Gerard S B Lebon

List of Publications by Year
in descending order

54 papers	1,808 citations	304743 22 h-index	276875 41 g-index
61 all docs	61 docs citations	61 times ranked	832 citing authors

#	Article	IF	Citations
1	Characterizing the cavitation development and acoustic spectrum in various liquids. Ultrasonics Sonochemistry, 2017, 34, 651-662.	8.2	164
2	A synchrotron X-radiography study of the fragmentation and refinement of primary intermetallic particles in an Al-35 Cu alloy induced by ultrasonic melt processing. Acta Materialia, 2017, 141, 142-153.	7.9	131
3	Fundamental studies of ultrasonic melt processing. Ultrasonics Sonochemistry, 2019, 52, 455-467.	8.2	127
4	Ultrafast synchrotron X-ray imaging studies of microstructure fragmentation in solidification under ultrasound. Acta Materialia, 2018, 144, 505-515.	7.9	112
5	A refining mechanism of primary Al3Ti intermetallic particles byÂultrasonic treatment in the liquid state. Acta Materialia, 2016, 116, 354-363.	7.9	109
6	In situ observation of ultrasonic cavitation-induced fragmentation of the primary crystals formed in Al alloys. Ultrasonics Sonochemistry, 2017, 39, 66-76.	8.2	86
7	Investigation of the factors influencing cavitation intensity during the ultrasonic treatment of molten aluminium. Materials and Design, 2016, 90, 979-983.	7.0	82
8	Ultrasonic exfoliation of graphene in water: A key parameter study. Carbon, 2020, 168, 737-747.	10.3	76
9	Numerical modelling of acoustic streaming during the ultrasonic melt treatment of direct-chill (DC) casting. Ultrasonics Sonochemistry, 2019, 54, 171-182.	8.2	74
10	Numerical modelling of ultrasonic waves in a bubbly Newtonian liquid using a high-order acoustic cavitation model. Ultrasonics Sonochemistry, 2017, 37, 660-668.	8.2	66
11	Ultrasonic liquid metal processing: The essential role of cavitation bubbles in controlling acoustic streaming. Ultrasonics Sonochemistry, 2019, 55, 243-255.	8.2	64
12	Experimental and numerical investigation of acoustic pressures in different liquids. Ultrasonics Sonochemistry, 2018, 42, 411-421.	8.2	62
13	Characterisation of the ultrasonic acoustic spectrum and pressure field in aluminium melt with an advanced cavitometer. Journal of Materials Processing Technology, 2016, 229, 582-586.	6.3	60
14	Effect of ultrasonic melt treatment on the refinement of primary Al3Ti intermetallic in an Alâ€“0.4Ti alloy. Journal of Crystal Growth, 2016, 435, 24-30.	1.5	53
15	Calibration and performance assessment of an innovative high-temperature cavitometer. Sensors and Actuators A: Physical, 2016, 240, 57-69.	4.1	47
16	On the governing fragmentation mechanism of primary intermetallics by induced cavitation. Ultrasonics Sonochemistry, 2021, 70, 105260.	8.2	44
17	Synchrotron radiographic studies of ultrasonic melt processing of metal matrix nano composites. Materials Letters, 2016, 164, 484-487.	2.6	40
18	In Situ Synchrotron Radiography and Spectrum Analysis of Transient Cavitation Bubbles in Molten Aluminium Alloy. Physics Procedia, 2015, 70, 841-845.	1.2	36

