Xiaofeng Zhao

List of Publications by Year
in descending order

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125 papers	2,809 citations	201385 27 h-index	253896 43 g-index
125 all docs	125 docs citations	125 times ranked	1903 citing authors

#	Article	IF	Citations
1	Multicomponent highâ€entropy Zrâ€Yâ€Ybâ€Taâ€Nbâ€O oxides for nextâ€generation thermal barrier coating applications. Journal of the American Ceramic Society, 2022, 105, 35-43.	1.9	19
2	Introducing segmentation cracks in air plasmaâ€sprayed thermal barrier coatings by controlling residual stress. Journal of the American Ceramic Society, 2022, 105, 1286-1299.	1.9	7
3	Exploring the relationship between Ln leaching and Lnâ€“O binding energy in monazite (Nd, Sm, Eu). Journal of the American Ceramic Society, 2022, 105, 553-563.	1.9	5
4	Thermal conduction mechanism of ferroelastic Zrâ€Yâ€Ybâ€Taâ€Nbâ€O highâ€entropy oxides with glassâ€like thermal conductivity. Journal of the American Ceramic Society, 2022, 105, 4360-4374.	1.9	8
5	Preparation and dielectric properties of La doped NBCCTO ceramics. Journal of Electroceramics, 2022, 48, 117-126.	0.8	4
6	Y-doped AlCoCrFeNi2.1 eutectic high-entropy alloy with excellent oxidation resistance and structure stability at 1000Â°C and 1100Â°C. Corrosion Science, 2021, 180, 109191.	3.0	37
7	Equimolar YO_{1.5} and TaO_{2.5} coâ€doped ZrO₂ as a potential CMASâ€resistant material for thermal barrier coatings. Journal of the American Ceramic Society, 2021, 104, 1132-1145.	1.9	13
8	Reduction of the sintering temperature and dielectric loss of the CCTO ceramic by doping tellurite glass. Ceramics International, 2021, 47, 10006-10012.	2.3	12
9	Design of Continuous Transport of the Droplet by the Contact-Boiling Regime. Langmuir, 2021, 37, 553-560.	1.6	8
10	Large-Scale Fabrication of Wettability-Controllable Coatings for Optimizing Condensate Transfer Ability. Langmuir, 2021, 37, 2476-2484.	1.6	4
11	Chemical compatibility of rare earth apatite with yttria-stabilized zirconia. Journal of the European Ceramic Society, 2021, 41, 1995-2001.	2.8	6
12	Oxidation behavior of gas-atomized AlCoCrFeNi high-entropy alloy powder at 900ï¼1100 Â°C. Corrosion Science, 2021, 181, 109257.	3.0	31
13	Y-Hf co-doped AlCoCrFeNi high-entropy alloy coating with superior oxidation and spallation resistance at 1100 Â°C. Corrosion Science, 2021, 182, 109267.	3.0	44
14	Effect of doping location induced anisotropy on thermophysical properties of dilute Fe₂O₃â€Y₂O₃â€ZrO₂ solid solutions. Journal of the American Ceramic Society, 2021, 104, 4742-4758.	1.9	7
15	Al CoCrFeNi high entropy alloys with superior hot corrosion resistance to Na2SO4 + 25% NaCl at 900 Â°C. Corrosion Science, 2021, 187, 109479.	3.0	40
16	Y-Hf co-doped AlCoCrFeNi2.1 eutectic high-entropy alloy with excellent oxidation and spallation resistance under thermal cycling conditions at 1100 Â°C and 1200 Â°C. Corrosion Science, 2021, 187, 109515.	3.0	14
17	Enhancement of Condensation Heat Transfer, Anti-Frosting and Water Harvesting by Hybrid Wettability Coating. Nano, 2021, 16, 2150086.	0.5	2
18	ZrO₂â€doped YTaO₄ as potential CMASâ€resistant materials for thermal barrier coatings application. Journal of the American Ceramic Society, 2021, 104, 6029-6043.	1.9	7

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19	Influence of pore characteristics of air plasma sprayed thermal barrier coatings on calcia-magnesia-alumino-silicate (CMAS) attack behavior. Corrosion Science, 2021, 190, 109636.	3.0	19
20	Preparation and characterization of SiC-ZAC composite material for immobilizing the simulated radioactive graphite. Progress in Nuclear Energy, 2021, 143, 104029.	1.3	0
