

David S Nobes

List of Publications by Year in descending order

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124
papers

1,771
citations

279798

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docs citations

127
times ranked

1615
citing authors

#	ARTICLE	IF	CITATIONS
1	Flow Reconstruction and Prediction Based on Small Particle Image Velocimetry Experimental Datasets with Convolutional Neural Networks. <i>Industrial & Engineering Chemistry Research</i> , 2022, 61, 8504-8519.	3.7	5
2	Experimental Investigation of the Vortex Dynamics in Circular Jet Impinging on Rotating Disk. <i>Fluids</i> , 2022, 7, 223.	1.7	1
3	Research paper: The three-dimensional mechanical response of orthodontic archwires and brackets in vitro during simulated orthodontic torque. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021, 114, 104196.	3.1	6
4	Determination of fluid flow adjacent to a gas/liquid interface using particle tracking velocimetry (PTV) and a high-quality tessellation approach. <i>Experiments in Fluids</i> , 2021, 62, 1.	2.4	4
5	On the three-dimensional features of a confined slug bubble in a flowing square capillary. <i>Physics of Fluids</i> , 2021, 33, .	4.0	6
6	The Position of the Heart During Normothermic Ex Situ Heart Perfusion is an Important Factor in Preservation and Recovery of Myocardial Function. <i>ASAIO Journal</i> , 2021, 67, 1222-1231.	1.6	3
7	Dual Graded Lattice Structures: Generation Framework and Mechanical Properties Characterization. <i>Polymers</i> , 2021, 13, 1528.	4.5	13
8	The effect of three-phase contact line pinning during the passage of an isolated bubble through a confining pore. <i>Physics of Fluids</i> , 2021, 33, .	4.0	7
9	An Experimental Investigation of Flow Phenomena in a Multistage Micro-Tesla Valve. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2021, 143, .	1.5	15
10	Local flow dynamics in the motion of slug bubbles in a flowing mini square channel. <i>International Journal of Heat and Mass Transfer</i> , 2021, 178, 121588.	4.8	6
11	Marangoni convection in an evaporating water droplet. <i>International Journal of Heat and Mass Transfer</i> , 2021, 181, 122042.	4.8	13
12	The Role of Emulsions in Steam-Assisted-Gravity-Drainage (SAGD) Oil-Production Process: A Review. <i>SPE Journal</i> , 2020, 25, 969-989.	3.1	9
13	Measurement of the flow behavior index of Newtonian and shear-thinning fluids via analysis of the flow velocity characteristics in a mini-channel. <i>SN Applied Sciences</i> , 2020, 2, 1.	2.9	27
14	Investigation of Light-Induced Surface Roughness in Projection Micro-Stereolithography Additive Manufacturing (PµSLA). <i>Procedia CIRP</i> , 2020, 92, 187-193.	1.9	14
15	Additive manufacturing of shape memory polymers: effects of print orientation and infill percentage on shape memory recovery properties. <i>Rapid Prototyping Journal</i> , 2020, 26, 1593-1602.	3.2	9
16	Experimental and analytical investigation of meso-scale slug bubble dynamics in a square capillary channel. <i>Physics of Fluids</i> , 2020, 32, .	4.0	16
17	Experimental investigation into the effect of compliance of a mock aorta on cardiac performance. <i>PLoS ONE</i> , 2020, 15, e0239604.	2.5	1
18	Interaction of loosely packed bubbly flow passing through a pore space. <i>Journal of Visualization</i> , 2020, 23, 649-660.	1.8	9

