Eric H Jordan

List of Publications by Year
in descending order

81 papers	6,805 citations	94433 37 h-index	62596 80 g-index
83 all docs	83 docs citations	83 times ranked	3390 citing authors

#	Article	IF	Citations
1	Thermal Barrier Coatings for Gas-Turbine Engine Applications. Science, 2002, 296, 280-284.	12.6	3,626
2	The 2016 Thermal Spray Roadmap. Journal of Thermal Spray Technology, 2016, 25, 1376-1440.	3.1	243
3	Thermal Barrier Coatings Made by the Solution Precursor Plasma Spray Process. Journal of Thermal Spray Technology, 2008, 17, 124-135.	3.1	132
4	Highly durable thermal barrier coatings made by the solution precursor plasma spray process. Surface and Coatings Technology, 2004, 177-178, 97-102.	4.8	127
5	Mechanisms of ceramic coating deposition in solution-precursor plasma spray. Journal of Materials Research, 2002, 17, 2363-2372.	2.6	121
6	Thick ceramic thermal barrier coatings with high durability deposited using solution-precursor plasma spray. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 405, 313-320.	5.6	102
7	Effect of solution concentration on splat formation and coating microstructure using the solution precursor plasma spray process. Surface and Coatings Technology, 2008, 202, 2132-2138.	4.8	92
8	Formation of vertical cracks in solution-precursor plasma-sprayed thermal barrier coatings. Surface and Coatings Technology, 2006, 201, 1058-1064.	4.8	84
9	The Solution Precursor Plasma Spray (SPPS) Process: A Review with Energy Considerations. Journal of Thermal Spray Technology, 2015, 24, 1153-1165.	3.1	80
10	Identification of coating deposition mechanisms in the solution-precursor plasma-spray process using model spray experiments. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 362, 204-212.	5.6	79
11	Processing parameter effects on solution precursor plasma spray process spray patterns. Surface and Coatings Technology, 2004, 183, 51-61.	4.8	70
12	Stress variation with thermal cycling in the thermally grown oxide of an EB-PVD thermal barrier coating. Surface and Coatings Technology, 2004, 179, 286-296.	4.8	68
13	Failure mechanisms of dense vertically-cracked thermal barrier coatings. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 384, 151-161.	5.6	65
14	Pressureless sintering of translucent MgO ceramics. Scripta Materialia, 2008, 59, 757-759.	5.2	64
15	Thermal Stability of Air Plasma Spray and Solution Precursor Plasma Spray Thermal Barrier Coatings. Journal of the American Ceramic Society, 2007, 90, 3160-3166.	3.8	61
16	Apatite formation on alkaline-treated dense TiO2 coatings deposited using the solution precursor plasma spray process. Acta Biomaterialia, 2008, 4, 553-559.	8.3	57
17	Higher Temperature Thermal Barrier Coatings with the Combined Use of Yttrium Aluminum Garnet and the Solution Precursor Plasma Spray Process. Journal of Thermal Spray Technology, 2018, 27, 543-555.	3.1	57
18	Fluid Mechanics and Heat Transfer of Liquid Precursor Droplets Injected into High-Temperature Plasmas. Journal of Thermal Spray Technology, 2008, 17, 60-72.	3.1	55

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19	Low Thermal Conductivity Yttria-Stabilized Zirconia Thermal Barrier Coatings Using the Solution Precursor Plasma Spray Process. Journal of Thermal Spray Technology, 2014, 23, 849-859.	3.1	55
20	Surface geometry and strain energy effects in the failure of a (Ni,Pt)Al/EB-PVD thermal barrier coating. Acta Materialia, 2004, 52, 1107-1115.	7.9	52
21	Low thermal conductivity thermal barrier coating deposited by the solution plasma spray process. Surface and Coatings Technology, 2006, 201, 4447-4452.	4.8	52
22	Deposition of thermal barrier coatings using the solution precursor plasma spray process. Journal of Materials Science, 2004, 39, 1639-1646.	3.7	51
23	Infraredâ€Transparent Y₂O₃â€“MgO Nanocomposites Using Solâ€“Gel Combustion Synthesized Powder. Journal of the American Ceramic Society, 2010, 93, 3535-3538.	3.8	50
24	Deposition mechanisms of thermal barrier coatings in the solution precursor plasma spray process. Surface and Coatings Technology, 2004, 177-178, 103-107.	4.8	49
25	The effect of bond coat grit blasting on the durability and thermally grown oxide stress in an electron beam physical vapor deposited thermal barrier coating. Surface and Coatings Technology, 2003, 176, 57-66.	4.8	48
26	Mechanisms of spallation of solution precursor plasma spray thermal barrier coatings. Surface and Coatings Technology, 2004, 188-189, 101-106.	4.8	48
27	Microstructure of Suspension Plasma Spray and Air Plasma Spray Al2O3-ZrO2 Composite Coatings. Journal of Thermal Spray Technology, 2009, 18, 421-426.	3.1	47
28	The Solution Precursor Plasma Spray Coatings: Influence of Solvent Type. Plasma Chemistry and Plasma Processing, 2010, 30, 111-119.	2.4	47
29	Damage evolution in an electron beam physical vapor deposited thermal barrier coating as a function of cycle temperature and time. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 393, 51-62.	5.6	46
30	Explanation of the effect of rapid cycling on oxidation, rumpling, microcracking and lifetime of air plasma sprayed thermal barrier coatings. Surface and Coatings Technology, 2014, 244, 109-116.	4.8	45
31	Photoluminescence Piezospectroscopy: A Multiâ€Purpose Quality Control and NDI Technique for Thermal Barrier Coatings. International Journal of Applied Ceramic Technology, 2004, 1, 316-329.	2.1	44
32	Identification of Desirable Precursor Properties for Solution Precursor Plasma Spray. Journal of Thermal Spray Technology, 2011, 20, 802-816.	3.1	44
33	Double-Layer Gadolinium Zirconate/Yttria-Stabilized Zirconia Thermal Barrier Coatings Deposited by the Solution Precursor Plasma Spray Process. Journal of Thermal Spray Technology, 2015, 24, 895-906.	3.1	44
34	Phase and microstructural stability of solution precursor plasma sprayed thermal barrier coatings. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 381, 189-195.	5.6	40
35	Effect of temperature on rumpling and thermally grown oxide stress in an EB-PVD thermal barrier coating. Surface and Coatings Technology, 2006, 201, 3289-3298.	4.8	40
36	Porous TiO2 coating using the solution precursor plasma spray process. Surface and Coatings Technology, 2008, 202, 6113-6119.	4.8	40

