# Stephan Kabelac

## List of Publications by Citations



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|---|---|---|---|
| 101 papers | 1,990 citations | 18 h-index | 43 g-index |
| 148 ext. papers | 2,236 ext. citations | 3 avg, IF | 4.86 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 101 | A benchmark study on the thermal conductivity of nanofluids. *Journal of Applied Physics*, **2009**, 106, 094312 | 2.5 | 766 |
| 100 | Transport coefficients of the Lennard-Jones model fluid. I. Viscosity. *Journal of Chemical Physics*, **2004**, 121, 3671-87 | 3.9 | 155 |
| 99 | Transport coefficients of the Lennard-Jones model fluid. II Self-diffusion. *Journal of Chemical Physics*, **2004**, 121, 9526-35 | 3.9 | 109 |
| 98 | Transport coefficients of the Lennard-Jones model fluid. III. Bulk viscosity. *Journal of Chemical Physics*, **2005**, 122, 14513 | 3.9 | 65 |
| 97 | Flow boiling of R134a and ammonia in a plate heat exchanger. *International Journal of Heat and Mass Transfer*, **2008**, 51, 6235-6242 | 4.9 | 54 |
| 96 | Investigation of local heat transfer coefficients in plate heat exchangers with temperature oscillation IR thermography and CFD. *International Journal of Heat and Mass Transfer*, **2010**, 53, 3764-3781 | 4.9 | 53 |
| 95 | Speed of sound instrument for fluids with pressures up to 100 MPa. *Review of Scientific Instruments* , **2006**, 77, 123903 | 1.7 | 48 |
| 94 | A Molecular Dynamics Simulation Study of the Self-Diffusion Coefficient and Viscosity of the Lennard□Jones Fluid. *International Journal of Thermophysics*, **2001**, 22, 161-173 | 2.1 | 43 |
| 93 | Nanofluids revisited. *Applied Thermal Engineering*, **2016**, 106, 1114-1126 | 5.8 | 37 |
| 92 | Local heat transfer coefficients in spray cooling systems measured with temperature oscillation IR thermography. *International Journal of Heat and Mass Transfer*, **2007**, 50, 1953-1962 | 4.9 | 35 |
| 91 | Pressure derivatives in the classical molecular-dynamics ensemble. *Journal of Chemical Physics*, **2006**, 124, 64104 | 3.9 | 35 |
| 90 | Experimental investigation of the flow pattern, pressure drop and void fraction of two-phase flow in the corrugated gap of a plate heat exchanger. *International Journal of Multiphase Flow*, **2017**, 91, 155-169 | 3.6 | 27 |
| 89 | Flow boiling of ammonia in a plain and a low finned horizontal tube. *International Journal of Refrigeration*, **2001**, 24, 41-50 | 3.8 | 25 |
| 88 | Exergy analysis of the diesel pre-reforming solid oxide fuel cell system with anode off-gas recycling in the SchIBZ project. Part I: Modeling and validation. *International Journal of Hydrogen Energy*, **2018**, 43, 16684-16693 | 6.7 | 23 |
| 87 | Preparation and electrochemical behavior of dense YSZ film for SOEC. *International Journal of Hydrogen Energy*, **2012**, 37, 12074-12080 | 6.7 | 22 |
| 86 | Fundamental Material Properties of the 2LiBH4-MgH2 Reactive Hydride Composite for Hydrogen Storage: (I) Thermodynamic and Heat Transfer Properties. *Energies*, **2018**, 11, 1081 | 3.1 | 21 |
| 85 | Analyses of thermal performance and pressure drop in a plate heat exchanger filled with ferrofluids under a magnetic field. *Fuel*, **2021**, 293, 120432 | 7.1 | 18 |

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|---|---|---|---|