21	Tracking the calcium-magnesium-alumino-silicate (CMAS) infiltration into an air-plasma spray thermal barrier coating using X-ray imaging. Scripta Materialia, 2020, 176, 94-98.	2.6	20
22	Roles of strontium and hierarchy structure on the in vitro biological response and drug release mechanism of the strontium-substituted bioactive glass microspheres. Materials Science and Engineering C, 2020, 107, 110336.	3.8	10
23	Fracture behavior of TBCs with cooling hole structure under cyclic thermal loadings. Ceramics International, 2020, 46, 3644-3654.	2.3	19
24	Comparison of hydrothermal corrosion behavior of SiC with Al2O3and Al2O3Â+ÂY2O3sintering additives. Journal of the American Ceramic Society, 2020, 103, 2024-2034.	1.9	4
25	Visible lightâ€activated degradation of microcystinâ€LR by ultrathin gâ€C₃N₄ nanosheetsâ€based heterojunction photocatalyst. Journal of the American Ceramic Society, 2020, 103, 1281-1292.	1.9	13
26	Densification, strengthening and toughening in hafnium carbide with the addition of silicon carbonitride. Journal of the American Ceramic Society, 2020, 103, 3286-3298.	1.9	10
27	Effect of oxygen partial pressure on the phosphorescence of different lanthanide ion (Ln3+)-doped yttria-stabilised zirconia. Sensors and Actuators B: Chemical, 2020, 308, 127666.	4.0	17
28	Continuous alumina fiber-reinforced yttria-stabilized zirconia composites with high density and toughness. Journal of the European Ceramic Society, 2020, 40, 1539-1548.	2.8	24
29	Effect of surface curvature on oxidation of a MCrAlY coating. Corrosion Science, 2020, 163, 108256.	3.0	31
30	Multicomponent high-entropy zirconates with comprehensive properties for advanced thermal barrier coating. Scripta Materialia, 2020, 178, 382-386.	2.6	162
31	Stress evolution in ceramic top coat of air plasma-sprayed thermal barrier coatings due to CMAS penetration under thermal cycle loading. Surface and Coatings Technology, 2020, 381, 125146.	2.2	15
32	Effects of iron and platinum on the isothermal oxidation of Î²-NiAl overlay coatings fabricated by spark plasma sintering. Surface and Coatings Technology, 2020, 382, 125178.	2.2	6
33	Exploring the Degradation Behavior of Ce-Monazite in Water Solution through Adsorption and Penetration Kinetics. Journal of Physical Chemistry C, 2020, 124, 22173-22184.	1.5	10
34	Improved stress measurement of YSZ by Raman spectroscopy: Effect of yttrium segregationâ€dependent tetragonality. International Journal of Applied Ceramic Technology, 2020, 17, 2416-2423.	1.1	6
35	Room-Temperature and High-Temperature Wear Behaviors of As-Sprayed and Annealed Cr3C2-25NiCr Coatings Prepared by High Velocity Air-Fuel Spraying. Coatings, 2020, 10, 1090.	1.2	8
36	Sintering behavior of a nanostructured thermal barrier coating deposited using electroâ€sprayed particles. Journal of the American Ceramic Society, 2020, 103, 7267-7282.	1.9	23

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37	Enhanced Catalytic Conversion of Polysulfides Using Bimetallic Co₇Fe₃ for High-Performance Lithiumâ€“Sulfur Batteries. ACS Nano, 2020, 14, 11558-11569.	7.3	158
38	A promising molten silicate resistant material: Rare-earth oxy-apatite RE9.33(SiO4)6O2 (REâ€¯=â€¯Gd, Nd or) Tj ETQq0 0 0 rgBT /Overlo	2.8	17
39	ZCAS-assisting low-temperature hot-press sintering of SiC ceramic for immobilizing simulated radioactive graphite. Ceramics International, 2020, 46, 23406-23416.	2.3	4
40	Strain-Engineered Metal-Free h-B₂O Monolayer as a Mechanocatalyst for Photocatalysis and Improved Hydrogen Evolution Reaction. Journal of Physical Chemistry C, 2020, 124, 7884-7892.	1.5	27
41	Engineering defectâ€enabled 3D porous MoS₂/C architectures for high performance lithiumâ€ion batteries. Journal of the American Ceramic Society, 2020, 103, 4453-4462.	1.9	20
