

Alberto Ortona

List of Publications by Year in descending order

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80
papers

2,071
citations

201674

27
h-index

265206

42
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86
all docs

86
docs citations

86
times ranked

1654
citing authors

#	ARTICLE	IF	CITATIONS
1	Additive Manufacturing of ceramic components by Digital Light Processing: A comparison between the "bottom-up" and the "top-down" approaches. Journal of the European Ceramic Society, 2019, 39, 2140-2148.	5.7	127
2	Wetting and contact-line effects for spherical and cylindrical droplets on graphene layers: A comparative molecular-dynamics investigation. Physical Review E, 2011, 84, 061602.	2.1	97
3	Cellular ceramics produced by rapid prototyping and replication. Materials Letters, 2012, 80, 95-98.	2.6	88
4	Additive manufacturing of architected catalytic ceramic substrates based on triply periodic minimal surfaces. Journal of the American Ceramic Society, 2019, 102, 6176-6193.	3.8	78
5	HfB ₂ /SiC as a protective coating for 2D Cf/SiC composites: Effect of high temperature oxidation on mechanical properties. Surface and Coatings Technology, 2008, 202, 2059-2067.	4.8	76
6	Thermal design, optimization and additive manufacturing of ceramic regular structures to maximize the radiative heat transfer. Materials and Design, 2019, 163, 107539.	7.0	70
7	Molecular dynamics simulations of the contact angle between water droplets and graphite surfaces. Fluid Phase Equilibria, 2012, 332, 173-177.	2.5	66
8	Sandwich structured ceramic matrix composites with periodic cellular ceramic cores: an active cooled thermal protection for space vehicles. Composite Structures, 2016, 154, 61-68.	5.8	61
9	Manufacturing SiC-Fiber-Reinforced SiC Matrix Composites by Improved CVI/Slurry Infiltration/Polymer Impregnation and Pyrolysis. Journal of the American Ceramic Society, 2004, 87, 1205-1209.	3.8	60
10	Carbon periodic cellular architectures. Carbon, 2015, 88, 70-85.	10.3	60
11	Polymer-derived SiCN cellular structures from replica of 3D printed lattices. Journal of the American Ceramic Society, 2018, 101, 2732-2738.	3.8	60
12	High Temperature Applications of Si ₃ N ₄ /SiC Cellular Ceramics. Advanced Engineering Materials, 2012, 14, 1074-1081.	3.5	57
13	Aging of reticulated Si-SiC foams in porous burners. Advances in Applied Ceramics, 2010, 109, 246-251.	1.1	52
14	Additive Manufactured open cell polyhedral structures as substrates for automotive catalysts. International Journal of Heat and Mass Transfer, 2018, 126, 1035-1047.	4.8	52
15	SiC-SiCf CMC manufacturing by hybrid CVI-PIP techniques: process optimisation. Fusion Engineering and Design, 2000, 51-52, 159-163.	1.9	47
16	Nature-Inspired, Ultra-Lightweight Structures with Gyroid Cores Produced by Additive Manufacturing and Reinforced by Unidirectional Carbon Fiber Ribs. Materials, 2019, 12, 4134.	2.9	43
17	Additive manufacturing of periodic ceramic substrates for automotive catalyst supports. International Journal of Applied Ceramic Technology, 2017, 14, 1164-1173.	2.1	42
18	An integrated assembly method of sandwich structured ceramic matrix composites. Journal of the European Ceramic Society, 2011, 31, 1821-1826.	5.7	38

