

# Wei-Mon Yan

## List of Publications by Year in descending order

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125  
papers

4,033  
citations

101384

36  
h-index

149479

56  
g-index

129  
all docs

129  
docs citations

129  
times ranked

2901  
citing authors

#	ARTICLE	IF	CITATIONS
1	Heat transfer enhancement in microchannel heat sinks using nanofluids. International Journal of Heat and Mass Transfer, 2012, 55, 2559-2570.	2.5	155
2	Study on thermal conductivity of water-based nanofluids with hybrid suspensions of CNTs/Al <sub>2</sub> O <sub>3</sub> nanoparticles. Journal of Thermal Analysis and Calorimetry, 2016, 124, 455-460.	2.0	153
3	Sensitivity analysis and application of machine learning methods to predict the heat transfer performance of CNT/water nanofluid flows through coils. International Journal of Heat and Mass Transfer, 2019, 128, 825-835.	2.5	141
4	Forced convection heat transfer of Nano-Encapsulated Phase Change Material (NEPCM) suspension in a mini-channel heatsink. International Journal of Heat and Mass Transfer, 2020, 155, 119858.	2.5	130
5	Numerical simulation of PV cooling by using single turn pulsating heat pipe. International Journal of Heat and Mass Transfer, 2018, 127, 203-208.	2.5	127
6	Natural convection in a trapezoidal enclosure filled with carbon nanotube/water nanofluid. International Journal of Heat and Mass Transfer, 2016, 92, 76-82.	2.5	123
7	A new scheme for reducing pressure drop and thermal resistance simultaneously in microchannel heat sinks with wavy porous fins. International Journal of Heat and Mass Transfer, 2017, 111, 1071-1078.	2.5	108
8	Enhancement of thermal performance in double-layered microchannel heat sink with nanofluids. International Journal of Heat and Mass Transfer, 2012, 55, 3225-3238.	2.5	103
9	Using artificial neural network to predict thermal conductivity of ethylene glycol with alumina nanoparticle. Journal of Thermal Analysis and Calorimetry, 2016, 126, 643-648.	2.0	103
10	A comprehensive review of last experimental studies on thermal conductivity of nanofluids. Journal of Thermal Analysis and Calorimetry, 2015, 122, 863-884.	2.0	90
11	Correlations of heat transfer effectiveness in a minichannel heat sink with water-based suspensions of Al <sub>2</sub> O <sub>3</sub> nanoparticles and/or MEPCM particles. International Journal of Heat and Mass Transfer, 2014, 69, 293-299.	2.5	84
12	Optimization of a double-layered microchannel heat sink with semi-porous-ribs by multi-objective genetic algorithm. International Journal of Heat and Mass Transfer, 2020, 149, 119217.	2.5	81
13	Molecular Dynamics Simulations on Coalescence and Non-coalescence of Conducting Droplets. Langmuir, 2015, 31, 7457-7462.	1.6	79
14	Two-phase mixture model for nanofluid turbulent flow and heat transfer: Effect of heterogeneous distribution of nanoparticles. Chemical Engineering Science, 2017, 167, 135-144.	1.9	76
15	Humidity of reactant fuel on the cell performance of PEM fuel cell with baffle-blocked flow field designs. Journal of Power Sources, 2006, 159, 468-477.	4.0	65
16	Dynamic cell performance of kW-grade proton exchange membrane fuel cell stack with dead-ended anode. Applied Energy, 2015, 142, 108-114.	5.1	65
17	Effect of humidity of reactants on the cell performance of PEM fuel cells with parallel and interdigitated flow field designs. Journal of Power Sources, 2008, 176, 247-258.	4.0	63
18	Three-dimensional numerical study on cell performance and transport phenomena of PEM fuel cells with conventional flow fields. International Journal of Hydrogen Energy, 2008, 33, 156-164.	3.8	63

