Hideki Hyuga

List of Publications by Year in descending order

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130	2,210 citations	23	40
papers		h-index	g-index
143	143 docs citations	143	1349
all docs		times ranked	citing authors

#	Article	IF	Citations
1	Preparation of porous diatomite ceramics by an alkali treatment near room temperature. Journal of the European Ceramic Society, 2021, 41, 849-855.	2.8	8
2	Improving the thermal conductivity of epoxy composites using a combustion-synthesized aggregated β-Si3N4 filler with randomly oriented grains. Scientific Reports, 2020, 10, 14926.	1.6	17
3	Effects of yttria and magnesia on densification and thermal conductivity of sintered reactionâ€bonded silicon nitrides. Journal of the American Ceramic Society, 2019, 102, 1579-1588.	1.9	37
4	Roundâ€robin exercise on the three―and fourâ€point flexural strength of thin ceramic plates for power modules. International Journal of Applied Ceramic Technology, 2019, 16, 2121-2130.	1.1	2
5	A study on formation mechanisms of relief structure formed in situ on the surface of ceramics. Ceramics International, 2019, 45, 23143-23148.	2.3	17
6	Effect of nanorelief structure formed in situ on tribological properties of ceramics in dry sliding. Ceramics International, 2019, 45, 13818-13824.	2.3	22
7	Improved resistance to thermal fatigue of active metal brazing substrates for silicon carbide power modules using tough silicon nitrides with high thermal conductivity. Ceramics International, 2018, 44, 8870-8876.	2.3	32
8	Thermal conductivity analysis using threeâ€dimensional microstructures of gelation freezing derived cellular mullite. Journal of the American Ceramic Society, 2018, 101, 3266-3270.	1.9	7
9	Dielectric breakdown of silicon nitride substrates with various thicknesses. Journal of the Ceramic Society of Japan, 2018, 126, 693-698.	0.5	8
10	Accelerated thermal fatigue test of metallized ceramic substrates for SiC power modules by repeated four-point bending. , 2018 , , .		1
11	Effect of high temperature cycling on both crack formation in ceramics and delamination of copper layers in silicon nitride active metal brazing substrates. Ceramics International, 2017, 43, 5080-5088.	2.3	50
12	Nitridation behavior of silicon powder compacts of various thicknesses with Y ₂ O ₃ and MgO as sintering additives. International Journal of Applied Ceramic Technology, 2017, 14, 1157-1163.	1.1	6
13	Effect of gelatin gel strength on microstructures and mechanical properties of cellular ceramics created by gelation freezing route. Journal of Materials Research, 2017, 32, 3286-3293.	1.2	17
14	Fabrication of porous silica ceramics by gelation-freezing of diatomite slurry. Journal of the European Ceramic Society, 2017, 37, 5259-5264.	2.8	24
15	Improvement in Thermal Conductivity of Silicon Nitride Ceramics via Microstructural Control and Their Application to Heat Dissipation Substrates. Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy, 2017, 64, 439-444.	0.1	5
16	Green Manufacturing of Silicon Nitride Ceramics., 2016,, 223-243.		1
17	Effect of mechanical properties of the ceramic substrate on the thermal fatigue of Cu metallized ceramic substrates. , 2016 , , .		5
18	Measurements of fracture toughness of ceramic thin plates through single-edge V-notch plate method. Journal of the European Ceramic Society, 2016, 36, 4327-4331.	2.8	6

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19	Round-robin test on the fracture toughness of ceramic thin plates through modified single edge-precracked plate method. Journal of the European Ceramic Society, 2016, 36, 3245-3248.	2.8	10
20	Effect of amounts and types of silicon nitride on thermal conductivity of Si ₃ N ₄ /epoxy resin composite. Journal of the Ceramic Society of Japan, 2015, 123, 908-912.	0.5	18
