Alberto Ortona

List of Publications by Year
in descending order

80 papers	2,071 citations	201674 27 h-index	265206 42 g-index
86 all docs	86 docs citations	86 times ranked	1654 citing authors

#	Article	IF	Citations
1	Influence of pyrolysis and Silicon infiltration on the properties of CMC parts shaped by composite flow molding. International Journal of Applied Ceramic Technology, 2022, 19, 45-53.	2.1	1
2	Fabrication of dense SiSiC ceramics by a hybrid additive manufacturing process. Journal of the American Ceramic Society, 2022, 105, 786-793.	3.8	10
3	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. Journal of the European Ceramic Society, 2022, 42, 1984-1994.	5.7	4
4	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
5	Multi-configuration evaluation of a megajoule-scale high-temperature latent thermal energy storage test-bed. Applied Thermal Engineering, 2022, , 118697.	6.0	0
6	3D-printed, carbon-based, lossy photonic crystals: Is high electrical conductivity the must?. Carbon, 2021, 171, 484-492.	10.3	17
7	A novel device to simply 3D print bulk green ceramic components by stereolithography employing viscous slurries. Open Ceramics, 2021, 5, 100089.	2.0	5
8	The influence of topology on DLP 3D printing, debinding and sintering of ceramic periodic architectures designed to replace bulky components. Open Ceramics, 2021, 5, 100059.	2.0	14
9	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
10	Application of Ceramic Lattice Structures to Design Compact, High Temperature Heat Exchangers: Material and Architecture Selection. Materials, 2021, 14, 3225.	2.9	19
11	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
12	Structured Alumina Substrates for Environmental Catalysis Produced by Stereolithography. Applied Sciences (Switzerland), 2021, 11, 8239.	2.5	5
13	Review on the Design Approaches of Cellular Architectures Produced by Additive Manufacturing. , 2021, , 52-64.		7
14	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
15	Design and optimization of a high-temperature latent heat storage unit. Applied Energy, 2020, 261, 114330.	10.1	14
16	Pressure Drop and Convective Heat Transfer in Different SiSiC Structures Fabricated by Indirect Additive Manufacturing. Journal of Heat Transfer, 2020, 142, .	2.1	14
17	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
18	Additive Manufacturing of ceramic components by Digital Light Processing: A comparison between the â€œbottom-upâ€•and the â€œtop-downâ€•approaches. Journal of the European Ceramic Society, 2019, 39, 2140-2148.	5.7	127

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19	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
20	Formation of CeO2 coatings on Siâ€“SiC foams by electrophoretic deposition and sintering in air. Ceramics International, 2019, 45, 15603-15608.	4.8	3
21	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
22	Graphite-Si-SiC ceramics produced by microwave assisted reactive melt infiltration. Journal of the European Ceramic Society, 2019, 39, 2232-2243.	5.7	16
23	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
24	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
25	Net shape CMC components produced by composite flow moulding, pyrolysis and reactive silicon infiltration. Ceramics International, 2018, 44, 12204-12209.	4.8	4
26	SiC foam sandwich structures obtained by Mo-wrap joining. Materials Letters, 2018, 221, 240-243.	2.6	10
27	Polymerâ€derived SiCN cellular structures from replica of 3D printed lattices. Journal of the American Ceramic Society, 2018, 101, 2732-2738.	3.8	60
28	Development of a robust and efficient biogas processor for hydrogen production. Part 2: Experimental campaign. International Journal of Hydrogen Energy, 2018, 43, 161-177.	7.1	11
29	Microwave heating controlled reactive melt infiltration for graphiteâ€Siâ€SiC ceramics manufacturing. Journal of the American Ceramic Society, 2018, 102, 2304.	3.8	9
30	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
31	Effect of ZrB2 addition on the oxidation behavior of Si-SiC-ZrB2 composites exposed at 1500Â°C in air. Journal of Applied Biomaterials and Functional Materials, 2018, 16, 14-22.	1.6	0
32	Numerical quantification of coupling effects for radiation-conduction heat transfer in participating macroporous media: Investigation of a model geometry. International Journal of Heat and Mass Transfer, 2017, 112, 387-400.	4.8	15
33	Development of a robust and efficient biogas processor for hydrogen production. Part 1: Modelling and simulation. International Journal of Hydrogen Energy, 2017, 42, 22841-22855.	7.1	18
34	Additive manufacturing of periodic ceramic substrates for automotive catalyst supports. International Journal of Applied Ceramic Technology, 2017, 14, 1164-1173.	2.1	42
35	Innovative Thermal Management Concepts and Material Solutions for Future Space Vehicles. Journal of Spacecraft and Rockets, 2016, 53, 1051-1060.	1.9	29
36	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