42	Strength retention in scheelite coated SiC fibers: Effect of the gas composition and pre-heat treatment. Journal of the European Ceramic Society, 2020, 40, 2801-2810.	2.8	3
43	Flexible and robust YAG-Al2O3 composite nanofibrous membranes enabled by a hybrid nanocrystalline-amorphous structure. Journal of the European Ceramic Society, 2020, 40, 2463-2469.	2.8	21
44	A novel CMASâ€resistant material based on thermodynamic equilibrium design: Apatiteâ€type Gd₁₀(SiO₄)₆O₃. Journal of the American Ceramic Society, 2020, 103, 3401-3415.	1.9	19
45	Measurements and understanding of the stiffness of an air plasma sprayed thermal barrier coating. Surface and Coatings Technology, 2020, 394, 125678.	2.2	13
46	High fracture toughness of HfC through nanoâ€scale templating and novel sintering aids. Journal of the American Ceramic Society, 2019, 102, 997-1009.	1.9	8
47	A robust quasiâ€superhydrophobic ceria coating prepared using airâ€plasma spraying. Journal of the American Ceramic Society, 2019, 102, 1386-1393.	1.9	19
48	Superior oxidation and spallation resistant NiCoCrAlY bond coat via homogenizing the yttrium distribution. Corrosion Science, 2019, 159, 108145.	3.0	33
49	The structure properties, defect stability and excess properties in Am-doped LnPO4 (LnÂ= La, Ce, Nd, Sm,) Tj ETQq1 1 0.784314 rgBT	2.8	7
50	Effect of microstructure of a NiCoCrAlY coating fabricated by high-velocity air fuel on the isothermal oxidation. Corrosion Science, 2019, 159, 108126.	3.0	43
51	Generalization of the quantitative stress-intensity relationship of mechanoluminescent sensor SrAl₂O₄:Eu²⁺,Dy³⁺ in an elastic domain. Measurement Science and Technology, 2019, 30, 075104.	1.4	3
52	Effect of Synthesis Process on CuO Segregation and Dielectric Properties of CaCu3Ti4O12 Ceramic. Journal Wuhan University of Technology, Materials Science Edition, 2019, 34, 1089-1096.	0.4	2
53	Effects of sintering atmosphere on the densification and microstructure of yttrium aluminum garnet fibers prepared by sol-gel process. Journal of the European Ceramic Society, 2019, 39, 5332-5337.	2.8	13
54	Visible Light-Activated Self-Recovery Hydrophobic CeO₂/Black TiO₂ Coating Prepared Using Air Plasma Spraying. ACS Applied Materials & Interfaces, 2019, 11, 37209-37215.	4.0	13

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55	Measurements of elastic modulus and fracture toughness of an air plasma sprayed thermal barrier coating using micro-cantilever bending. Surface and Coatings Technology, 2019, 374, 12-20.	2.2	26
56	Environmental Effect on the Crack Behavior of Yttria-Stabilized Zirconia During Laser Drilling. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2019, 141, .	1.3	8
57	Effect of hydrothermal corrosion on the fracture strength of SiC layer in tristructuralâ€isotropic fuel particles. Journal of the American Ceramic Society, 2019, 102, 5555-5564.	1.9	6
58	Effect of reactivity of silicon and magnesium on the preparation of SiC MgAl2O4 composites for immobilizing graphite. Ceramics International, 2019, 45, 10203-10210.	2.3	5
59	Significantly improving the oxidation and spallation resistance of a MCrAlY alloy by controlling the distribution of yttrium. Corrosion Science, 2019, 153, 178-190.	3.0	65
60	A hierarchically porous bioactive glass-ceramic microsphere with enhanced bioactivity for bone tissue engineering. Ceramics International, 2019, 45, 13579-13583.	2.3	20
61	Fabrication of a Novel Catalyst Reactor with Improved Strength and Catalytic Performance Used for Automotive Exhaust Treatment. Industrial & Engineering Chemistry Research, 2019, 58, 4024-4031.	1.8	2