21	Surface modification of graphite powder with lanthanum ultraphosphate by chemical process and its oxidation resistance. Advanced Powder Technology, 2015, 26, 901-906.	2.0	5
22	Development of high-thermal-conductivity silicon nitride ceramics. Journal of Asian Ceramic Societies, 2015, 3, 221-229.	1.0	106
23	Effect of Aluminum Content on Mechanical Properties and Thermal Conductivities of Sintered Reactionâ∈Bonded Silicon Nitride. International Journal of Applied Ceramic Technology, 2014, 11, 534-542.	1.1	21
24	Fracture Resistance Behavior of Highâ€Thermalâ€Conductivity Silicon Nitride Ceramics. International Journal of Applied Ceramic Technology, 2014, 11, 872-882.	1.1	20
25	Effects of Impurity Iron Content on Characteristics of Sintered Reactionâ€Bonded Silicon Nitride. International Journal of Applied Ceramic Technology, 2013, 10, 690-700.	1.1	23
26	Energy efficient synthesis of porous ZrO2 with fine closed pores by microwave irradiation. Materials Letters, 2013, 93, 293-296.	1.3	5
27	Review and Overview of Silicon Nitride and SiAlON, Including their Applications. , 2013, , 245-266.		4
28	Fabrication and characterization of porous ZrO2 with a high volume fraction of fine closed pores. Journal of the European Ceramic Society, 2013, 33, 61-66.	2.8	11
29	Low-temperature joining of boron carbide ceramics. Journal of the Ceramic Society of Japan, 2012, 120, 207-210.	0.5	13
30	Influence of joining time and temperature on the flexural strength of joined boron carbide ceramics. Journal of the Ceramic Society of Japan, 2012, 120, 393-399.	0.5	10
31	Semi-homogeneous joining of silicon nitride using oxynitride glass insert containing silicon nitride powder and post-heat treatment. Journal of the Ceramic Society of Japan, 2012, 120, 119-122.	0.5	5
32	Hydraulic alumina as an inorganic binder for extruding and sintering Si ₃ N ₄ ceramics. Journal of the Ceramic Society of Japan, 2012, 120, 330-333.	0.5	1
33	Microwave joining of alumina with alumina/zirconia insert under low pressure and high temperature. Journal of the Ceramic Society of Japan, 2012, 120, 362-365.	0.5	1
34	Effects of Impurity Oxygen Content in Raw Si Powder on Thermal and Mechanical Properties of Sintered Reactionâ∈Bonded Silicon Nitrides. International Journal of Applied Ceramic Technology, 2012, 9, 229-238.	1.1	36
35	Formation mechanism of Ti2AlC under the self-propagating high-temperature synthesis (SHS) mode. Materials Research Bulletin, 2012, 47, 1164-1168.	2.7	28
36	Joining of B4C by Al–Si infiltrated TiC tape: Effect of Si content on joint microstructure and corrosion resistance. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 539, 238-242.	2.6	4

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37	Joining of SiC by Al infiltrated TiC tape: Effect of joining parameters on the microstructure and mechanical properties. Journal of the European Ceramic Society, 2012, 32, 149-156.	2.8	21
38	High Thermal Conductivity Silicon Nitride Ceramics. Journal of the Korean Ceramic Society, 2012, 49, 380-384.	1.1	50
39	Synthesis, microstructure and mechanical properties of reaction-infiltrated TiB2–SiC–Si composites. Journal of Alloys and Compounds, 2011, 509, 1819-1823.	2.8	10
40	Joining of SiC with Si infiltrated tape-cast TiB2–C interlayer: Effect of interlayer composition and thickness on the microstructure and mechanical properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 530, 580-584.	2.6	5
41	Semi-homogeneous joining of silicon nitride with a silicon nitride powder insert. Journal of the Ceramic Society of Japan, 2011, 119, 322-324.	0.5	7