| 84 | Microstructural modification of the anode/electrolyte interface of SOEC for hydrogen production. *International Journal of Hydrogen Energy*, **2012**, 37, 12833-12838 | 6.7 | 17 |
| 83 | Exergy of solar radiation. *International Journal of Energy Technology and Policy*, **2005**, 3, 115 | 1 | 17 |
| 82 | Bi-level heat exchanger network synthesis with evolution method for structure optimization and memetic particle swarm optimization for parameter optimization. *Engineering Optimization*, **2017**, 49, 401-416 | 2 | 16 |
| 81 | The entropy of terrestrial solar radiation. *Solar Energy*, **1992**, 48, 239-248 | 6.8 | 16 |
| 80 | Fundamental Material Properties of the 2LiBH4-MgH2 Reactive Hydride Composite for Hydrogen Storage: (II) Kinetic Properties. *Energies*, **2018**, 11, 1170 | 3.1 | 16 |
| 79 | The single-blow transient testing technique for offset and wavy fins of compact plate-fin heat exchangers. *Applied Thermal Engineering*, **2017**, 111, 1588-1595 | 5.8 | 15 |
| 78 | Heat transfer coefficient and pressure drop during refrigerant R-134a condensation in a plate heat exchanger. *Chemical Papers*, **2008**, 62, | 1.9 | 13 |
| 77 | A new look at the maximum conversion efficiency of black-body radiation. *Solar Energy*, **1991**, 46, 231-236 | 6.8 | 13 |
| 76 | Thermodynamik der Strahlung **1994**, | | 13 |
| 75 | Dynamic simulation and experimental validation of a two-phase closed thermosyphon for geothermal application. *Propulsion and Power Research*, **2017**, 6, 107-116 | 3.6 | 12 |
| 74 | Boiling of R134a in a Plate-Fin Heat Exchanger Having Offset Fins. *Journal of Heat Transfer*, **2015**, 137, | 1.8 | 11 |
| 73 | The transient response of finned crossflow heat exchangers. *International Journal of Heat and Mass Transfer*, **1989**, 32, 1183-1189 | 4.9 | 11 |
| 72 | Absorption and Scattering Behavior of Nanofluids in the Visible Range. *International Journal of Thermophysics*, **2015**, 36, 2769-2783 | 2.1 | 10 |
| 71 | Thermodynamic Properties of Propane. IV. Speed of Sound in the Liquid and Supercritical Regions. *Journal of Chemical & Engineering Data*, **2012**, 57, 3391-3398 | 2.8 | 10 |
| 70 | Entropy Generation During the Interaction of Thermal Radiation with a Surface. *Entropy*, **2012**, 14, 717-735 | 2.5 | 10 |
| 69 | Measurements of the Speed of Sound in Liquid Toluene. *Journal of Chemical & Engineering Data*, **2013**, 58, 1398-1406 | 2.8 | 9 |
| 68 | AN EXPERIMENTAL INVESTIGATION OF POOL BOILING ON NARROW HORIZONTAL TUBES. *Experimental Heat Transfer*, **2004**, 17, 131-146 | 2.4 | 9 |
| 67 | The Spectral Directional Emissivity of Photovoltaic Surfaces. *International Journal of Thermophysics*, **2001**, 22, 1577-1592 | 2.1 | 9 |

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|---|---|---|---|
| 66 | Simulation and experimental validation of a 400 m vertical CO2 heat pipe for geothermal application. *Heat and Mass Transfer*, **2017**, 53, 3257-3265 | 2.2 | 8 |
| 65 | Hydrogen production by methane decomposition: Analysis of thermodynamic carbon properties and process evaluation. *Energy Conversion and Management*, **2020**, 221, 113125 | 10.6 | 8 |
| 64 | Thermodynamische Stoffdaten f□ Biogase. *Forschung Im Ingenieurwesen/Engineering Research*, **2005**, 70, 46-55 | 0.8 | 8 |