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37	Dense TiO2Coating Using the Solution Precursor Plasma Spray Process. Journal of the American Ceramic Society, 2008, 91, 865-872.	3.8	39
38	Three-dimensional X-ray micro-computed tomography of cracks in a furnace cycled air plasma sprayed thermal barrier coating. Scripta Materialia, 2015, 97, 13-16.	5.2	38
39	Influence of microstructure on the durability of gadolinium zirconate thermal barrier coatings using APS & SPPS processes. Surface and Coatings Technology, 2018, 337, 117-125.	4.8	38
40	Dense Aluminaâ€"Zirconia Coatings Using the Solution Precursor Plasma Spray Process. Journal of the American Ceramic Society, 2008, 91, 359-365.	3.8	37
41	Solâ€"gel synthesis and characterization of Al2O3â€"TiO2 nanocrystalline powder. Journal of Sol-Gel Science and Technology, 2009, 50, 44-47.	2.4	36
42	Sol-Gel Combustion Synthesis of Nanocrystalline YAG Powder from Metal-Organic Precursors. Journal of the American Ceramic Society, 2008, 91, 2759-2762.	3.8	35
43	The viscoplastic behavior of hastelloy-X single crystal. International Journal of Plasticity, 1993, 9, 119-139.	8.8	30
44	A Foaming Esterification Solâ€"Gel Route for the Synthesis of Magnesiaâ€"Yttria Nanocomposites. Journal of the American Ceramic Society, 2011, 94, 367-371.	3.8	29
45	Suspension plasma sprayed composite coating using amorphous powder feedstock. Applied Surface Science, 2009, 255, 5935-5938.	6.1	27
46	Effects of Precursor Chemistry on the Structural Characteristics of Y₂O₃â€"MgO Nanocomposites Synthesized by a Combined Solâ€"Gel/Thermal Decomposition Route. Journal of the American Ceramic Society, 2011, 94, 372-381.	3.8	27
47	Microstress analysis of periodic composites. Composites Part B: Engineering, 1991, 1, 29-40.	0.6	26
48	Evolution of photo-stimulated luminescence of EB-PVD/(Ni, Pt)Al thermal barrier coatings. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 398, 99-107.	5.6	23
49	Thermoviscoplastic analysis of fibrous periodic composites by the use of triangular subvolumes. Composites Science and Technology, 1994, 50, 71-84.	7.8	22
50	Dy:YAG Phosphor Coating Using the Solution Precursor Plasma Spray Process. Journal of the American Ceramic Society, 2009, 92, 268-271.	3.8	22
51	Phase Homogeneity in <scp><scp>Y</scp>₂<scp>O</scp>₃â€"<scp>MgO</scp></scp> Nanocomposites Synthesized by Thermal Decomposition of Nitrate Precursors with Ammonium Acetate Additions. Journal of the American Ceramic Society, 2011, 94, 4207-4217.	3.8	21
52	Experimental investigation of the relationship between thermal barrier coating structured porosity and homogeneous charge compression ignition engine combustion. International Journal of Engine Research, 2021, 22, 88-108.	2.3	21
53	A Sucroseâ€Mediated Solâ€"Gel Technique for the Synthesis of <scp><scp>MgO</scp></scp>â€"<scp><scp>Y</scp></scp>₂<scp><scp>O</scp></scp><sub>3</sub Nanocomposites. Journal of the American Ceramic Society, 2013, 96, 346-350.	3.8	20
54	Experimental and Finite Element Study of an Air Plasma Sprayed Thermal Barrier Coating under Fixed Cycle Duration at Various Temperatures. Journal of the American Ceramic Society, 2013, 96, 3210-3217.	3.8	20