42	Nitridation behaviors of silicon powder doped with various rare earth oxides. Journal of the Ceramic Society of Japan, 2011, 119, 251-253.	0.5	22
43	Mechanism for the formation of SiC by carbothermal reduction reaction using a microwave heating technique. Journal of the Ceramic Society of Japan, 2011, 119, 740-744.	0.5	15
44	Study of modification on alumina surface by using of organosilicon polymer. Journal of the Ceramic Society of Japan, 2011, 119, 378-381.	0.5	10
45	Fabrication of Dense \hat{l}^2 -SiAlON Ceramics with ZrO2 Additions Via a Rapid Reaction-Bonding and Postsintering Route. Journal of the American Ceramic Society, 2011, 94, 1014-1018.	1.9	19
46	A Tough Silicon Nitride Ceramic with High Thermal Conductivity. Advanced Materials, 2011, 23, 4563-4567.	11.1	212
47	Joining of SiC by Tape-Cast SiC-Al ₂ O ₃ -Y ₂ O ₃ Interlayer. Key Engineering Materials, 2011, 484, 26-31.	0.4	1
48	Effect of composition and joining parameters on microstructure and mechanical properties of silicon carbide joints. Journal of the Ceramic Society of Japan, 2010, 118, 799-804.	0.5	5
49	Joining of silicon nitride with silicon slurry via reaction bonding and post sintering. Journal of the Ceramic Society of Japan, 2010, 118, 9-12.	0.5	12
50	Joining of silicon nitride by microwave local heating. Journal of the Ceramic Society of Japan, 2010, 118, 959-962.	0.5	18
51	Joining of Silicon Nitride by Slurry or Paste. Ceramic Engineering and Science Proceedings, 2010, , 131-134.	0.1	0
52	Crack profiles under a Vickers indent in silicon nitride ceramics with various microstructures. Ceramics International, 2010, 36, 173-179.	2.3	15
53	Enhancement of thermoelectric performance in rare earth-doped Sr3Ti2O7 by symmetry restoration of TiO6 octahedra. Journal of Electroceramics, 2010, 24, 76-82.	0.8	29
54	Microstructure of boron carbide pressureless sintered in an Ar atmosphere containing gaseous metal species. Journal of the European Ceramic Society, 2010, 30, 999-1005.	2.8	18

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55	Reaction joining of SiC ceramics using TiB2-based composites. Journal of the European Ceramic Society, 2010, 30, 3203-3208.	2.8	34
56	Synthesis of precursor for fibrous mullite powder by alkoxide hydrolysis method. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2010, 173, 66-71.	1.7	18
57	Environmental Impact Evaluation and Rationalization of Ceramics Process on the Basis of Exergy Analysis. Materials Science Forum, 2010, 654-656, 1982-1985.	0.3	O
58	Correlation of wear behavior and indentation fracture resistance in silicon nitride ceramics hot-pressed with alumina and yttria. Journal of the European Ceramic Society, 2009, 29, 1535-1542.	2.8	38
59	Relationship between fracture toughness determined by surface crack in flexure and fracture resistance measured by indentation fracture for silicon nitride ceramics with various microstructures. Ceramics International, 2009, 35, 493-501.	2.3	26
60	Fabrication of pressureless sintered dense \hat{l}^2 -SiAlON via a reaction-bonding route with ZrO2 addition. Ceramics International, 2009, 35, 1927-1932.	2.3	28
61	Nitridation behaviour of ZrO2 added silicon powder with different ZrO2 particle sizes. Journal of the Ceramic Society of Japan, 2009, 117, 157-161.	0.5	10
62	A rationalization guideline for the utilization of energy and resources considering total manufacturing processes. Synthesiology, 2009, 1, 199-208.	0.2	3
63	Stereo fabric modeling technology in ceramics manufacture. Journal of the European Ceramic Society, 2008, 28, 1079-1083.	2.8	16
64	Tribological Behavior of Si3N4and Si3N4/Carbon Fiber Composites Against Stainless Steel Under Water Lubrication for a Thrust-Bearing Application. International Journal of Applied Ceramic Technology, 2008, 5, 111-118.	1.1	3
