

# Richard

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5741268/publications.pdf>

Version: 2024-02-01

88

papers

3,238

citations

147801

31

h-index

161849

54

g-index

91

all docs

91

docs citations

91

times ranked

2368

citing authors

#	ARTICLE	IF	CITATIONS
1	Abnormal grain growth in DC flash sintered 3â€mol% yttriaâ€stabilized zirconia ceramics. Journal of the American Ceramic Society, 2022, 105, 5562-5568.	3.8	4
2	Visible light emissions during flash sintering of 3YSZ are thermal radiation. Scripta Materialia, 2022, 219, 114849.	5.2	8
3	Effect of Ion Irradiation on Nanoindentation Fracture and Deformation in Silicon Carbide. Jom, 2021, 73, 1617-1628.	1.9	7
4	Promoting core/surface homogeneity during flash sintering of 3YSZ ceramic by current path management: experimental and modelling studies. Journal of the European Ceramic Society, 2021, 41, 6649-6659.	5.7	13
5	Nacre-like alumina with unique high strain rate capabilities. Journal of the European Ceramic Society, 2020, 40, 417-426.	5.7	26
6	The microstructural origin of rapid densification in 3YSZ during ultra-fast firing with or without an electric field. Journal of the European Ceramic Society, 2020, 40, 5829-5836.	5.7	40
7	Measurement of swelling-induced residual stress in ion implanted SiC, and its effect on micromechanical properties. Acta Materialia, 2020, 196, 78-87.	7.9	20
8	Characterisation of damage mechanisms in oxide ceramics indented at dynamic and quasi-static strain rates. Journal of the European Ceramic Society, 2019, 39, 4936-4945.	5.7	14
9	MWCNT-coated alumina micro-platelets for nacre-like biomimetic composites. Carbon, 2019, 145, 586-595.	10.3	10
10	Measurement and modelling of electrical resistivity by four-terminal method during flash sintering of 3YSZ. Journal of the Ceramic Society of Japan, 2018, 126, 579-590.	1.1	41
11	Statistical effects in X-ray diffraction lattice strain measurements of ferritic steel using crystal plasticity. Materials and Design, 2018, 153, 159-165.	7.0	8
12	Ultra-fast firing: Effect of heating rate on sintering of 3YSZ, with and without an electric field. Journal of the European Ceramic Society, 2017, 37, 2547-2551.	5.7	182
13	Liquid-phase assisted flash sintering of SiC from powder mixtures prepared by aqueous colloidal processing. Journal of the European Ceramic Society, 2017, 37, 485-498.	5.7	34
14	A synchrotron X-ray diffraction study of non-proportional strain-path effects. Acta Materialia, 2017, 124, 290-304.	7.9	30
15	Assessment of X-ray diffraction and crystal plasticity lattice strain evolutions under biaxial loading. International Journal of Plasticity, 2016, 83, 1-18.	8.8	28
16	Transient liquid phase spark plasma sintering of B4C-based ceramics using Ti-Al intermetallics as sintering aid. Journal of the European Ceramic Society, 2016, 36, 2419-2426.	5.7	48
17	Abrasive wear rate of boron carbide ceramics: Influence of microstructural and mechanical aspects on their tribological response. Journal of the European Ceramic Society, 2016, 36, 3925-3928.	5.7	24
18	Grain size dependence of hardness and fracture toughness in pure near fully-dense boron carbide ceramics. Journal of the European Ceramic Society, 2016, 36, 1829-1834.	5.7	102