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19	An imaging approach for in-situ measurement of refractive index of a porous medium. Optics and Lasers in Engineering, 2020, 134, 106175.	3.8	0
20	Micro- and Macro-Scale Measurement of Flow Velocity in Porous Media: A Shadow Imaging Approach for 2D and 3D. Optics, 2020, 1, 71-87.	1.2	10
21	Concurrent Modelling and Experimental Investigation of Material Properties and Geometries Produced by Projection Microstereolithography. Polymers, 2020, 12, 506.	4.5	16
22	Three-Dimensional Reconstruction of Evaporation-Induced Instabilities Using Volumetric Scanning Particle Image Velocimetry. Optics, 2020, 1, 52-70.	1.2	1
23	Experimental investigation into the effect of compliance of a mock aorta on cardiac performance. , 2020, 15, e0239604.		0
24	Experimental investigation into the effect of compliance of a mock aorta on cardiac performance. , 2020, 15, e0239604.		0
25	Experimental investigation into the effect of compliance of a mock aorta on cardiac performance. , 2020, 15, e0239604.		0
26	Experimental investigation into the effect of compliance of a mock aorta on cardiac performance. , 2020, 15, e0239604.		0
27	Experimental investigation into the effect of compliance of a mock aorta on cardiac performance. , 2020, 15, e0239604.		0
28	Experimental investigation into the effect of compliance of a mock aorta on cardiac performance. , 2020, 15, e0239604.		0
29	Semi-empirical pressure loss model for viscous flow through high aspect ratio rectangular orifices. Physics of Fluids, 2019, 31, 073603.	4.0	2
30	Transportation and deposition of spherical and irregularly shaped particles flowing through a porous network into a narrow slot. Experimental Thermal and Fluid Science, 2019, 109, 109894.	2.7	4
31	Mimicking "œ-Shaped" and Anisotropic Stress" Strain Behavior of Human and Porcine Aorta by Fabric-Reinforced Elastomer Composites. ACS Applied Materials & Interfaces, 2019, 11, 33323-33335.	8.0	38
32	Particle Surface Roughness Improves Colloidal Stability of Pressurized Pharmaceutical Suspensions. Pharmaceutical Research, 2019, 36, 43.	3.5	26
33	Determining the pressure distribution of a multi-phase flow through a pore space using velocity measurement and shape analysis. Measurement Science and Technology, 2019, 30, 054004.	2.6	14
34	Normothermic Ex Situ Heart Perfusion in Working Mode: Assessment of Cardiac Function and Metabolism. Journal of Visualized Experiments, 2019, , .	0.3	8
35	Heat transfer and flow characteristics in a rectangular channel with combined delta winglet inserts. International Journal of Heat and Mass Transfer, 2019, 134, 149-165.	4.8	35
36	Additive manufacturing of shape memory polymers: effects of print orientation and infill percentage on mechanical properties. Rapid Prototyping Journal, 2018, 24, 744-751.	3.2	33

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37	Measuring the Refractive Index, Density, Viscosity, pH, and Surface Tension of Potassium Thiocyanate (KSCN) Solutions for Refractive Index Matching in Flow Experiments. <i>Journal of Chemical & Engineering Data</i> , 2018, 63, 1275-1285.	1.9	6
38	Visualization of Fines Migration in the Flow Entering Apertures through the Near-Wellbore Porous Media. , 2018, , .		1
39	The influence of container geometry and thermal conductivity on evaporation of water at low pressures. <i>Scientific Reports</i> , 2018, 8, 15121.	3.3	10
40	The passage of bubbles rising through a confining rectangular geometry. <i>Physics of Fluids</i> , 2018, 30, .	4.0	19
41	Characterization of the suspension stability of pharmaceuticals using a shadowgraphic imaging method. <i>International Journal of Pharmaceutics</i> , 2018, 548, 128-138.	5.2	12
42	Investigation of the phenomena occurring near the liquid-vapor interface during evaporation of water at low pressures. <i>Physical Review Fluids</i> , 2018, 3, .	2.5	9
43	Enhanced Evaporation of Microscale Droplets With an Infrared Laser. <i>Journal of Heat Transfer</i> , 2017, 139, .	2.1	17
44	Experimental and Numerical Study of the Evaporation of Water at Low Pressures. <i>Langmuir</i> , 2017, 33, 4578-4591.	3.5	54
45	Hydrocyclone equivalent settling area factor at higher concentrations and developing a performance chart. <i>Separation and Purification Technology</i> , 2017, 182, 171-184.	7.9	8
46	OSM-Classic: An optical imaging technique for accurately determining strain. <i>SoftwareX</i> , 2017, 6, 225-230.	2.6	7
47	Effect of the Thermocouple on Measuring the Temperature Discontinuity at a Liquid-Vapor Interface. <i>Langmuir</i> , 2017, 33, 7169-7180.	3.5	23
48	Modification of an ST05G-CNC Stirling Engine to Use a Low Temperature Heat Source. , 2017, , .		2
49	Investigation of particle-laden turbulent pipe flow at high-Reynolds-number using particle image/tracking velocimetry (PIV/PTV). <i>International Journal of Multiphase Flow</i> , 2017, 89, 136-149.	3.4	36
50	A PIV COMPARISON OF THE FLOW FIELD AND WALL SHEAR STRESS IN RIGID AND COMPLIANT MODELS OF HEALTHY CAROTID ARTERIES. <i>Journal of Mechanics in Medicine and Biology</i> , 2017, 17, 1750041.	0.7	23
51	An experimental investigation on hydrocyclone underflow pumping. <i>Powder Technology</i> , 2017, 305, 99-108.	4.2	22
52	Characterization of flow field within the liquid phase of a small pool fire using particle image velocimetry technique. <i>Experimental Thermal and Fluid Science</i> , 2016, 75, 228-234.	2.7	14
53	Predicting equivalent settling area factor in hydrocyclones; a method for determining tangential velocity profile. <i>Separation and Purification Technology</i> , 2016, 163, 341-351.	7.9	8
54	Damage Detection in Tires Using Image-Based Strain Measurements. <i>Journal of Failure Analysis and Prevention</i> , 2016, 16, 438-448.	0.9	5