65	Exergy Consumption Through the Life Cycle of Ceramic Parts. International Journal of Applied Ceramic Technology, 2008, 5, 373-381.	1.1	12
66	In SituMeasurement of Shrinkage During Postreaction Sintering of Reaction-Bonded Silicon Nitride. Journal of the American Ceramic Society, 2008, 91, 3413-3415.	1.9	13
67	Nitridation enhancing effect of ZrO2 on silicon powder. Materials Letters, 2008, 62, 3475-3477.	1.3	38
68	Pressureless sintering of boron carbide ceramics. Journal of the Ceramic Society of Japan, 2008, 116, 1319-1321.	0.5	22
69	Influence of zirconia addition on reaction bonded silicon nitride produced from various silicon particle sizes. Journal of the Ceramic Society of Japan, 2008, 116, 688-693.	0.5	19
70	Corrosion behavior of reaction bonded Si3N4-SiC and SiAlON-SiC composites in simulated aluminum smelting conditions. Journal of the Ceramic Society of Japan, 2008, 116, 712-716.	0.5	6
71	Measurement of Indentation Fracture Toughness of Silicon Nitride Ceramics: I, Effect of Microstructure of Materials. Key Engineering Materials, 2007, 352, 41-44.	0.4	4
72	Enhancement of Seebeck coefficient for SrO(SrTiO3)2 by Sm substitution: Crystal symmetry restoration of distorted TiO6 octahedra. Applied Physics Letters, 2007, 91, 242102.	1.5	15

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73	Improvement of Oxidation Resistance of Graphite Powder Treated with Phosphate. Key Engineering Materials, 2007, 352, 133-136.	0.4	2
74	Measurement of Indentation Fracture Toughness of Silicon Nitride Ceramics: II, Effect of the Experimental Conditions. Key Engineering Materials, 2007, 352, 45-48.	0.4	6
75	Fabrication and Wettability Test of Silicon Nitrides with Ordered Protrusions. Solid State Phenomena, 2007, 127, 173-178.	0.3	O
76	Expansion of Silicon Nitride-Boron Nitride Composite by Reaction Bonding. Journal of the Ceramic Society of Japan, 2007, 115, 147-150.	1.3	0
77	Fabrication of Thick Silicon Nitride by Reaction Bonding and Post-Sintering. Journal of the Ceramic Society of Japan, 2007, 115, 285-289.	1.3	9
78	Exergy Analysis on the Ceramic Manufacturing Process. Journal of the Ceramic Society of Japan, 2007, 115, 987-992.	0.5	6
79	Effect of Calcium Compounds in Lubrication Oil on the Frictional Properties of Fe2O3-Al2O3 Ceramics under Boundary Lubricating Conditions. Journal of the Ceramic Society of Japan, 2007, 115, 32-36.	1.3	0
80	Effect of Green Machining on Strength of Silicon Nitride with As-Sintered Surface. Journal of the Ceramic Society of Japan, 2007, 115, 504-506.	0.5	2
81	Reaction sintering of two-dimensional silicon carbide fiber-reinforced silicon carbide composite by sheet stacking method. Journal of Nuclear Materials, 2007, 367-370, 769-773.	1.3	8
82	The application of automated image analysis to dense heterogeneities in partially sintered alumina. Journal of the European Ceramic Society, 2007, 27, 1927-1933.	2.8	4
83	Comparison of fracture resistance as measured by the indentation fracture method and fracture toughness determined by the single-edge-precracked beam technique using silicon nitrides with different microstructures. Journal of the European Ceramic Society, 2007, 27, 2347-2354.	2.8	36
84	Reaction sintering of \hat{l}^2 -tricalcium phosphates and their mechanical properties. Journal of the European Ceramic Society, 2007, 27, 3215-3220.	2.8	14
85	The Relationship Between Multiple Scratch Tests and Wear Behavior of Hot-Pressed Silicon Nitride Ceramics with Various Rare-Earth Additive Systems. Journal of the American Ceramic Society, 2007, 91, 071031103425001-???.	1.9	3
86	Enhancement of Hydrophilic Properties of Alumina-Based Ceramics. Journal of the Ceramic Society of Japan, 2006, 114, 347-350.	1.3	5