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19	High temperature oxidation of multilayered SiC processed by tape casting and sintering. Journal of the European Ceramic Society, 2002, 22, 2071-2079.	5.7	37
20	Potential of SiC multilayer ceramics for high temperature applications in oxidising environment. Ceramics International, 2008, 34, 197-203.	4.8	34
21	Finite element analysis of reticulated ceramics under compression. Acta Materialia, 2012, 60, 6692-6702.	7.9	31
22	Tubular Si-infiltrated SiCf/SiC composites for solar receiver application – Part 1: Fabrication by replica and electrophoretic deposition. Solar Energy Materials and Solar Cells, 2015, 132, 123-130.	6.2	31
23	Studying the wettability of Si and eutectic Si-Zr alloy on carbon and silicon carbide by sessile drop experiments. Journal of the European Ceramic Society, 2019, 39, 735-742.	5.7	31
24	Innovative Thermal Management Concepts and Material Solutions for Future Space Vehicles. Journal of Spacecraft and Rockets, 2016, 53, 1051-1060.	1.9	29
25	Cellular ceramic architectures produced by hybrid additive manufacturing: a review on the evolution of their design. Journal of the Ceramic Society of Japan, 2020, 128, 595-604.	1.1	29
26	Coarse-graining MARTINI model for molecular-dynamics simulations of the wetting properties of graphitic surfaces with non-ionic, long-chain, and T-shaped surfactants. Journal of Chemical Physics, 2012, 137, 094904.	3.0	28
27	Development of 2D and 3D Hi-Nicalon fibres/SiC matrix composites manufactured by a combined CVI – PIP route. Journal of Nuclear Materials, 2002, 307-311, 1196-1199.	2.7	27
28	Surface growth for molten silicon infiltration into carbon millimeter-sized channels: Lattice Boltzmann simulations, experiments and models. International Journal of Modern Physics C, 2016, 27, 1650062.	1.7	27
29	Numerical study of effective heat conductivities of foams by coupled conduction and radiation. International Journal of Thermal Sciences, 2016, 109, 270-278.	4.9	26
30	Fabrication of cylindrical SiCf/Si/SiC-based composite by electrophoretic deposition and liquid silicon infiltration. Journal of the European Ceramic Society, 2014, 34, 1131-1138.	5.7	25
31	Tubular Si-infiltrated SiCf/SiC composites for solar receiver application – Part 2: Thermal performance analysis and prediction. Solar Energy Materials and Solar Cells, 2015, 140, 382-387.	6.2	25
32	Micropollutant adsorption from water with engineered porous ceramic architectures produced by additive manufacturing and coated with natural zeolite. Journal of Cleaner Production, 2020, 258, 120500.	9.3	25
33	Additive manufacturing of silicon carbide by selective laser sintering of PA12 powders and polymer infiltration and pyrolysis. Journal of the European Ceramic Society, 2021, 41, 5056-5065.	5.7	25
34	Numerical study of cell morphology effects on convective heat transfer in reticulated ceramics. International Journal of Heat and Mass Transfer, 2012, 55, 7902-7910.	4.8	22
35	Si/SiC Heat Exchangers for Recuperative Gas Burners with Highly Structured Surface Elements. International Journal of Applied Ceramic Technology, 2014, 11, 927-937.	2.1	22
36	Application of Ceramic Lattice Structures to Design Compact, High Temperature Heat Exchangers: Material and Architecture Selection. Materials, 2021, 14, 3225.	2.9	19

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37	Development of a robust and efficient biogas processor for hydrogen production. Part 1: Modelling and simulation. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 22841-22855.	7.1	18
38	Si-SiC-ZrB ₂ ceramics by silicon reactive infiltration. <i>Ceramics International</i> , 2012, 38, 3243-3250.	4.8	17
39	Structure and oxidation resistance of micro-cellular SiC foams derived from natural resins. <i>Ceramics International</i> , 2013, 39, 1841-1851.	4.8	17
40	3D-printed, carbon-based, lossy photonic crystals: Is high electrical conductivity the must?. <i>Carbon</i> , 2021, 171, 484-492.	10.3	17
41	Influence of the loading direction on the mechanical behavior of ceramic foams and lattices under compression. <i>Acta Materialia</i> , 2013, 61, 5525-5534.	7.9	16
42	Early-stage oxidation behavior at high temperatures of SiSiC cellular architectures in a porous burner. <i>Ceramics International</i> , 2016, 42, 16255-16261.	4.8	16
43	Graphite-Si-SiC ceramics produced by microwave assisted reactive melt infiltration. <i>Journal of the European Ceramic Society</i> , 2019, 39, 2232-2243.	5.7	16
44	Numerical quantification of coupling effects for radiation-conduction heat transfer in participating macroporous media: Investigation of a model geometry. <i>International Journal of Heat and Mass Transfer</i> , 2017, 112, 387-400.	4.8	15
45	The influence of cell morphology on the effective thermal conductivity of reticulated ceramic foams. <i>Journal of Porous Materials</i> , 2012, 19, 307-315.	2.6	14
46	Design and optimization of a high-temperature latent heat storage unit. <i>Applied Energy</i> , 2020, 261, 114330.	10.1	14
47	The influence of topology on DLP 3D printing, debinding and sintering of ceramic periodic architectures designed to replace bulky components. <i>Open Ceramics</i> , 2021, 5, 100059.	2.0	14
48	Pressure Drop and Convective Heat Transfer in Different SiSiC Structures Fabricated by Indirect Additive Manufacturing. <i>Journal of Heat Transfer</i> , 2020, 142, .	2.1	14
49	Heteroporous heterogeneous ceramics for reusable thermal protection systems. <i>Journal of Materials Research</i> , 2013, 28, 2273-2280.	2.6	11
50	On the nonlinear mechanical behavior of macroporous cellular ceramics under bending. <i>Journal of the European Ceramic Society</i> , 2014, 34, 2133-2141.	5.7	11
51	Reactive silicon infiltration of carbon bonded preforms embedded in powder field modifiers heated by microwaves. <i>Ceramics International</i> , 2015, 41, 12439-12446.	4.8	11
52	Development of a robust and efficient biogas processor for hydrogen production. Part 2: Experimental campaign. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 161-177.	7.1	11
53	Evaluation of a simple finite element method for the calculation of effective electrical conductivity of compression moulded polymer-graphite composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2013, 48, 15-25.	7.6	10
54	Surface Growth Effects On Reactive Capillary-Driven Flow: Lattice Boltzmann Investigation. <i>Engineering Applications of Computational Fluid Mechanics</i> , 2014, 8, 549-561.	3.1	10