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55	Flow Visualization for Performance Measurement across Sand Control Orifices. , 2016, , .		0
56	Quantifying the Conduction Pathways in a Laboratory-Scale Methanol Pool Fire. Combustion Science and Technology, 2015, 187, 765-779.	2.3	13
57	Particle Motion in a Macroscale, Multiwavelength Acoustic Field. Journal of Fluids Engineering, Transactions of the ASME, 2015, 137, .	1.5	4
58	Analysis of the Particle Formation Process of Structured Microparticles. Molecular Pharmaceutics, 2015, 12, 2562-2573.	4.6	66
59	Hydrocyclone Performance and Energy Consumption Prediction: A Comparison with Other Centrifugal Separators. Separation Science and Technology, 2015, 50, 788-801.	2.5	13
60	Active and passive flow control on a precessing jet. Experiments in Fluids, 2015, 56, 1.	2.4	1
61	Fluid motion and energy transfer within burning liquid fuel pools of various thicknesses. Combustion and Flame, 2015, 162, 1477-1488.	5.2	31
62	Characterization of polyurethane shape memory polymer processed by material extrusion additive manufacturing. Additive Manufacturing, 2015, 8, 132-141.	3.0	66
63	Comparison of deformation and torque expression of the orthos and orthos Ti bracket systems. European Journal of Orthodontics, 2014, 36, 381-388.	2.4	10
64	Investigation into the effects of stainless steel ligature ties on the mechanical characteristics of conventional and self-ligated brackets subjected to torque. Journal of Orthodontics, 2014, 41, 188-200.	1.0	6
65	Unsteadiness of the internal flow in an effervescent atomizer nozzle. Experiments in Fluids, 2014, 55, 1.	2.4	12
66	Bioconversion of coal: new insights from a core flooding study. RSC Advances, 2014, 4, 22779.	3.6	40
67	New Laboratory Core Flooding Experimental System. Industrial & Engineering Chemistry Research, 2014, 53, 13497-13505.	3.7	21
68	Water-alternate-emulsion (WAE): A new technique for enhanced oil recovery. Journal of Petroleum Science and Engineering, 2014, 121, 167-173.	4.2	21
69	Transport phenomena within the liquid phase of a laboratory-scale circular methanol pool fire. Combustion and Flame, 2014, 161, 1076-1084.	5.2	35
70	Bubble formation and flow instability in an effervescent atomizer. Journal of Visualization, 2014, 17, 113-122.	1.8	17
71	Theoretical and Experimental Study of Hydrocyclone Performance and Equivalent Settling Area. , 2014, , .		4
72	Calibration of a planar laser induced fluorescence technique for use in large scale water facilities. Measurement: Journal of the International Measurement Confederation, 2013, 46, 2597-2607.	5.0	16