#	ARTICLE	IF	CITATIONS
19	A Mathematical Model for Flash Sintering. Mathematical Modelling of Natural Phenomena, 2015, 10, 77-89.	2.4	30
20	Electrical characteristics of flash sintering: thermal runaway of Joule heating. Journal of the European Ceramic Society, 2015, 35, 1865-1877.	5.7	347
21	Ultra-fast and energy-efficient sintering of ceramics by electric current concentration. Scientific Reports, 2015, 5, 8513.	3.3	69
22	Functionally graded ceramics by a new in situ processing route: Residual stress and wear resistance. Journal of the European Ceramic Society, 2015, 35, 2693-2698.	5.7	10
23	A synchrotron X-ray diffraction study of in situ biaxial deformation. Acta Materialia, 2015, 90, 46-58.	7.9	48
24	Stiffness, strength and interwall sliding in aligned and continuous multi-walled carbon nanotube/glass composite microcantilevers. Acta Materialia, 2015, 100, 118-125.	7.9	9
25	Microcantilever investigation of fracture toughness and subcritical crack growth on the scale of the microstructure in Al <sub>2</sub> O <sub>3</sub> . Journal of the European Ceramic Society, 2015, 35, 4521-4533.	5.7	64
26	Quantitative analysis of the residual stress and dislocation density distributions around indentations in alumina and zirconia toughened alumina (ZTA) ceramics. Journal of the European Ceramic Society, 2014, 34, 753-763.	5.7	22
27	In-situ synthesis and sintering of mullite glass composites by SPS. Journal of Advanced Ceramics, 2014, 3, 165-170.	17.4	11
28	Effect of residual compressive surface stress on severe wear of alumina-silicon carbide two-layered composites. Tribology International, 2014, 74, 87-92.	5.9	22
29	Preliminary investigation of flash sintering of SiC. Journal of the European Ceramic Society, 2013, 33, 2811-2816.	5.7	202
30	A trapped field of $\sim 3$ T in bulk MgB <sub>2</sub> fabricated by uniaxial hot pressing. Superconductor Science and Technology, 2012, 25, 112002.	3.5	92
31	Influence of C doping on the fracture mode and abrasive wear of Al <sub>2</sub> O <sub>3</sub> . Journal of the European Ceramic Society, 2012, 32, 4003-4007.	5.7	21
32	Residual stress distribution in a functionally graded alumina-silicon carbide material. Scripta Materialia, 2012, 67, 281-284.	5.2	20
33	Ultra-fast densification of CNTs reinforced alumina based on combustion reaction and quick pressing. Science China Technological Sciences, 2012, 55, 484-489.	4.0	12
34	High strain rate indentation-induced deformation in alumina ceramics measured by Cr <sup>3+</sup> fluorescence mapping. Journal of the European Ceramic Society, 2011, 31, 2177-2187.	5.7	12
35	Thermal and electrical properties of aluminoborosilicate glass-ceramics containing multiwalled carbon nanotubes. Scripta Materialia, 2011, 65, 408-411.	5.2	21
36	Surface studies of Region II superplasticity of AA5083 in shear: Confirmation of diffusion creep, grain neighbour switching and absence of dislocation activity. Acta Materialia, 2011, 59, 5159-5170.	7.9	83