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19	Experiment on thermal performance of water-based suspensions of Al <sub>2</sub> O <sub>3</sub> nanoparticles and MEPCM particles in a minichannel heat sink. <i>International Journal of Heat and Mass Transfer</i> , 2014, 69, 276-284.	2.5	63
20	Reduction in the contact time of impacting droplets by decorating a rectangular ridge on superhydrophobic surfaces. <i>International Journal of Heat and Mass Transfer</i> , 2019, 132, 1105-1115.	2.5	62
21	Enhancement of maximum temperature drop across thermoelectric cooler through two-stage design and transient supercooling effect. <i>Applied Energy</i> , 2016, 175, 285-292.	5.1	56
22	Investigation of heat transfer enhancement by electrohydrodynamics in a double-wall-heated channel. <i>International Journal of Heat and Mass Transfer</i> , 2017, 113, 373-383.	2.5	50
23	Enhanced Peltier cooling of two-stage thermoelectric cooler via pulse currents. <i>International Journal of Heat and Mass Transfer</i> , 2017, 114, 656-663.	2.5	49
24	Contribution of hybrid Al <sub>2</sub> O <sub>3</sub> -water nanofluid and PCM suspension to augment thermal performance of coolant in a minichannel heat sink. <i>International Journal of Heat and Mass Transfer</i> , 2018, 122, 651-659.	2.5	48
25	Experimental study on cooling performance of minichannel heat sink using water-based MEPCM particles. <i>International Communications in Heat and Mass Transfer</i> , 2013, 48, 67-72.	2.9	46
26	Efficacy of divergent minichannels on cooling performance of heat sinks with water-based MEPCM suspensions. <i>International Journal of Thermal Sciences</i> , 2018, 130, 333-346.	2.6	46
27	Cooling performance of MEPCM suspensions for heat dissipation intensification in a minichannel heat sink. <i>International Journal of Heat and Mass Transfer</i> , 2017, 115, 43-49.	2.5	45
28	Novel bufferless photosynthetic microbial fuel cell (PMFCs) for enhanced electrochemical performance. <i>Bioresource Technology</i> , 2018, 255, 83-87.	4.8	45
29	The application of artificial neural networks to predict the performance of solar chimney filled with phase change materials. <i>Energy Conversion and Management</i> , 2018, 171, 1255-1262.	4.4	44
30	Convective heat transfer of nano-encapsulated phase change material suspension in a divergent minichannel heatsink. <i>International Journal of Heat and Mass Transfer</i> , 2021, 165, 120717.	2.5	43
31	Electro-coalescence of two charged droplets under constant and pulsed DC electric fields. <i>International Journal of Heat and Mass Transfer</i> , 2016, 98, 10-16.	2.5	42
32	Microencapsulated n-eicosane PCM suspensions: Thermophysical properties measurement and modeling. <i>International Journal of Heat and Mass Transfer</i> , 2018, 125, 792-800.	2.5	40
33	Thermal and hydrodynamic characteristics of divergent rectangular minichannel heat sinks. <i>International Journal of Heat and Mass Transfer</i> , 2018, 122, 264-274.	2.5	39
34	Assessment of recirculation batch mode operation in bufferless Bio-cathode microbial Fuel Cells (MFCs). <i>Applied Energy</i> , 2018, 209, 120-126.	5.1	39
35	Experimental study of cooling performance of water-based alumina nanofluid in a minichannel heat sink with MEPCM layer embedded in its ceiling. <i>International Communications in Heat and Mass Transfer</i> , 2019, 103, 1-6.	2.9	39
36	Experimental study on fluid flow and heat transfer characteristics of falling film over tube bundle. <i>International Journal of Heat and Mass Transfer</i> , 2019, 130, 9-24.	2.5	39