87	Changes in Microstructure and Properties of ZnO-Added Al2O3 upon Sliding. Journal of the Ceramic Society of Japan, 2006, 114, 599-602.	1.3	5
88	Effect of Yb2O3 Addition on Si3N4-Lu2O3-SiO2 Ceramics. Journal of the Ceramic Society of Japan, 2006, 114, 1097-1099.	1.3	2
89	Formation and Microstructure of Silicide-Particle-Reinforced Si3N4 Composites with Crystallized Grain Boundary Phase of Yb2Si2O7. Journal of the Ceramic Society of Japan, 2006, 114, 1126-1132.	1.3	0
90	Processing and Tribological Properties of SiC/Carbon Short Fiber Composites. Journal of the Ceramic Society of Japan, 2006, 114, 323-328.	1.3	11

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91	Oil Wettability and Sliding Properties of Organic and Inorganic Hybrid Coating Films Prepared from Methyltriethoxysilane and Various Metal Alkoxides. Journal of the Ceramic Society of Japan, 2006, 114, 580-582.	1.3	1
92	Influence of the Measuring Method for Crack Length on the Fracture Toughness of Silicon Nitride Ceramics Obtained by the Indentation Fracture Technique. Journal of the Ceramic Society of Japan, 2006, 114, 787-790.	1.3	0
93	Substitution Model of Monovalent (Li, Na, and K), Divalent (Mg), and Trivalent (Al) Metal Ions for beta-Tricalcium Phosphate. Journal of the American Ceramic Society, 2006, 89, 688-690.	1.9	92
94	Dry Sliding Wear of Lu ₂ O ₃ Sialon Ceramics. Key Engineering Materials, 2006, 317-318, 351-354.	0.4	0
95	Effect of Ta2O5 Addition on Microstructure of Mo5Si3 Particle Reinforced Si3N4 Composite with Grain Boundary Phase of Yb2Si2O7. Journal of the Ceramic Society of Japan, 2005, 113, 320-324.	1.3	2
96	In situ synthesis of Mo5Si3 particle reinforced Si3N4 composite with crystallized grain boundary phase of Yb2Si2O7. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 395, 160-166.	2.6	6
97	Comparison of Tribological Behavior Between alpha-Sialon/Si3N4 and Si3N4/Si3N4 Sliding Pairs in Water Lubrication. Journal of the American Ceramic Society, 2005, 88, 1655-1658.	1.9	16
98	Friction and Wear Properties of Si3N4/Carbon Fiber Composites with Aligned Microstructure. Journal of the American Ceramic Society, 2005, 88, 1239-1243.	1.9	15
99	Influence of Carbon Fiber Additions on Friction Properties and Running-In Behavior of Silicon Nitride-Based Composites Under Water Lubrication. Journal of the American Ceramic Society, 2005, 88, 3474-3477.	1.9	5
100	Effect of rare-earth species on the wear properties of $\hat{l}\pm$ sialon and \hat{l}^2 silicon nitride ceramics under tribochemical type conditions. Journal of Materials Research, 2004, 19, 2750-2758.	1.2	6
101	<i>In Situ</i> Synthesis and Microstructures of Tungsten Carbideâ€Nanoparticleâ€Reinforced Silicon Nitrideâ€Matrix Composites. Journal of the American Ceramic Society, 2004, 87, 337-341.	1.9	8
102	Tribological Behavior of a Si ₃ N ₄ /Carbon Short Fiber Composite under Water Lubrication. Journal of the American Ceramic Society, 2004, 87, 699-702.	1.9	15
103	Processing and Properties of <i>in Situ</i> â€Reinforced αâ€SiAlONs Stabilized with Y ₂ O ₃ . Journal of the American Ceramic Society, 2004, 87, 710-713.	1.9	13
104	Highly Transparent Luâ€Î±â€SiAlON. Journal of the American Ceramic Society, 2004, 87, 714-716.	1.9	71
105	Fabrication and Mechanical Properties of Si ₃ N ₄ /Carbon Fiber Composites with Aligned Microstructure Produced by a Seeding and Extrusion Method. Journal of the American Ceramic Society, 2004, 87, 894-899.	1.9	10
106	Influence of Rareâ€Earth Additives on Wear Properties of Hotâ€Pressed Silicon Nitride Ceramics under Dry Sliding Conditions. Journal of the American Ceramic Society, 2004, 87, 1683-1686.	1.9	29