#	ARTICLE	IF	CITATIONS
37	Quantitative optical fluorescence microprobe measurements of stresses around indentations in Al <sub>2</sub> O <sub>3</sub> and Al <sub>2</sub> O <sub>3</sub> /SiC nanocomposites: The influence of depth resolution and specimen translucency. Acta Materialia, 2011, 59, 2637-2647.	7.9	17
38	An indentation model for erosive wear in Al <sub>2</sub> O <sub>3</sub> /SiC nanocomposites. Journal of the European Ceramic Society, 2011, 31, 85-95.	5.7	6
39	High resolution optical microprobe investigation of surface grinding stresses in Al <sub>2</sub> O <sub>3</sub> and Al <sub>2</sub> O <sub>3</sub> /SiC nanocomposites. Journal of the European Ceramic Society, 2011, 31, 97-109.	5.7	16
40	Relationship between microstructure and abrasive wear resistance of Al <sub>2</sub> O <sub>3</sub> -FeAl <sub>2</sub> O <sub>4</sub> nanocomposites produced via solid-state precipitation. Journal of the European Ceramic Society, 2011, 31, 339-350.	5.7	16
41	Understanding the mechanical reinforcement of uniformly dispersed multiwalled carbon nanotubes in alumino-borosilicate glass ceramic. Acta Materialia, 2010, 58, 2685-2697.	7.9	99
42	The nature of grain boundaries in alumina fabricated by fast sintering. Scripta Materialia, 2010, 62, 658-661.	5.2	55
43	Confocal fluorescence microscopy in alumina-based ceramics: Where does the signal come from?. Journal of the European Ceramic Society, 2010, 30, 641-648.	5.7	21
44	Microstructure and mechanical properties of Al <sub>2</sub> O <sub>3</sub> matrix nanocomposites produced by solid state precipitation. Journal of the European Ceramic Society, 2010, 30, 1359-1372.	5.7	26
45	Cr <sup>3+</sup> microspectroscopy measurements and modelling of local variations in surface grinding stresses in polycrystalline alumina. Journal of the European Ceramic Society, 2010, 30, 2533-2545.	5.7	15
46	Effect of yttria doping on the microstructure and mechanical properties of Al <sub>2</sub> O <sub>3</sub> -FeAl <sub>2</sub> O <sub>4</sub> nanocomposites developed via solid state precipitation. Journal of the European Ceramic Society, 2010, 30, 2905-2915.	5.7	10
47	Processing and properties of aligned multi-walled carbon nanotube/aluminoborosilicate glass composites made by sol-gel processing. Carbon, 2010, 48, 2212-2217.	10.3	36
48	Probing the improbable: imaging C atoms in alumina. Materials Today, 2010, 13, 34-36.	14.2	99
49	The effects of attrition and ball milling on the properties of magnesium diboride. Superconductor Science and Technology, 2010, 23, 065015.	3.5	4
50	Effects of Y <sub>2</sub> O <sub>3</sub> additives and powder purity on the densification and grain boundary composition of Al <sub>2</sub> O <sub>3</sub> /SiC nanocomposites. Journal of the European Ceramic Society, 2009, 29, 1613-1624.	5.7	23
51	A study of the sintering behaviour of magnesium diboride. Journal of the European Ceramic Society, 2009, 29, 1817-1824.	5.7	42
52	The relationship between microstructure, fracture and abrasive wear in Al <sub>2</sub> O <sub>3</sub> /SiC nanocomposites and microcomposites containing 5 and 10% SiC. Journal of the European Ceramic Society, 2009, 29, 2841-2848.	5.7	59
53	Fabrication and properties of dense <i>ex situ</i> magnesium diboride bulk material synthesized using spark plasma sintering. Superconductor Science and Technology, 2009, 22, 095003.	3.5	44
54	High resolution surface studies of superplastic deformation in shear and tension. Materialwissenschaft Und Werkstofftechnik, 2008, 39, 289-292.	0.9	14

#	ARTICLE	IF	CITATIONS
55	Piezospectroscopic measurement of the stress field around an indentation crack tip in ruby using SEM cathodoluminescence. Journal of the European Ceramic Society, 2008, 28, 2049-2055.	5.7	2
56	Influence factors on wear resistance of two alumina matrix composites. Wear, 2008, 265, 27-33.	3.1	19
57	Study on the structure and properties of fine-grained alumina fast sintered with high heating rate. Materials Research Bulletin, 2008, 43, 3521-3528.	5.2	8
58	Fabrication of carbon-nanotube-reinforced glass-ceramic nanocomposites by ultrasonic in situ sol-gel processing. Journal of Materials Chemistry, 2008, 18, 5344.	6.7	59
59	Mechanisms of Microsuperplasticity. Materials Science Forum, 2007, 551-552, 135-145.	0.3	6
60	High Resolution Surface Studies of Superplastic Deformation. Materials Science Forum, 2007, 551-552, 615-620.	0.3	14
61	In situ neutron diffraction study of residual stress development in MgO/SiC ceramic nanocomposites during thermal cycling. Acta Materialia, 2007, 55, 4535-4544.	7.9	8
62	Thermal expansion behaviour of ultra-high modulus carbon fibre reinforced magnesium composite during thermal cycling. Journal of Materials Science, 2006, 41, 6228-6236.	3.7	12
63	Microstructure-Property Relationships in Wear Resistant Alumina/SiC "Nanocomposites". Advances in Science and Technology, 2006, 45, 555-563.	0.2	15
64	The effect of thermal cycling on the properties of a carbon fibre reinforced magnesium composite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 397, 249-256.	5.6	46
65	Relationship between wear rate, surface pullout and microstructure during abrasive wear of alumina and alumina/SiC nanocomposites. Acta Materialia, 2005, 53, 3345-3357.	7.9	103
66	Effects of Yttrium on the Sintering and Microstructure of Alumina-Silicon Carbide "Nanocomposites". Journal of the American Ceramic Society, 2005, 88, 2354-2361.	3.8	22
67	Microstructural analysis of a carbon fibre reinforced AZ91D magnesium alloy composite. Surface and Interface Analysis, 2005, 37, 336-342.	1.8	43
68	Grain Boundary Microanalysis in Al <sub>2</sub> O <sub>3</sub> -SiC Nanocomposites. , 2005, , 111-119.		0
69	Quantitative Surface Fractography of Alumina and Alumina-SiC Composites during Diamond Grinding. Key Engineering Materials, 2005, 290, 149-159.	0.4	5
70	Superplasticity in Commercial Al 7475. Materials Science Forum, 2004, 447-448, 283-290.	0.3	0
71	Thermal stress induced microcracking in alumina-20% SiCp composites. Acta Materialia, 2004, 52, 1621-1629.	7.9	45
72	Mechanism of the HIP bonding of Zircaloy-4 in the $\beta$ -phase field. Journal of Materials Processing Technology, 2003, 135, 131-136.	6.3	7