62	High-temperature tribological behavior of Mo and BaF₂ added Cr₃C₂-NiCr matrix composite. Industrial Lubrication and Tribology, 2019, 72, 136-145.	0.6	5
63	Effect of bimodal pores on sintering and residual stresses of YSZ membranes prepared by non-solvent induced phase separation method. Journal of the European Ceramic Society, 2019, 39, 1073-1081.	2.8	8
64	Pressure effect on phosphor thermometry using Mg₄FGeO₆:Mn. Measurement Science and Technology, 2019, 30, 027001.	1.4	12
65	The effect of Ce content on structure and stability of Gd1-Ce PO4: Theory and experiment. Journal of the European Ceramic Society, 2019, 39, 1555-1563.	2.8	13
66	Investigation on the performance of air plasma sprayed thermal barrier coating with Lu/Hf-doped NiAl bond coat. Surface and Coatings Technology, 2019, 360, 140-152.	2.2	11
67	The effect of reactive element species and concentrations on the isothermal oxidation of Î²-NiAl coating fabricated by spark plasma sintering. Surface and Coatings Technology, 2019, 357, 841-848.	2.2	15
68	Numerical stress analysis of the TBC-film cooling system under operating conditions considering the effects of thermal gradient and TGO growth. Surface and Coatings Technology, 2019, 357, 433-444.	2.2	41
69	Effects of reactive element oxides on the isothermal oxidation of Î²-NiAl coatings fabricated by spark plasma sintering. Surface and Coatings Technology, 2019, 357, 322-331.	2.2	20
70	Assessment of the performance of Y2SiO5-YSZ/YSZ double-layered thermal barrier coatings. Journal of the European Ceramic Society, 2019, 39, 461-469.	2.8	14
71	A robust hierarchical microcapsule for efficient supercapacitors exhibiting an ultrahigh current density of 300 A g^{âˆ'1}. Journal of Materials Chemistry A, 2018, 6, 5724-5732.	5.2	15
72	Quantitative stress measurement of elastic deformation using mechanoluminescent sensor: An intensity ratio model. Review of Scientific Instruments, 2018, 89, 045006.	0.6	11

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73	Microstructure and thermal conductivity of fully ceramic microencapsulated fuel fabricated by spark plasma sintering. Journal of the American Ceramic Society, 2018, 101, 4224-4236.	1.9	18
74	Bioactive glassâ€“chitosan composite coatings on PEEK: Effects of surface wettability and roughness on the interfacial fracture resistance and in vitro cell response. Applied Surface Science, 2018, 440, 514-523.	3.1	49
75	Thermal barrier coatings with interface modified by 3D mesh patterns: Failure analysis and design optimization. Journal of the American Ceramic Society, 2018, 101, 2084-2095.	1.9	9
76	Synthesis and characterization of SiC based composite materials for immobilizing radioactive graphite. Journal of Nuclear Materials, 2018, 504, 94-100.	1.3	6
77	â€œOxygen quenchingâ€•in Eu-based thermographic phosphors: Mechanism and potential application in oxygen/pressure sensing. Sensors and Actuators B: Chemical, 2018, 254, 578-587.	4.0	26
78	Effect of internal oxidation on the interfacial morphology and residual stress in air plasma sprayed thermal barrier coatings. Surface and Coatings Technology, 2018, 334, 215-226.	2.2	29
79	Hollow ceramic microspheres prepared by combining electro-spraying with non-solvent induced phase separation method: A promising feedstock for thermal barrier coatings. Materials and Design, 2018, 139, 343-350.	3.3	25
80	Integration of pressure-sensitive paint with persistent phosphor: A light-charged pressure-sensing system. Review of Scientific Instruments, 2018, 89, 085003.	0.6	8
81	Effects of the Î² phase size and shape on the oxidation behavior of NiCoCrAlY coating. Corrosion Science, 2018, 145, 262-270.	3.0	28