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37	Enhancement of boiling heat transfer of thin water film on an electrified solid surface. International Journal of Heat and Mass Transfer, 2017, 109, 410-416.	2.5	38
38	Exposing effect of comb-type cathode electrode on the performance of sediment microbial fuel cells. Applied Energy, 2017, 204, 620-625.	5.1	38
39	Numerical study on convective heat transfer of nanofluid in a minichannel heat sink with micro-encapsulated PCM-cooled ceiling. International Journal of Heat and Mass Transfer, 2020, 153, 119589.	2.5	38
40	Numerical study on forced convection of water-based suspensions of nanoencapsulated PCM particles/Al <sub>2</sub> O <sub>3</sub> nanoparticles in a mini-channel heat sink. International Journal of Heat and Mass Transfer, 2020, 157, 119965.	2.5	37
41	Heat transfer enhancement of microchannel heat sink using transcritical carbon dioxide as the coolant. Energy Conversion and Management, 2016, 110, 154-164.	4.4	36
42	Experimental study on bubble characteristics of time periodic subcooled flow boiling in annular ducts due to wall heat flux oscillation. International Journal of Heat and Mass Transfer, 2020, 157, 119974.	2.5	35
43	Thermal performance analysis of a 30 kW switched reluctance motor. International Journal of Heat and Mass Transfer, 2017, 114, 145-154.	2.5	33
44	A combined numerical and experimental study on the forced convection of Al <sub>2</sub> O <sub>3</sub> -water nanofluid in a circular tube. International Journal of Heat and Mass Transfer, 2018, 120, 66-75.	2.5	33
45	Asymmetric heat transfer characteristics of a double droplet impact on a moving liquid film. International Journal of Heat and Mass Transfer, 2018, 126, 649-659.	2.5	33
46	Experimental and numerical study on convective boiling in a staggered array of micro pin-fin microgap. International Journal of Heat and Mass Transfer, 2020, 149, 119203.	2.5	33
47	Thermal energy storage characteristics in an enclosure packed with MEPCM particles: An experimental and numerical study. International Journal of Heat and Mass Transfer, 2014, 73, 88-96.	2.5	31
48	Experimental study of boiling heat transfer in a microchannel with nucleated-shape columnar micro-pin-fins. International Communications in Heat and Mass Transfer, 2019, 108, 104277.	2.9	30
49	Experimental study of cooling characteristics of water-based alumina nanofluid in a minichannel heat sink. Case Studies in Thermal Engineering, 2019, 14, 100418.	2.8	30
50	Experimental study on thermophysical properties of water-based nanoemulsion of n-eicosane PCM. Journal of Molecular Liquids, 2021, 321, 114760.	2.3	29
51	Performance improvement of air-breathing proton exchange membrane fuel cell stacks by thermal management. International Journal of Hydrogen Energy, 2020, 45, 22324-22339.	3.8	28
52	Physical properties measurement and performance comparison of membranes for planar membrane humidifiers. International Journal of Heat and Mass Transfer, 2019, 136, 393-403.	2.5	26
53	Effects of Nanoparticle Enhanced Lubricant Films in Thermal Design of Plain Journal Bearings at High Reynolds Numbers. Symmetry, 2019, 11, 1353.	1.1	25
54	Performance evaluation of a multi-stage plate-type membrane humidifier for proton exchange membrane fuel cell. Energy Conversion and Management, 2018, 176, 123-130.	4.4	24