| 63 | Exergy analysis of the diesel pre-reforming SOFC-system with anode off-gas recycling in the SchIBZ project. Part II: System exergetic evaluation. *International Journal of Hydrogen Energy*, **2019**, 44, 10916-10924 | 4.7 | 7 |
| 62 | Local Entropy Production Rates in a Polymer Electrolyte Membrane Fuel Cell. *Journal of Non-Equilibrium Thermodynamics*, **2017**, 42, 1-30 | 3.8 | 6 |
| 61 | Optimal Retrofit Strategy of Heat Exchanger Networks Applied in Crude Oil Distillation Units. *Industrial & Engineering Chemistry Research*, **2016**, 55, 11283-11290 | 3.9 | 6 |
| 60 | Mean heat transfer coefficients during the evaporation of 1,1,1,2-tetrafluoroethane (R-134a) in a plate heat exchanger. *Journal of the Serbian Chemical Society*, **2007**, 72, 833-846 | 0.9 | 6 |
| 59 | Radiation and Energetic Analysis of Nanofluid Based Volumetric Absorbers for Concentrated Solar Power. *Nanomaterials*, **2018**, 8, | 5.4 | 6 |
| 58 | On the Controversy of Nanofluid Rheological Behavior. *International Journal of Thermophysics*, **2019**, 40, 1 | 2.1 | 5 |
| 57 | Multifunctional fuel cell system for civil aircraft: Study of the cathode exhaust gas dehumidification. *International Journal of Hydrogen Energy*, **2017**, 42, 29518-29531 | 6.7 | 5 |
| 56 | Measurements of the Speed of Sound in the Refrigerants HFC227ea and HFC365mfc in the Liquid Region. *Journal of Chemical & Engineering Data*, **2013**, 58, 446-454 | 2.8 | 5 |
| 55 | Grenzfl□henenergien von Teflon und verschiedenen Fl□sigkeiten in einer verdichteten Stickstoffatmosph□e. *Forschung Im Ingenieurwesen/Engineering Research*, **2002**, 67, 56-71 | 0.8 | 5 |
| 54 | Water Management of PEM Fuel Cell Systems Based on the Humidity Distribution in the Anode Gas Channels. *Fuel Cells*, **2020**, 20, 477-486 | 2.9 | 5 |
| 53 | A Diffusivity Study of (Sc2O3)0.1(CeO2)0.01(ZrO2)0.89 between 1100 and 1500 K at Zero Pressure with Molecular Dynamics. *Journal of Chemical & Engineering Data*, **2018**, 63, 1955-1960 | 2.8 | 5 |
| 52 | Measurements of the Speed of Sound in Propene in the Liquid and Supercritical Regions. *Journal of Chemical & Engineering Data*, **2013**, 58, 1621-1628 | 2.8 | 4 |
| 51 | Local heat transfer coefficients during the evaporation of 1,1,1,2-tetrafluoroethane (R-134a) in a plate heat exchanger. *Journal of the Serbian Chemical Society*, **2009**, 74, 427-440 | 0.9 | 4 |
| 50 | K1 Radiation of Surfaces **2010**, 945-960 | | 4 |
| 49 | Experimental results of an absorption-compression heat pump using the working fluid ammonia/water for heat recovery in industrial processes. *International Journal of Refrigeration*, **2019**, 99, 59-68 | 3.8 | 4 |

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| 48 | Approach to the Coulomb Contribution of Thermodynamic Properties from the Mean Electrostatic Potential of the Ions in (ZrO2)1−x(Y2O3)x. *Journal of Physical Chemistry C*, **2018**, 122, 62-70 | 3.8 | 3 |
| 47 | Particle migration in isobaric and flash evaporation of nanofluids. *Forschung Im Ingenieurwesen/Engineering Research*, **2016**, 80, 101-109 | 0.8 | 3 |
| 46 | Impact of Multi-Causal Transport Mechanisms in an Electrolyte Supported Planar SOFC with (ZrO)(YO) Electrolyte. *Entropy*, **2018**, 20, | 2.8 | 3 |