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55	Analysis of localized damage in EB-PVD/(Ni, Pt)Al thermal barrier coatings. Surface and Coatings Technology, 2006, 200, 5193-5202.	4.8	18
56	Solution precursor high-velocity oxy-fuel spray ceramic coatings. Journal of the European Ceramic Society, 2009, 29, 3349-3353.	5.7	18
57	<scp><scp>Y₂O₃â€“MgOâ€“ZrO₂</scp></scp> Infrared Transparent Ceramic Nanocomposites. Journal of the American Ceramic Society, 2012, 95, 1033-1037.	3.8	18
58	Phase Homogeneity in MgOâ€“ZrO₂ Nanocomposites Synthesized by a Combined Solâ€“Gel/Thermal Decomposition Route. Journal of the American Ceramic Society, 2010, 93, 3102-3109.	3.8	17
59	Closed form solution for rectangular inclusions with quadratic eigenstrains. International Journal of Engineering Science, 1999, 37, 1261-1276.	5.0	15
60	Laser induced breakdown spectroscopy for contamination removal on engine-run thermal barrier coatings. Surface and Coatings Technology, 2011, 205, 4614-4619.	4.8	15
61	Remaining Life Prediction of Thermal Barrier Coatings Based on Photoluminescence Piezospectroscopy Measurements. Journal of Engineering for Gas Turbines and Power, 2006, 128, 610-616.	1.1	14
62	Synthesis of porous, high surface area MgO microspheres. Materials Letters, 2009, 63, 783-785.	2.6	14
63	Implementation of a Viscoplastic Model for a Plasma Sprayed Ceramic Thermal Barrier Coating. Journal of Engineering Materials and Technology, Transactions of the ASME, 2003, 125, 200-207.	1.4	13
64	Low Thermal Conductivity Yttrium Aluminum Garnet Thermal Barrier Coatings Made by the Solution Precursor Plasma Spray: Part Iâ€"Processing and Properties. Journal of Thermal Spray Technology, 2018, 27, 781-793.	3.1	13
65	Plasma Sprayed Dense MgO-Y2O3 Nanocomposite Coatings Using Sol-Gel Combustion Synthesized Powder. Journal of Thermal Spray Technology, 2010, 19, 873-878.	3.1	12
66	Effect of CMAS viscosity on the infiltration depth in thermal barrier coatings of different microstructures. Surface and Coatings Technology, 2022, 432, 128039.	4.8	11
67	Solution Precursor Plasma Spray <scp><scp>Eu</scp></scp>: <scp><scp>Y₂O₃</scp></scp> Phosphor Coating. International Journal of Applied Ceramic Technology, 2012, 9, 636-641.	2.1	10
68	Low Thermal Conductivity Yttrium Aluminum Garnet Thermal Barrier Coatings Made by the Solution Precursor Plasma Spray: Part IIâ€"Planar Pore Formation and CMAS Resistance. Journal of Thermal Spray Technology, 2018, 27, 794-808.	3.1	10
69	High Temperature Thermal Barrier Coating Made by the Solution Precursor Plasma Spray Process. , 2014, , .		9
70	Cyclic furnace testing and life predictions of thermal barrier coating spallation subject to a step change in temperature or in cycle duration. Surface and Coatings Technology, 2015, 275, 384-391.	4.8	9
71	Elastic Constants of Single Crystal Hastelloy X at Elevated Temperatures. Journal of Engineering Materials and Technology, Transactions of the ASME, 1998, 120, 242-247.	1.4	8
72	Stress measurements via photoluminescence piezospectroscopy on engine run thermal barrier coatings. Surface and Coatings Technology, 2012, 206, 2751-2758.	4.8	8

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73	Self-consistent constitutive modeling and testing of polycrystalline hastelloy-X. International Journal of Solids and Structures, 1992, 29, 2623-2638.	2.7	6
74	Gauss integration applied to a Green's function formulation for cylindrical fiber composites. Mechanics of Materials, 1997, 26, 247-267.	3.2	6
75	Ytterbium Silicate Environmental Barrier Coatings Deposited Using the Solution-Based Precursor Plasma Spray. Journal of Thermal Spray Technology, 2020, 29, 979-994.	3.1	6
76	Microstructural Characteristics of Y2O3-MgO Composite Coatings Deposited by Suspension Plasma Spray. Journal of Thermal Spray Technology, 2012, 21, 1309-1321.	3.1	5
77	Transient temperature distribution in a composite with periodic microstructure. Composites Part B: Engineering, 1994, 4, 1055-1072.	0.6	4
78	Contaminant identification during laser cleaning of thermal barrier coatings. Surface and Coatings Technology, 2015, 270, 86-94.	4.8	3
79	A higher order subdomain method for finding local stress fields in composites. International Journal of Solids and Structures, 1998, 35, 5189-5203.	2.7	2
80	The Solution Precursor Plasma Spray Process for Making Durable Thermal Barrier Coatings. , 2005, , .		2
81	Differential displacement measurement using scanning x-ray beams. Review of Scientific Instruments, 1998, 69, 452-456.	1.3	1