#	ARTICLE	IF	CITATIONS
73	The improvement of constituent dissolution and mechanical properties of 7055 aluminum alloy by stepped heat treatments. Journal of Materials Processing Technology, 2003, 142, 190-196.	6.3	134
74	Thermal microstress measurements in Al <sub>2</sub> O <sub>3</sub> /SiC nanocomposites by Cr <sup>3+</sup> fluorescence microscopy. Journal of the European Ceramic Society, 2003, 23, 1779-1783.	5.7	11
75	Investigation of Superplastic Behaviour and Solid State Bonding of Zircaloy-4. Materials Science Forum, 2001, 357-359, 99-104.	0.3	3
76	Critical review of mechanism of superplastic deformation in fine grained metallic materials. Materials Science and Technology, 2000, 16, 1287-1294.	1.6	10
77	Deformation and Microstructural Development in a 2124Al/SiC<sub>p</sub>MMC during High Strain Rate Superplasticity. Materials Science Forum, 1999, 304-306, 233-240.	0.3	3
78	Microstructural requirements for aluminaâ€SiC nanocomposites. Advances in Applied Ceramics, 1999, 98, 219-224.	0.4	48
79	Thermal residual stresses and their toughening effect in Al <sub>2</sub> O <sub>3</sub> platelet reinforced glass. Acta Materialia, 1999, 47, 3233-3240.	7.9	51
80	Relating Grain Boundary Structure to Superplastic Deformation. Materials Science Forum, 1997, 243-245, 99-108.	0.3	2
81	Objective Modelling of Diffusion Bonding in Superplastic Duplex Stainless Steels. Materials Science Forum, 1997, 243-245, 675-680.	0.3	5
82	Influence of processing on the microstructural development and flexure strength of Al <sub>2</sub> O <sub>3</sub> /SiC nanocomposites. Journal of the European Ceramic Society, 1997, 17, 865-872.	5.7	50
83	Neutron diffraction measurements of residual stresses in alumina/SiC nanocomposites. Acta Materialia, 1997, 45, 1791-1800.	7.9	56
84	Analysis of neutron diffraction peak broadening caused by internal stresses in composite materials. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1995, 354, 139-144.	1.6	6
85	Processing and properties of Al<sub>2</sub>O<sub>3</sub>/SiC nanocomposites. Journal of Microscopy, 1995, 177, 305-312.	1.8	89
86	Grain boundary tension induced strain recovery following superplastic flow. Acta Metallurgica Et Materialia, 1994, 42, 2921-2928.	1.8	9
87	Threshold stress for the superplastic elastic after-effect in the Sn-Pb eutectic. Scripta Metallurgica Et Materialia, 1993, 29, 407-409.	1.0	2
88	Large anelastic strains at constant volume in superplastic tin-lead eutectic alloy. Scripta Metallurgica Et Materialia, 1992, 27, 127-132.	1.0	9