107	Wear properties under dry sliding of Lu-α sialons with in situ reinforced microstructures. Journal of the European Ceramic Society, 2004, 24, 3581-3589.	2.8	8
108	Influence of carbon fibre content on the processing and tribological properties of silicon nitride/carbon fibre composites. Journal of the European Ceramic Society, 2004, 24, 877-885.	2.8	23

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109	Wear properties of self-reinforced α-SiAlON ceramics produced by spark plasma sintering. Wear, 2004, 257, 292-296.	1.5	15
110	Wear behaviour of single phase and composite sialon ceramics stabilized with Y $2\mathrm{O}$ 3 and Lu $2\mathrm{O}$ 3. Journal of the European Ceramic Society, 2004, 24, 3271-3277.	2.8	17
111	Tribological behavior of ceramic materials (Si 3 N 4 , SiC and Al 2 O 3) in aqueous medium. Journal of the European Ceramic Society, 2004, 24, 3279-3284.	2.8	97
112	Microstructural characteristics in silicon nitride/tungsten composites by different in-situ processing. Materials Letters, 2004, 58, 21-24.	1.3	3
113	Influence of Sintering Conditions on the Microstructure and Mechanical Properties of Si3N4 Ceramics with WB Addition. Journal of the Ceramic Society of Japan, 2004, 112, 153-158.	1.3	0
114	Strength and Microstructure of Silicon Nitride Fabricated by Post-Sintering Process Using Low-Purity Silicon Powder as Raw Materials. Journal of the Ceramic Society of Japan, 2004, 112, 214-218.	1.3	3
115	Complete Homochirality Induced by Nonlinear Autocatalysis and Recycling. Journal of the Physical Society of Japan, 2004, 73, 33-35.	0.7	98
116	Wear properties of Y–α/β composite sialon ceramics. Journal of the European Ceramic Society, 2003, 23, 1743-1750.	2.8	48
117	Optical and Mechanical Properties of $\hat{l}\pm/\hat{l}^2$ Composite Sialons. Journal of the American Ceramic Society, 2003, 86, 520-522.	1.9	35
118	Processing and Tribological Properties of Si ₃ N ₄ /Carbon Short Fiber Composites. Journal of the American Ceramic Society, 2003, 86, 1081-1087.	1.9	21
119	Tribological Behaviour of α/ß Composite SiAlON Ceramics. Key Engineering Materials, 2003, 237, 203-210.	0.4	2
120	Wear Properties of SiAlON Ceramics. Key Engineering Materials, 2003, 247, 293-296.	0.4	0
121	Mechanical and wear properties of Si ₃ N ₄ –W composites using tungsten boride powder. Journal of Materials Research, 2003, 18, 2262-2267.	1.2	4
122	Frictional and Mechanical Properties of Fe5Si3-Particles-Dispersed Si3N4 Formed by the Reaction during Sintering Journal of the Ceramic Society of Japan, 2002, 110, 942-949.	1.3	10
123	Frictional Properties of Si3N4 with Improved Oilphilic Property Journal of the Ceramic Society of Japan, 2002, 110, 1084-1091.	1.3	5
124	Fabrication process and electrical properties of BaTiO3/Ni nanocomposites. Scripta Materialia, 1997, 9, 547-550.	0.5	40
125	Fracture Resistance and Wear Properties of Silicon Nitride Ceramics. Key Engineering Materials, 0, 403, 53-56.	0.4	0
126	Exergy Analysis on the Life Cycle of Ceramic Parts. Key Engineering Materials, 0, 403, 261-264.	0.4	2

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127	Reaction Bonded Silicon Nitride - Silicon Carbide and SiAlON - Silicon Carbide Refractories for Aluminium Smelting. Key Engineering Materials, 0, 403, 235-238.	0.4	7
128	Fracture-Toughness Test of Silicon Nitrides with Different Microstructures Using Vickers Indentation., 0,, 433-442.		1
129	Rolling Contact Fatigue Properties and Fracture Resistance for Silicon Nitride Ceramics with Various Microstructures. Ceramic Engineering and Science Proceedings, 0, , 90-99.	0.1	O
130	Study of Factors Affecting the Lengths of Surface Cracks in Silicon Nitride Introduced by Vickers Indentation., 0,, 389-398.		0