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55	Dynamics of droplets impacting hydrophilic surfaces decorated with a hydrophobic strip. International Journal of Heat and Mass Transfer, 2019, 135, 235-246.	2.5	24
56	Experimental study on convective boiling of micro-pin-finned channels with parallel arrangement fins for FC-72 dielectric fluid. International Journal of Heat and Mass Transfer, 2019, 138, 390-400.	2.5	23
57	Experimental study on thermal performance of water-based nano-PCM emulsion flow in multichannel heat sinks with parallel and divergent rectangular mini-channels. International Journal of Heat and Mass Transfer, 2020, 146, 118861.	2.5	23
58	Review on design factors of microbial fuel cells using Buckingham's Pi Theorem. Renewable and Sustainable Energy Reviews, 2020, 130, 109878.	8.2	23
59	Molecular dynamics investigation on enhancement of heat transfer between electrified solid surface and liquid water. International Journal of Heat and Mass Transfer, 2018, 125, 756-760.	2.5	22
60	Measurement and Artificial Neural Network Modeling of Electrical Conductivity of CuO/Glycerol Nanofluids at Various Thermal and Concentration Conditions. Energies, 2018, 11, 1190.	1.6	22
61	Study on heat and mass transfer of a planar membrane humidifier for PEM fuel cell. International Journal of Heat and Mass Transfer, 2020, 152, 119538.	2.5	21
62	Properties and Phase Behavior of Water-in-Diesel Microemulsion Fuels Stabilized by Nonionic Surfactants in Combination with Aliphatic Alcohol. Energy & Fuels, 2020, 34, 2135-2142.	2.5	21
63	Acceleration of aqueous nano-film evaporation by applying parallel electric field: A molecular dynamics simulation. International Journal of Heat and Mass Transfer, 2019, 138, 68-74.	2.5	20
64	Transient cooling characteristics of Al <sub>2</sub> O <sub>3</sub> -water nanofluid flow in a microchannel subject to a sudden-pulsed heat flux. International Journal of Mechanical Sciences, 2019, 151, 95-105.	3.6	20
65	Optimization of Design Parameters for a Sandwich-Distribution Porous-Microchannel Heat Sink. Numerical Heat Transfer; Part A: Applications, 2014, 66, 229-251.	1.2	19
66	Comparative study on thermal performance of MEPCM suspensions in parallel and divergent minichannel heat sinks. International Communications in Heat and Mass Transfer, 2018, 94, 96-105.	2.9	19
67	Optimization of the Electrolyte Parameters and Components in Zinc Particle Fuel Cells. Energies, 2019, 12, 1090.	1.6	19
68	Experimental study of transient thermal characteristics of nanofluid in a minichannel heat sink with MEPCM layer in its ceiling. International Journal of Heat and Mass Transfer, 2019, 133, 1041-1051.	2.5	19
69	Water-based nano-PCM emulsion flow and heat transfer in divergent mini-channel heat sink—An experimental investigation. International Journal of Heat and Mass Transfer, 2020, 148, 119086.	2.5	19
70	An experimental study of forced convection effectiveness of Al <sub>2</sub> O <sub>3</sub> -water nanofluid flowing in circular tubes. International Communications in Heat and Mass Transfer, 2017, 83, 23-29.	2.9	18
71	Three-dimensional analysis of entropy generation for forced convection over an inclined step with presence of solid nanoparticles and magnetic force. Numerical Heat Transfer; Part A: Applications, 2021, 80, 318-335.	1.2	18
72	Experimental study on transient supercooling of two-stage thermoelectric cooler. Case Studies in Thermal Engineering, 2019, 14, 100509.	2.8	17

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73	Improved performance of a Zn-air fuel cell by coupling Zn particle fuel and flowing electrolyte. <i>Chemical Physics Letters</i> , 2019, 728, 160-166.	1.2	17
74	Thermo-economic Evaluation of Producing Liquefied Natural Gas and Natural Gas Liquids from Flare Gases. <i>Energies</i> , 2018, 11, 1868.	1.6	16
75	Laminar forced convection effectiveness of Al <sub>2</sub> O <sub>3</sub> -water nanofluid flow in a circular tube at various operation temperatures: Effects of temperature-dependent properties. <i>International Journal of Heat and Mass Transfer</i> , 2016, 100, 464-481.	2.5	15
76	Bubble characteristics in time periodic saturated flow boiling of R-134a in a narrow annular pipe due to heat flux oscillation. <i>International Journal of Heat and Mass Transfer</i> , 2016, 102, 1150-1158.	2.5	15
77	Optimization of pulse current on energy storage of zinc-air flow batteries. <i>Journal of Power Sources</i> , 2019, 442, 227253.	4.0	15
78	Application of interface material and effects of oxygen gradient on the performance of single-chamber sediment microbial fuel cells (SSMFCs). <i>Journal of Environmental Sciences</i> , 2019, 75, 163-168.	3.2	15
79	A Comprehensive Review on Measurement and Correlation Development of Capillary Pressure for Two-Phase Modeling of Proton Exchange Membrane Fuel Cells. <i>Journal of Chemistry</i> , 2015, 2015, 1-17.	0.9	14
80	Experimental and numerical study on transient thermal energy storage of microencapsulated phase change material particles in an enclosure. <i>International Journal of Heat and Mass Transfer</i> , 2016, 94, 191-198.	2.5	14
81	Laser-scribed Graphene Electrodes Functionalized with Nafion/Fe <sub>3</sub> O <sub>4</sub> Nanohybrids for the Ultrasensitive Detection of Neurotoxin Drug Cloquinol. <i>ACS Omega</i> , 2022, 7, 15936-15950.	1.6	14
82	Time periodic saturated flow boiling heat transfer of R-134a in a narrow annular duct due to heat flux oscillation. <i>International Journal of Heat and Mass Transfer</i> , 2017, 106, 35-46.	2.5	12
83	Highly heterogeneous interior structure of biofilm wastewater for enhanced pollutant removals. <i>Bioresource Technology</i> , 2019, 291, 121919.	4.8	12
84	Molecular dynamics simulation on evaporation enhancement of water and aqueous nano-films by the application of alternating electric field. <i>International Journal of Heat and Mass Transfer</i> , 2019, 145, 118735.	2.5	12
85	Treatment of Oily Wastewater by the Optimization of Fe <sub>2</sub> O <sub>3</sub> Calcination Temperatures in Innovative Bio-Electron-Fenton Microbial Fuel Cells. <i>Energies</i> , 2018, 11, 565.	1.6	11
86	Enhancement of air-flow management in Zn-air fuel cells by the optimization of air-flow parameters. <i>Energy</i> , 2020, 197, 117181.	4.5	11
87	Thermophysical properties of water-based nano-emulsion of tricosane - An Experimental investigation. <i>Case Studies in Thermal Engineering</i> , 2021, 24, 100849.	2.8	11
88	Effects of operating parameters on transport phenomena and cell performance of PEM fuel cells with conventional and contracted flow field designs. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 15808-15819.	3.8	10
89	Melting processes of phase change materials in an enclosure with a free-moving ceiling: An experimental and numerical study. <i>International Journal of Heat and Mass Transfer</i> , 2015, 86, 780-786.	2.5	10
90	Time periodic evaporation heat transfer of R-134a in a narrow annular duct due to mass flow rate oscillation. <i>International Journal of Heat and Mass Transfer</i> , 2018, 118, 154-164.	2.5	10