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55	Heat and Mass Transfer in Ceramic Lattices During High-Temperature Oxidation. Journal of the American Ceramic Society, 2015, 98, 2625-2633.	3.8	10
56	SiC foam sandwich structures obtained by Mo-wrap joining. Materials Letters, 2018, 221, 240-243.	2.6	10
57	Fabrication of dense SiC ceramics by a hybrid additive manufacturing process. Journal of the American Ceramic Society, 2022, 105, 786-793.	3.8	10
58	Simulation of capillary infiltration into packing structures for the optimization of ceramic materials using the lattice Boltzmann method. Engineering Applications of Computational Fluid Mechanics, 2016, 10, 485-499.	3.1	9
59	Microwave heating controlled reactive melt infiltration for graphite-SiC ceramics manufacturing. Journal of the American Ceramic Society, 2018, 102, 2304.	3.8	9
60	Modeling the Properties of Cellular Ceramics: From Foams to Lattices and Back to Foams. Advances in Science and Technology, 0, , .	0.2	8
61	Instationary heat and mass transfer phenomena in additive manufactured open cell polyhedral structures for automotive catalysis. Chemical Engineering Science, 2021, 234, 116448.	3.8	8
62	Monitoring sandwich structured SiC ceramics integrity with electrical resistance. NDT and E International, 2012, 46, 77-82.	3.7	7
63	Lattice Boltzmann simulations on the role of channel structure for reactive capillary infiltration. Engineering Applications of Computational Fluid Mechanics, 2015, 9, 301-323.	3.1	7
64	Review on the Design Approaches of Cellular Architectures Produced by Additive Manufacturing. , 2021, , 52-64.		7
65	Cellular Ceramics Produced by Replication: A Digital Approach. Advanced Engineering Materials, 2012, 14, 1104-1109.	3.5	6
66	Oxidation Behavior at 1600°C of Si ₃ N ₄ /SiC Composites Produced by Si Reactive Infiltration. Advanced Engineering Materials, 2014, 16, 176-183.	3.5	6
67	Tomography-Based Determination of Effective Transport Properties for Reacting Porous Media. , 2010, , .		5
68	Computing effective properties of random heterogeneous materials on heterogeneous parallel processors. Computer Physics Communications, 2012, 183, 2424-2433.	7.5	5
69	Spark plasma sintering of ZrB ₂ -SiC composites with in-situ reaction bonded silicon carbide. Ceramics International, 2014, 40, 821-826.	4.8	5
70	A novel device to simply 3D print bulk green ceramic components by stereolithography employing viscous slurries. Open Ceramics, 2021, 5, 100089.	2.0	5
71	Structured Alumina Substrates for Environmental Catalysis Produced by Stereolithography. Applied Sciences (Switzerland), 2021, 11, 8239.	2.5	5
72	Liquid metal infiltration of silicon based alloys into porous carbonaceous materials. Part I: Modelling of channel filling and reaction phase formation. Journal of the European Ceramic Society, 2022, 42, 1971-1983.	5.7	5

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73	Net shape CMC components produced by composite flow moulding, pyrolysis and reactive silicon infiltration. <i>Ceramics International</i> , 2018, 44, 12204-12209.	4.8	4
74	Liquid metal infiltration of silicon based alloys into porous carbonaceous materials. Part II: Experimental verification of modelling approaches by infiltration of Si-Zr alloy into idealized microchannels. <i>Journal of the European Ceramic Society</i> , 2022, 42, 1984-1994.	5.7	4
75	Formation of CeO ₂ coatings on SiC foams by electrophoretic deposition and sintering in air. <i>Ceramics International</i> , 2019, 45, 15603-15608.	4.8	3
76	Random Packing of Small Blocks: Pressure Effects, Orientational Correlations and Application to Polymer-Based Composites. <i>Particle and Particle Systems Characterization</i> , 2012, 29, 24-34.	2.3	1
77	Phase Change Material Systems for High Temperature Heat Storage. <i>Chimia</i> , 2015, 69, 780-783.	0.6	1
78	Influence of pyrolysis and Silicon infiltration on the properties of CMC parts shaped by composite flow molding. <i>International Journal of Applied Ceramic Technology</i> , 2022, 19, 45-53.	2.1	1
79	Effect of ZrB ₂ addition on the oxidation behavior of Si-SiC-ZrB ₂ composites exposed at 1500°C in air. <i>Journal of Applied Biomaterials and Functional Materials</i> , 2018, 16, 14-22.	1.6	0
80	Multi-configuration evaluation of a megajoule-scale high-temperature latent thermal energy storage test-bed. <i>Applied Thermal Engineering</i> , 2022, , 118697.	6.0	0