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73	Three-dimensional deformation comparison of self-ligating brackets. American Journal of Orthodontics and Dentofacial Orthopedics, 2013, 143, 645-657.	1.7	8
74	Effects of altering the liquid phase boundary conditions of methanol pool fires. Experimental Thermal and Fluid Science, 2013, 44, 786-791.	2.7	25
75	An investigation into the mechanical characteristics of select self-ligated brackets at a series of clinically relevant maximum torquing angles: loading and unloading curves and bracket deformation. European Journal of Orthodontics, 2013, 35, 719-729.	2.4	18
76	The effect on elastic modulus of rigid-matrix tubular composite braid radius and braid angle change under tensile loading. Composite Structures, 2013, 100, 135-143.	5.8	29
77	Three-dimensional deformation of orthodontic brackets. Journal of Dental Biomechanics, 2013, 4, 1758736013492529.	1.2	10
78	A PARAMETRIC STUDY OF A FLASH ATOMIZED WATER JET USING A PHASE DOPPLER PARTICLE ANALYZER. Atomization and Sprays, 2013, 23, 799-817.	0.8	2
79	Investigating the motion of particles in an ultrasonic acoustic wave field using PIV/PTV. AIP Conference Proceedings, 2012, , .	0.4	1
80	Experimental Investigation of the Flow Front Behind a Liquid-Air Interface for Capillary Flow. , 2012, , .		1
81	Mean Concentration Field of a Jet in a Uniform Counter-Flow. Journal of Fluids Engineering, Transactions of the ASME, 2012, 134, .	1.5	8
82	Statistical Analysis of Velocity Fields Obtained From Experimental Study of Micro-Porous Media. , 2012, , .		0
83	Deformation and warping of the bracket slot in select self-ligating orthodontic brackets due to an applied third order torque. Journal of Orthodontics, 2012, 39, 25-33.	1.0	14
84	Effect of geometry on the mechanisms for off-bottom solids suspension in a stirred tank. Chemical Engineering Science, 2012, 79, 163-176.	3.8	63
85	Impeller characterization and selection: Balancing efficient hydrodynamics with process mixing requirements. AIChE Journal, 2012, 58, 2573-2588.	3.6	44
86	Optical measurement of pore scale velocity field inside microporous media. Microfluidics and Nanofluidics, 2012, 12, 189-200.	2.2	34
87	PERFORMANCE EVALUATION AND WAKE STUDY OF A MICRO WIND TURBINE. Transactions of the Canadian Society for Mechanical Engineering, 2011, 35, 101-117.	0.8	4
88	Optical Measurement of the Relative Motion of a Spherical Particle in a Micro-Capillary. , 2011, , .		0
89	Tracking of Capillary Interface in Microfluidic Channels. , 2011, , .		0
90	A Novel Scanning Molecular Tagging Velocimetry Technique for Two Dimensional Microfluidic Applications. , 2011, , .		2