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91	Bubble dynamics in evaporation flow of R-134a in narrow annular ducts due to flow rate oscillation. International Communications in Heat and Mass Transfer, 2019, 100, 27-34.	2.9	10
92	Protection efficiencies of surface-active inhibitors in zinc-air batteries. International Journal of Energy Research, 2020, 44, 11883-11893.	2.2	10
93	Effects of operating parameters and load mode on dynamic cell performance of proton exchange membrane fuel cell. International Journal of Energy Research, 2021, 45, 2474-2487.	2.2	10
94	An investigation on the thermal energy storage in an enclosure packed with micro-encapsulated phase change material. Case Studies in Thermal Engineering, 2021, 25, 100987.	2.8	10
95	Optimization of the zinc oxide reduction in the charging process of zinc-air flow batteries. International Journal of Energy Research, 2020, 44, 8399-8412.	2.2	10
96	Experimental study on heat and mass transfer of a multi-stage planar dehumidifier. International Journal of Heat and Mass Transfer, 2020, 148, 119104.	2.5	9
97	Discharge performance of Zn-air fuel cells under the influence of Carbopol 940 thickener. International Journal of Energy Research, 2020, 44, 4543-4555.	2.2	9
98	A fluid dynamics perspective on the flow dependent performance of honey comb microbial fuel cells. Energy, 2021, 214, 118928.	4.5	9
99	Cooling performance of Al <sub>2</sub> O <sub>3</sub> -water nanofluid flow in a minichannel with thermal buoyancy and wall conduction effects. Case Studies in Thermal Engineering, 2018, 12, 833-842.	2.8	8
100	Physical properties measurement and performance analysis of membranes for a multi-stage planar membrane dehumidifier. Case Studies in Thermal Engineering, 2019, 15, 100516.	2.8	8
101	Electromagnetic field analysis and cooling system design for high power switched reluctance motor. International Journal of Numerical Methods for Heat and Fluid Flow, 2019, 29, 1756-1785.	1.6	8
102	Innovative multi-processed N-doped carbon and Fe <sub>3</sub> O <sub>4</sub> cathode for enhanced bioelectro-Fenton microbial fuel cell performance. International Journal of Energy Research, 2019, 43, 7594.	2.2	7
103	Thermal performance of phase change nano-emulsion in a rectangular minichannel with wall conduction effect. International Communications in Heat and Mass Transfer, 2020, 110, 104438.	2.9	7
104	Efficacy of turbulent convective heat transfer in a circular tube with water-based nanoemulsion of n-Eicosane. An experimental study. International Journal of Heat and Mass Transfer, 2022, 183, 122062.	2.5	7
105	Solvothermal synthesis of two-dimensional graphitic carbon nitride/tungsten oxide nanocomposite: a robust electrochemical scaffold for selective determination of dopamine and uric acid. Journal of Applied Electrochemistry, 2022, 52, 1231-1248.	1.5	7
106	Experimental study on time periodic evaporation heat transfer of R-134a in annular ducts due to wall heat flux oscillation. International Journal of Heat and Mass Transfer, 2017, 106, 1232-1241.	2.5	6
107	Experimental study on influence of oscillatory heat flux on heat transfer of R-134a time-periodic subcooled flow boiling in annular duct. International Journal of Thermal Sciences, 2021, 167, 106988.	2.6	6
108	Transient thermal energy storage in partitioned enclosures packed with microencapsulated phase change materials. International Communications in Heat and Mass Transfer, 2017, 86, 253-261.	2.9	5

