i> , 1978, 83, 329. | 0.4 | 7 |
| 108 | Ising Critical Exponents in Real Fluids: An Experiment. <i>Physical Review Letters</i> , 1976, 37, 29-32. | 7.8 | 145 |

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| 109 | Specific heat of He ₄ and He ₃ -He ₄ mixtures at their λ transition. Physical Review B, 1975, 12, 93-113. | 3.2 | 46 |
| 110 | Observation of Anomalously Large Supercooling in Carbon Dioxide. Physical Review Letters, 1975, 34, 639-642. | 7.8 | 57 |
| 111 | Versatile cells for optical studies in fluids. Review of Scientific Instruments, 1975, 46, 1699-1700. | 1.3 | 4 |
| 112 | A differential transformer as a position detector in a magnetic densimeter. Review of Scientific Instruments, 1974, 45, 1462-1463. | 1.3 | 26 |
| 113 | Visual observation of the critical temperature and density: CO ₂ and C ₂ H ₄ . Journal of Chemical Physics, 1974, 61, 1766-1778. | 3.0 | 59 |
| 114 | Thermal Relaxation near the Critical Point. Physical Review A, 1972, 6, 1915-1920. | 2.5 | 35 |
| 115 | Metastable Thermodynamic States Near the Critical Point of He ₃ . Physical Review Letters, 1971, 27, 1421-1424. | 7.8 | 39 |
| 116 | Second-Order Nature of the Spin-Reorientation Phase Transitions in YbFeO ₃ . Physical Review Letters, 1971, 26, 1257-1259. | 7.8 | 37 |
| 117 | Cost of Elementary Laboratory and Lecture Instruction at a Large University. American Journal of Physics, 1971, 39, 454-455. | 0.7 | 1 |
| 118 | Scaling of the Specific-Heat Singularity of He ₄ Near Its Critical Point. Physical Review, 1969, 182, 342-352. | 2.7 | 100 |
| 119 | Specific Heat of He ₃ -He ₄ Mixtures Very Near the λ Line. Physical Review Letters, 1969, 23, 749-752. | 7.8 | 51 |
| 120 | Specific Heat of He ₃ and He ₄ in the Neighborhood of Their Critical Points. Physical Review Letters, 1965, 15, 54-56. | 7.8 | 65 |