82	Hydrothermal ageing of tetragonal zirconia porous membranes: Effect of thermal residual stresses on the phase stability. Corrosion Science, 2018, 142, 66-78.	3.0	7
83	Numerical analyses of the residual stress and top coat cracking behavior in thermal barrier coatings under cyclic thermal loading. Engineering Fracture Mechanics, 2018, 196, 191-205.	2.0	66
84	Investigation on the oxidation and corrosion behaviors of FeCrZr alloy as a protective material for Zr cladding. Journal of Alloys and Compounds, 2018, 753, 532-542.	2.8	6
85	The oxidation performance of plasma-sprayed NiAl bond coat: Effect of Hf addition in bond coat and substrate. Surface and Coatings Technology, 2018, 352, 49-58.	2.2	12
86	A highly strain and damageâ€tolerant thermal barrier coating fabricated by electroâ€sprayed zirconia hollow spheres. Journal of the American Ceramic Society, 2018, 101, 4375-4386.	1.9	27
87	Effect of microstructure on early oxidation of MCrAlY coatings. Acta Materialia, 2018, 159, 150-162.	3.8	188
88	Pore filling behavior of <scp>YSZ</scp> under <scp>CMAS</scp> attack: Implications for designing corrosionâ€resistant thermal barrier coatings. Journal of the American Ceramic Society, 2018, 101, 5756-5770.	1.9	23
89	Corrosion of the bonding at FeCrAl/Zr alloy interfaces in steam. Journal of Nuclear Materials, 2018, 508, 411-422.	1.3	31
90	Finite Element Analysis of the Effects of Thermally Grown Oxide Thickness and Interface Asperity on the Cracking Behavior Between the Thermally Grown Oxide and the Bond Coat. Journal of Engineering for Gas Turbines and Power, 2017, 139, .	0.5	19

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91	Effects of water vapor on the oxidation and the fracture strength of SiC layer in <scp>TRISO</scp> fuel particles. Journal of the American Ceramic Society, 2017, 100, 2154-2165.	1.9	14
92	Role of internal oxidation on the failure of air plasma sprayed thermal barrier coatings with a double-layered bond coat. Surface and Coatings Technology, 2017, 319, 370-377.	2.2	33
93	The oxidation performance for Zr-doped nickel aluminide coating by composite electrodepositing and pack cementation. Corrosion Science, 2017, 123, 103-115.	3.0	33
94	Evaluation of the in-depth temperature sensing performance of Eu- and Dy-doped YSZ in air plasma sprayed thermal barrier coatings. Surface and Coatings Technology, 2017, 316, 210-218.	2.2	21
95	A simple approach to manufacture ceramic coils based on liquid rope coiling effect. Journal of the American Ceramic Society, 2017, 100, 4977-4982.	1.9	5
96	High temperature stress and its influence on surface rumpling in NiCoCrAlY bond coat. Acta Materialia, 2017, 139, 122-137.	3.8	56
97	Evaluation of thermal conductivity of the constituent layers in TRISO particles using Raman spectroscopy. Journal of the European Ceramic Society, 2017, 37, 4457-4465.	2.8	17
98	Effect of alloyed Lu, Hf and Cr on the oxidation and spallation behavior of NiAl. Corrosion Science, 2017, 126, 334-343.	3.0	63
99	A high performance NiCoCrAlY bond coat manufactured using laser powder deposition. Corrosion Science, 2017, 126, 356-365.	3.0	49
100	FE Analysis of the Effects of TGO Thickness and Interface Asperity on the Cracking Behavior Between the TGO and the Bond Coat. , 2016, , .		0
101	Phosphor-Doped Thermal Barrier Coatings Deposited by Air Plasma Spray for In-Depth Temperature Sensing. Sensors, 2016, 16, 1490.	2.1	8
102	Comparison of lifetime-based methods for 2D phosphor thermometry in high-temperature environment. Measurement Science and Technology, 2016, 27, 095201.	1.4	17
103	Influence of substrate composition on the oxidation performance of nickel aluminide coating prepared by pack cementation. Corrosion Science, 2016, 110, 284-295.	3.0	29