| 45 | Experimentelle Bestimmung von Wärmeübergang und Druckverlust bei Kondensation im vertikalen Plattenspalt. Experimental Determination of Condensation Heat Transfer and Pressure Drop in a Vertical Plate Gap. *Chemie-Ingenieur-Technik*, **2015**, 87, 280-289 | 0.8 | 3 |
| 44 | Monte Carlo Simulations of Binary Lennard–Jones Mixtures: A Test of the van der Waals One-Fluid Model. *International Journal of Thermophysics*, **1998**, 19, 687-696 | 2.1 | 3 |
| 43 | A simple set of equations of state for process calculations and its application to R134a and R152a. *International Journal of Refrigeration*, **1991**, 14, 217-222 | 3.8 | 3 |
| 42 | Radiative Properties of a Nanofluid Mixture **2014**, | | 3 |
| 41 | Modeling a thermocell with proton exchange membrane and hydrogen electrodes. *International Journal of Hydrogen Energy*, **2018**, 43, 19841-19850 | 6.7 | 3 |
| 40 | Speed-of-Sound Measurements in Compressed Nitrogen and Dry Air. *Journal of Chemical & Engineering Data*, **2016**, 61, 3941-3951 | 2.8 | 2 |
| 39 | Nusselt numbers from numerical investigations of turbulent flow in highly eccentric horizontal annuli. *International Communications in Heat and Mass Transfer*, **2019**, 109, 104344 | 5.8 | 2 |
| 38 | A second view on the possible enhancement of distillation efficiency with nanofluids. *Applied Thermal Engineering*, **2017**, 125, 29-34 | 5.8 | 2 |
| 37 | Pressure drop during evaporation of 1,1,1,2-tetrafluoroethane (R-134a)in a plate heat exchanger. *Journal of the Serbian Chemical Society*, **2007**, 72, 1015-1022 | 0.9 | 2 |
| 36 | System Simulation and Analysis of an LNG-Fueled SOFC System Using Additively Manufactured High Temperature Heat Exchangers. *Energies*, **2022**, 15, 941 | 3.1 | 2 |
| 35 | Coupled Transport Effects in Solid Oxide Fuel Cell Modeling.. *Entropy*, **2022**, 24, | 2.8 | 2 |
| 34 | K3 Strahlung von Gasen und Gasgemischen **2013**, 1115-1128 | | 2 |
| 33 | Measurement of emittance and degree of polarisation of surfaces for solar energy converters. *High Temperatures - High Pressures*, **2000**, 32, 677-686 | 1.3 | 2 |
| 32 | K2 View Factors **2010**, 961-978 | | 2 |
| 31 | Experimental investigation of a thermocell with proton exchange membrane and hydrogen electrodes. *International Journal of Hydrogen Energy*, **2020**, 45, 12680-12690 | 6.7 | 2 |

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| 30 | Condensation quasi-local heat transfer and frictional pressure drop of R1234ze(E) and R134a in a micro-structured plate heat exchanger. *Applied Thermal Engineering*, **2021**, 197, 117404 | 5.8 | 2 |
| 29 | Conjugate heat transfer analysis of bubble growth during flow boiling in a rectangular microchannel. *International Journal of Heat and Mass Transfer*, **2021**, 181, 121828 | 4.9 | 2 |
| 28 | R410A flow condensation inside two dimensional micro-fin tubes and three dimensional dimple tubes. *International Journal of Heat and Mass Transfer*, **2022**, 182, 121910 | 4.9 | 2 |
| 27 | Multi-stream Plate-and-Frame Heat Exchangers for Condensation and Evaporation **2018**, 167-187 | | 1 |
| 26 | A simplified solution of the regenerator periodic problem: the case for air conditioning. *Forschung Im Ingenieurwesen/Engineering Research*, **2010**, 74, 207-214 | 0.8 | 1 |
| 25 | Local Two-Phase Flow Heat Transfer in Plate Heat Exchangers **2007**, 469 | | 1 |