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37	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
38	Early-stage oxidation behavior at high temperatures of SiSiC cellular architectures in a porous burner. Ceramics International, 2016, 42, 16255-16261.	4.8	16
39	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
40	Surface growth for molten silicon infiltration into carbon millimeter-sized channels: Latticeâ€"Boltzmann simulations, experiments and models. International Journal of Modern Physics C, 2016, 27, 1650062.	1.7	27
41	Phase Change Material Systems for High Temperature Heat Storage. Chimia, 2015, 69, 780-783.	0.6	1
42	Heat and Mass Transfer in Ceramic Lattices During Highâ€Temperature Oxidation. Journal of the American Ceramic Society, 2015, 98, 2625-2633.	3.8	10
43	Reactive silicon infiltration of carbon bonded preforms embedded in powder field modifiers heated by microwaves. Ceramics International, 2015, 41, 12439-12446.	4.8	11
44	Tubular Si-infiltrated SiCf/SiC composites for solar receiver application â€" Part 2: Thermal performance analysis and prediction. Solar Energy Materials and Solar Cells, 2015, 140, 382-387.	6.2	25
45	Carbon periodic cellular architectures. Carbon, 2015, 88, 70-85.	10.3	60
46	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
47	Tubular Si-infiltrated SiCf/SiC composites for solar receiver applicationâ€"Part 1: Fabrication by replica and electrophoretic deposition. Solar Energy Materials and Solar Cells, 2015, 132, 123-130.	6.2	31
48	Oxidation Behavior at 1600â€‰Â°<scp>C</scp> of Siâ€‹<scp>S</scp>i<scp>C</scp>â€‹<scp>Z</scp>r<scp>B</scp>₂ Composites Produced by Si Reactive Infiltration. Advanced Engineering Materials, 2014, 16, 176-183.	3.5	6
49	SiSiC Heat Exchangers for Recuperative Gas Burners with Highly Structured Surface Elements. International Journal of Applied Ceramic Technology, 2014, 11, 927-937.	2.1	22
50	Surface Growth Effects On Reactive Capillary-Driven Flow: Lattice Boltzmann Investigation. Engineering Applications of Computational Fluid Mechanics, 2014, 8, 549-561.	3.1	10
51	On the nonlinear mechanical behavior of macroporous cellular ceramics under bending. Journal of the European Ceramic Society, 2014, 34, 2133-2141.	5.7	11
52	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
53	Spark plasma sintering of ZrB2â€"SiC composites with in-situ reaction bonded silicon carbide. Ceramics International, 2014, 40, 821-826.	4.8	5
54	Structure and oxidation resistance of micro-cellular Siâ€"SiC foams derived from natural resins. Ceramics International, 2013, 39, 1841-1851.	4.8	17

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55	Influence of the loading direction on the mechanical behavior of ceramic foams and lattices under compression. Acta Materialia, 2013, 61, 5525-5534.	7.9	16
56	Evaluation of a simple finite element method for the calculation of effective electrical conductivity of compression moulded polymerâ€"graphite composites. Composites Part A: Applied Science and Manufacturing, 2013, 48, 15-25.	7.6	10
57	Hetoroporous heterogeneous ceramics for reusable thermal protection systems. Journal of Materials Research, 2013, 28, 2273-2280.	2.6	11
58	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
59	Molecular dynamics simulations of the contact angle between water droplets and graphite surfaces. Fluid Phase Equilibria, 2012, 332, 173-177.	2.5	66
60	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
61	Computing effective properties of random heterogeneous materials on heterogeneous parallel processors. Computer Physics Communications, 2012, 183, 2424-2433.	7.5	5
62	Finite element analysis of reticulated ceramics under compression. Acta Materialia, 2012, 60, 6692-6702.	7.9	31
63	Random Packing of Small Blocks: Pressure Effects, Orientational Correlations and Application to Polymerâ€Based Composites. Particle and Particle Systems Characterization, 2012, 29, 24-34.	2.3	1
64	Cellular Ceramics Produced by Replication: A Digital Approach. Advanced Engineering Materials, 2012, 14, 1104-1109.	3.5	6
65	High Temperature Applications of Siï£¿SiC Cellular Ceramics. Advanced Engineering Materials, 2012, 14, 1074-1081.	3.5	57
66	The influence of cell morphology on the effective thermal conductivity of reticulated ceramic foams. Journal of Porous Materials, 2012, 19, 307-315.	2.6	14
67	Si-SiC-ZrB2 ceramics by silicon reactive infiltration. Ceramics International, 2012, 38, 3243-3250.	4.8	17
68	Cellular ceramics produced by rapid prototyping and replication. Materials Letters, 2012, 80, 95-98.	2.6	88
69	Monitoring sandwich structured SiC ceramics integrity with electrical resistance. NDT and E International, 2012, 46, 77-82.	3.7	7
70	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
71	An integrated assembly method of sandwich structured ceramic matrix composites. Journal of the European Ceramic Society, 2011, 31, 1821-1826.	5.7	38
72	Aging of reticulated Si-SiC foams in porous burners. Advances in Applied Ceramics, 2010, 109, 246-251.	1.1	52

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73	Tomography-Based Determination of Effective Transport Properties for Reacting Porous Media. , 2010, , .		5
74	Potential of SiC multilayer ceramics for high temperature applications in oxidising environment. Ceramics International, 2008, 34, 197-203.	4.8	34
75	HfB2/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
76	Manufacturing SiCâ€Fiberâ€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
77	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
78	Development of 2D and 3D Hi-Nicalon fibres/SiC matrix composites manufactured by a combined CVIâ€"PIP route. Journal of Nuclear Materials, 2002, 307-311, 1196-1199.	2.7	27
79	SiCâ€"SiCf CMC manufacturing by hybrid CVIâ€"PIP techniques: process optimisation. Fusion Engineering and Design, 2000, 51-52, 159-163.	1.9	47
80	Modeling the Properties of Cellular Ceramics: From Foams to Lattices and Back to Foams. Advances in Science and Technology, 0, , .	0.2	8