104	A study of the zirconium alloy protection by Cr3C2â€“NiCr coating for nuclear reactor application. Surface and Coatings Technology, 2016, 287, 55-60.	2.2	44
105	Buckling failure in air-plasma sprayed thermal barrier coatings induced by molten silicate attack. Scripta Materialia, 2016, 113, 71-74.	2.6	64
106	Growth of carbon nanofibers/tubes by an in-situ polymerization route without metal-catalyst. Carbon, 2016, 100, 417-427.	5.4	3
107	Migration of sulphur in thermal barrier coatings during heat treatment. Materials and Design, 2016, 97, 364-371.	3.3	17
108	Microtexture Analysis of the Alumina Scale in Thermal Barrier Coatings. Journal of the American Ceramic Society, 2015, 98, 3639-3642.	1.9	3

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109	A comparative study on the performance of suspension plasma sprayed thermal barrier coatings with different bond coat systems. Surface and Coatings Technology, 2015, 275, 276-282.	2.2	21
110	Chemical durability and leaching mechanism of Ce0.5Eu0.5PO4 ceramics: Effects of temperature and pH values. Journal of Nuclear Materials, 2015, 466, 187-193.	1.3	16
111	Enhanced ionic conductivity in pyrochlore and fluorite mixed phase yttrium-doped lanthanum zirconate. Journal of Power Sources, 2015, 273, 290-297.	4.0	26
112	In Situ Measurement of Stresses and Phase Compositions of the Zirconia Scale During Oxidation of Zirconium by Raman Spectroscopy. Oxidation of Metals, 2014, 81, 331-343.	1.0	16
113	Evolution of residual stress in air plasma sprayed yttria stabilised zirconia thermal barrier coatings after isothermal treatment. Surface and Coatings Technology, 2014, 251, 98-105.	2.2	41
114	Sintering of electron beam physical vapor deposited thermal barrier coatings under flame shock. Ceramics International, 2013, 39, 5093-5102.	2.3	19
115	The effects of temperature and composition on the thermal conductivities of [(ZrO2)1â^'x(CeO2)x]0.92(Y2O3)0.08 (0â©½xâ©½1) solid solutions. Acta Materialia, 2012, 60, 914-922.	3.8	22
116	A study of the microstructure and mechanical properties of SiC coatings on spherical particles. Journal of the European Ceramic Society, 2012, 32, 1775-1786.	2.8	21
117	Onset Plastic Deformation and Cracking Behavior of Silicon Carbide under Contact Load at Room Temperature. Journal of the American Ceramic Society, 2011, 94, 3509-3514.	1.9	42
118	Effect of cooling rate and substrate thickness on spallation of alumina scale on Fecralloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 8687-8693.	2.6	10
119	Fabrication of Silicon Carbide (SiC) Coatings from Pyrolysis of Polycarbosilane/Aluminum. Journal of Inorganic and Organometallic Polymers and Materials, 2011, 21, 534-540.	1.9	22
120	Bulk conduction and relaxation in [(ZrO2)1â^'x(CeO2)x]0.92(Y2O3)0.08 (0â‰xâ‰1) solid solutions at intermediate temperatures. Journal of Power Sources, 2011, 196, 4943-4949.	4.0	18
121	Electrical properties of YSZ/Al2O3 composite and YSZ/Al2O3 interface studied by impedance spectroscopy and finite element modelling. Solid State Ionics, 2010, 181, 783-789.	1.3	16
122	Thermal conductivities of YSZ/Al2O3 composites. Journal of the European Ceramic Society, 2010, 30, 3111-3116.	2.8	64
123	Surface hardness enhancement in sp3-bonded carbon doped SiC nanocomposite films. Applied Physics Letters, 2007, 91, .	1.5	4
124	Determination of mechanical properties of thermally grown oxide on Fecralloy by nano-indentation. Thin Solid Films, 2007, 515, 8393-8401.	0.8	9
125	Investigation of Nd ³⁺ incorporation in Ceâ€rhabdophane: Insight from structural flexibility and occupation mechanism. Journal of the American Ceramic Society, 0, , .	1.9	4