| 24 | 3D Visualization of Molecular Simulations in High-performance Parallel Computing Environments. *Molecular Simulation*, **2004**, 30, 469-477 | 2 | 1 |
| 23 | Berechnung des Benetzungsverhaltens von Flüssigkeiten auf Teflon in einer verdichteten Stickstoffatmosphäre mit der Dichtegradiententheorie. *Forschung Im Ingenieurwesen/Engineering Research*, **2002**, 67, 45-55 | 0.8 | 1 |
| 22 | Experimental Study on CaCO3 Fouling Characteristics during Falling Film Evaporation. *Journal of Solar Energy Engineering, Transactions of the ASME*,1-27 | 2.3 | 1 |
| 21 | Technische Thermodynamik **2007**, F1-F95 | | 1 |
| 20 | K3 Gas Radiation: Radiation from Gas Mixtures **2010**, 979-988 | | 1 |
| 19 | K1 Strahlung technischer Oberflächen **2013**, 1083-1096 | | 1 |
| 18 | Femtosecond Laser-Induced Surface Modification of the Electrolyte in Solid Oxide Electrolysis Cells. *Energies*, **2020**, 13, 6562 | 3.1 | 1 |
| 17 | A novel method to determine the transport coefficients of an YSZ electrolyte based on impedance spectroscopy. *Solid State Ionics*, **2021**, 363, 115591 | 3.3 | 1 |
| 16 | F Technische Thermodynamik **2012**, 925-1021 | | 0 |
| 15 | The single-blow transient test technique using pulse change inlet condition with optimized pulse width and matching time. *Heat and Mass Transfer*, **2020**, 56, 963-972 | 2.2 | 0 |
| 14 | Identification of Existing Challenges and Future Trends for the Utilization of Ammonia-Water Absorption–Compression Heat Pumps at High Temperature Operation. *Applied Sciences (Switzerland)*, **2021**, 11, 4635 | 2.6 | 0 |
| 13 | Experimental investigation of the two-phase local heat transfer coefficients for condensation of R134a in a micro-structured plate heat exchanger. *Heat and Mass Transfer*,1 | 2.2 | 0 |

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|---|---|---|---|
| 12 | Influence of axial heat conduction in solid walls and fins on the overall thermal performance of an additively manufactured high-temperature heat exchanger. *Applied Thermal Engineering*, **2022**, 118566 | 5.8 | 0 |
| 11 | Experimentelle Untersuchung des dynamischen thermohydraulischen Verhaltens eines Naturumlaufverdampfers. *Chemie-Ingenieur-Technik*, **2013**, 85, 1464-1465 | 0.8 | |
| 10 | Wärmeübertragung bei der Verdampfung von Ammoniak in einem Plattenwärmeübertrager. *Chemie-Ingenieur-Technik*, **2003**, 75, 1628-1633 | 0.8 | |
| 9 | Flow pattern, heat transfer and frictional pressure drop investigation of R365mfc condensation in a micro-structured corrugated gap with mixed angles. *Applied Thermal Engineering*, **2022**, 201, 117812 | 5.8 | |
| 8 | Energie- und Stofftransport in Temperatur- und Konzentrationsfeldern **2019**, 1-33 | | |
| 7 | K1 Wärmestrahlung technischer Oberflächen. *Springer Reference Technik*, **2019**, 1183-1199 | 0.1 | |
| 6 | Grundlagen der Technischen Thermodynamik **2019**, 1-29 | | |
| 5 | Phasen- und Reaktionsgleichgewichte **2019**, 1-24 | | |
| 4 | Stoffmodelle der Technischen Thermodynamik **2019**, 1-29 | | |
| 3 | K2 Sichtfaktoren **2013**, 1097-1114 | | |
| 2 | Impact of Carbon Dioxide on the Non-Catalytic Thermal Decomposition of Methane. *ChemEngineering*, **2021**, 5, 12 | 2.6 | |
| 1 | Wärmestrahlung technischer Oberflächen. *Springer Reference Technik*, **2018**, 1-17 | 0.1 | |