#	Article	IF	Citations
19	New insights into sono-exfoliation mechanisms of graphite: In situ high-speed imaging studies and acoustic measurements. Materials Today, 2021, 49, 10-22.	14.2	36
20	Characterization of shock waves in power ultrasound. Journal of Fluid Mechanics, 2021, 915, .	3.4	34
21	Numerical modelling of melt-conditioned direct-chill casting. Applied Mathematical Modelling, 2020, 77, 1310-1330.	4.2	29
22	In-situ observations and acoustic measurements upon fragmentation of free-floating intermetallics under ultrasonic cavitation in water. Ultrasonics Sonochemistry, 2021, 80, 105820.	8.2	23
23	Experimental and numerical investigation of cavitation-induced erosion in thermal sprayed single splats. Ultrasonics Sonochemistry, 2019, 52, 336-343.	8.2	19
24	Numerical modelling and experimental validation of the effect of ultrasonic melt treatment in a direct-chill cast AA6008 alloy billet. Journal of Materials Research and Technology, 2021, 12, 1582-1596.	5.8	18
25	Dynamics of two interacting hydrogen bubbles in liquid aluminum under the influence of a strong acoustic field. Physical Review E, 2015, 92, 043004.	2.1	15
26	Mechanisms of ultrasonic de-agglomeration of oxides through in-situ high-speed observations and acoustic measurements. Ultrasonics Sonochemistry, 2021, 79, 105792.	8.2	15
27	Coupling of Acoustic Cavitation with Dem-Based Particle Solvers for Modeling De-agglomeration of Particle Clusters in Liquid Metals. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 5616-5627.	2.2	14
28	Structure Refinement Upon Ultrasonic Melt Treatment in a DC Casting Launder. Jom, 2020, 72, 4071-4081.	1.9	14
29	Mathematical modelling of a compressible oxygen jet entering a hot environment using a pressure-based finite volume code. Computers and Fluids, 2012, 59, 91-100.	2.5	13
30	A model of cavitation for the treatment of a moving liquid metal volume. International Journal of Cast Metals Research, 2016, 29, 324-330.	1.0	12
31	Numerical Modelling of the Ultrasonic Treatment of Aluminium Melts: An Overview of Recent Advances. Materials, 2019, 12, 3262.	2.9	12
32	Scale up design study on process vessel dimensions for ultrasonic processing of water and liquid aluminium. Ultrasonics Sonochemistry, 2021, 76, 105647.	8.2	12
33	Multiphysics Modelling of Ultrasonic Melt Treatment in the Hot-Top and Launder during Direct-Chill Casting: Path to Indirect Microstructure Simulation. Metals, 2021, 11, 674.	2.3	9
34	Cavitation in thermoplastic melts: New insights into ultrasound-assisted fibre-impregnation. Composites Part B: Engineering, 2022, 229, 109480.	12.0	9
35	Contactless Acoustic Wave Generation in a Melt by Electromagnetic Induction. , 2014, , 1379-1382.		7
36	Effect of Input Power and Temperature on the Cavitation Intensity During the Ultrasonic Treatment of Molten Aluminium. Transactions of the Indian Institute of Metals, 2015, 68, 1023-1026.	1.5	7

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37	Improving Ultrasonic Melt Treatment Efficiency Through Flow Management: Acoustic Pressure Measurements and Numerical Simulations. Minerals, Metals and Materials Series, 2020, , 981-987.	0.4	7
38	Application of the "Full Cavitation Model" to the fundamental study of cavitation in liquid metal processing. IOP Conference Series: Materials Science and Engineering, 2015, 72, 052050.	0.6	6
39	Evaluation of Shearing Time Sufficient for Effective Liquid Metal Processing. Jom, 2017, 69, 720-724.	1.9	6
40	Numerical Assessment of In-Line Rotorâ€“Stator Mixers in High-Shear Melt Conditioning (HSMC) Technology. Jom, 2020, 72, 4092-4100.	1.9	6
41	Comparison of cavitation intensity in water and in molten aluminium using a high-temperature cavitometer. Journal of Physics: Conference Series, 2015, 656, 012120.	0.4	5
42	High-Frequency Vibration and Ultrasonic Processing. Springer Series in Materials Science, 2018, , 153-193.	0.6	5
43	Effect of Temperature and Acoustic Pressure During Ultrasound Liquid-Phase Processing of Graphite in Water. Jom, 2021, 73, 3745-3752.	1.9	4
44	Time-dependent modelling and experimental validation of the metal/flux interface in a continuous casting mould. Revue De Metallurgie, 2008, 105, 33-43.	0.3	3
45	Effect of Flow Management on Ultrasonic Melt Processing in a Launder upon DC Casting. Minerals, Metals and Materials Series, 2022, , 649-654.	0.4	3
46	Investigation of Instabilities Arising with Non-Orthogonal Meshes Used in Cell Centred Elliptic Finite Volume Computations. Journal of Algorithms and Computational Technology, 2012, 6, 129-152.	0.7	2
47	Comparison between low-order and high-order acoustic pressure solvers for bubbly media computations. Journal of Physics: Conference Series, 2015, 656, 012134.	0.4	2
48	Fundamental studies on cavitation melt processing. IOP Conference Series: Materials Science and Engineering, 2016, 129, 012068.	0.6	2
49	Coupling acoustic cavitation and solidification in the modeling of light alloy melt ultrasonic treatment. , 2016, , .		2
50	Acoustic Cavitation Measurements and Modeling in Liquid Aluminum. Minerals, Metals and Materials Series, 2019, , 1533-1538.	0.4	2
51	Ultrasonic Melt Treatment in a DC Casting Launder: The Role of Melt Processing Temperature. Minerals, Metals and Materials Series, 2021, , 850-857.	0.4	1
52	A High-Order Acoustic Cavitation Model for the Treatment of a Moving Liquid Metal Volume. Minerals, Metals and Materials Series, 2016, , 135-142.	0.4	1
53	Contactless ultrasonic treatment of melts using EM induction. IOP Conference Series: Materials Science and Engineering, 2015, 84, 012017.	0.6	0
54	Contactless Acoustic Wave Generation in a Melt By Electromagnetic Induction. , 2014, , 1379-1382.		0