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91	Mechanical effects of third-order movement in self-ligated brackets by the measurement of torque expression. American Journal of Orthodontics and Dentofacial Orthopedics, 2011, 139, e31-e44.	1.7	36
92	Measurement of plastic and elastic deformation due to third-order torque in self-ligated orthodontic brackets. American Journal of Orthodontics and Dentofacial Orthopedics, 2011, 140, 326-339.	1.7	18
93	Gravity currents in two-layer stratified media. Environmental Fluid Mechanics, 2011, 11, 203-223.	1.6	14
94	The effect of chamber length and Reynolds number on jet precession. Experiments in Fluids, 2011, 51, 1623-1643.	2.4	9
95	Investigation of micro-jet active control of a precessing jet using PIV. Experiments in Fluids, 2011, 51, 1709-1719.	2.4	3
96	Experimental investigation of evaporation-induced convection in water using laser based measurement techniques. Experimental Thermal and Fluid Science, 2011, 35, 910-919.	2.7	21
97	Image-Based Photonic Techniques for Microfluidics. , 2011, , 3-28.		1
98	Evaluation of StereoPIV Measurement of Droplet Velocity in an Effervescent Spray. International Journal of Spray and Combustion Dynamics, 2010, 2, 103-123.	1.0	5
99	A Comparison of 2-D Molecular Tagging Velocimetry (MTV) and Micro Particle Image Velocimetry (µPIV) for Microscale Flows. , 2010, , .		0
100	Investigation of Interstitial Velocity Field Inside Micro-Porous Media. , 2010, , .		3
101	The effect of gas-injector location on bubble formation in liquid cross flow. Physics of Fluids, 2010, 22, 043305.	4.0	13
102	Measurement of Orthodontic Bracket Tie Wing Elastic and Plastic Deformation by Arch Wire Torque Expression Utilizing an Optical Image Correlation Technique. Journal of Dental Biomechanics, 2010, 1, .	1.2	14
103	EFFECT OF BUBBLE GENERATION CHARACTERISTICS ON EFFERVESCENT ATOMIZATION AT LOW GAS-LIQUID RATIO OPERATION. Atomization and Sprays, 2010, 20, 211-225.	0.8	14
104	Orthodontic Bracket Manufacturing Tolerances and Dimensional Differences between Select Self-Ligating Brackets. Journal of Dental Biomechanics, 2010, 1, 781321.	1.2	23
105	Investigation of the 3D Velocity Field of a Segmented Flow Utilizing a Novel 3C3D Micro-PIV Approach. , 2010, , .		1
106	Experimental Investigation of the Mean Concentration Fields in a Counterflowing Jet. , 2010, , .		0
107	ASSESSMENT OF PARAMETERS FOR DISTINGUISHING DROPLET SHAPE IN A SPRAY FIELD USING IMAGE-BASED TECHNIQUES. Small Group Research, 2009, 19, 809-831.	2.7	19
108	Evaluation of Digital Image Discretization Error in Droplet Shape Measurement Using Simulation. Particle and Particle Systems Characterization, 2009, 26, 243-255.	2.3	8

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109	Design and Validation of a Water Transfer Factor Measurement Apparatus for Proton Exchange Membrane Fuel Cells. Journal of Fuel Cell Science and Technology, 2009, 6, .	0.8	9
110	Volume Particle Tracking in Three-Dimensional Micro-Channel Flows. , 2008, , .		0
111	Investigation into the selection of viewing configurations for three-component planar Doppler velocimetry measurements. Applied Optics, 2007, 46, 4102.	2.1	20
112	Impacts of a jet's exit flow pattern on mixing and combustion performance. Progress in Energy and Combustion Science, 2006, 32, 496-538.	31.2	116
113	Two-frequency planar Doppler velocimetry ($2\frac{1}{2}$ -PDV). Review of Scientific Instruments, 2004, 75, 4487-4496.	1.3	27
114	Determination of view vectors from image warping mapping functions. Optical Engineering, 2004, 43, 407.	1.0	19
115	Instantaneous, three-component planar Doppler velocimetry using imaging fibre bundles. Experiments in Fluids, 2004, 36, 3-10.	2.4	46
116	Dual-illumination planar Doppler velocimetry using a single camera. , 2003, , .		0
117	Planar Doppler velocimetry measurements of flows using imaging fiber bundles. , 2003, 5191, 122.		4
118	The significance of particle clustering in pulverized coal flames. Proceedings of the Combustion Institute, 2002, 29, 797-804.	3.9	23
119	Instantaneous two-camera three-dimensional planar Doppler velocimetry using imaging fiber bundles. , 2001, , .		3
120	Acousto-optic frequency switching for single-camera planar Doppler velocimetry. , 2001, 4448, 272.		5
121	Measurement and prediction of NOx emissions from unconfined propane flames from turbulent-jet, bluff-body, swirl, and precessing jet burners. Proceedings of the Combustion Institute, 2000, 28, 481-487.	3.9	31
122	On the influence of solid modeling on design innovation in junior mechanical engineering design courses. Proceedings of the Canadian Engineering Education Association (CEEAA), 0, , .	0.2	0
123	An Experiment Design for Measuring the Velocity Field of a Round Wall Jet in Counter-Flow. International Journal of Mechanical Engineering and Mechatronics, 0, , .	0.0	0
124	Poster: More Spin, Less Twist: the Dance of Flexible Hoses. , 0, , .		0