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109	Experimental study on two water drops successively impinging on a solid surface. AIP Advances, 2020, 10, .	0.6	5
110	A novel geometrical design of gas-to-gas planar membrane humidifier for proton electrolyte membrane fuel cells. International Journal of Energy Research, 2021, 45, 16228-16241.	2.2	5
111	High performance zinc-air fuel cell with zinc particle fuel and flowing electrolyte. Journal of the Chinese Institute of Engineers, Transactions of the Chinese Institute of Engineers, Series A/Chung-kuo Kung Ch'eng Hsueh K'uan, 2021, 44, 842-850.	0.6	5
112	Effects of fluorinated ethylene propylene contents in a novel gas diffusion layer on cell performance of a proton exchange membrane fuel cell. International Journal of Energy Research, 2022, 46, 1553-1564.	2.2	5
113	Performance assessment of a flat-sheet membrane-based dehumidifier with serpentine flow channels: An experimental study. Energy Conversion and Management, 2022, 258, 115492.	4.4	5
114	Numerical investigation into transient response of proton exchange membrane fuel cell with serpentine flow field. International Journal of Energy Research, 2013, 37, 1302-1312.	2.2	4
115	Electrochemical polarization analysis for optimization of external operation parameters in zinc fuel cells. RSC Advances, 2020, 10, 28807-28818.	1.7	4
116	Numerical analysis on heat and mass transfer of the planar membrane dehumidifier. Numerical Heat Transfer; Part A: Applications, 2021, 80, 92-110.	1.2	4
117	On the Assessment of Unsteady Evaporation Heat Transfer due to Oscillating Flow Rate in a Narrow Annular Duct. International Journal of Heat and Mass Transfer, 2022, 184, 122356.	2.5	4
118	The onset of natural convection in a horizontal nanofluid layer heated from below. Heat Transfer, 2021, 50, 7764-7783.	1.7	3
119	Bubble characteristics in time periodic evaporation flow of R-134a in a narrow annular pipe due to heat flux oscillation. International Communications in Heat and Mass Transfer, 2016, 79, 9-15.	2.9	2
120	Unsteady phenomena in saturated flow boiling heat transfer – An experimental study on oscillating refrigerant mass flux. AEJ - Alexandria Engineering Journal, 2021, , .	3.4	2
121	Effectively inhibiting particles aggregation and sedimentation for $TiO_2-H_2O$ suspension by application of an electrode. Journal of Dispersion Science and Technology, 2023, 44, 679-685.	1.3	2
122	Tracking the diversity and interaction of methanogens in the energy recovery process of a full-scale wastewater treatment plant. Environmental Research, 2022, 211, 113010.	3.7	2
123	Experimental study on performance measurement of planar vacuum membrane dehumidifier with serpentine flow channel designs. AEJ - Alexandria Engineering Journal, 2022, 61, 10701-10711.	3.4	2
124	Thermal performance of various cross-sectioned rectangular minichannels with water-based phase change nano-suspensions. International Journal of Energy Research, 2020, 44, 344-359.	2.2	1
125	Experimental study on two consecutive droplets impacting onto an inclined solid surface. Journal of Mechanics, 2021, 37, 432-445.	0.7	1