R K Singh Raman

List of Publications by Year
in descending order

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59 papers	2,080 citations	279701 23 h-index	233338 45 g-index
60 all docs	60 docs citations	60 times ranked	1721 citing authors

#	Article	IF	Citations
1	Effect of Nanocrystalline Structure on the Oxidation Behavior of Feâ€“20Crâ€“3Al Alloy at High Temperatures. Oxidation of Metals, 2022, 97, 307.	1.0	0
2	Durability of Fibre Reinforced Polymers in Exposure to Dual Environment of Seawater Sea Sand Concrete and Seawater. Materials, 2022, 15, 4967.	1.3	5
3	Mechanical Alloying of Elemental Powders into Nanocrystalline (NC) Fe-Cr Alloys: Remarkable Oxidation Resistance of NC Alloys. Metals, 2021, 11, 695.	1.0	6
4	A Two-Step Silane Coating Incorporated with Quaternary Ammonium Silane for Mitigation of Microbial Corrosion of Mild Steel. ACS Omega, 2021, 6, 16913-16923.	1.6	16
5	Distinct Advantages of Circumferential Notch Tensile (CNT) Testing in the Determination of a Threshold for Stress Corrosion Cracking (KISCC). Materials, 2021, 14, 5620.	1.3	2
6	Role of Surface Preparation in Corrosion Resistance Due to Silane Coatings on a Magnesium Alloy. Molecules, 2021, 26, 6663.	1.7	4
7	Graphene and Graphene Oxide as a Support for Biomolecules in the Development of Biosensors. Nanotechnology, Science and Applications, 2021, Volume 14, 197-220.	4.6	54
8	Effect of Fibers Configuration and Thickness on Tensile Behavior of GFRP Laminates Exposed to Harsh Environment. Polymers, 2019, 11, 1401.	2.0	41
9	Crack Growth in a Range of Additively Manufactured Aerospace Structural Materials. Aerospace, 2018, 5, 118.	1.1	43
10	Understanding Fibre-Matrix Degradation of FRP Composites for Advanced Civil Engineering Applications: An Overview. Corrosion and Materials Degradation, 2018, 1, 27-41.	1.0	22
11	In-vitro biodegradation and corrosion-assisted cracking of a coated magnesium alloy in modified-simulated body fluid. Materials Science and Engineering C, 2017, 78, 278-287.	3.8	30
12	Influence of bovine serum albumin in Hanks' solution on the corrosion and stress corrosion cracking of a magnesium alloy. Materials Science and Engineering C, 2017, 80, 335-345.	3.8	62
13	Stress corrosion cracking and corrosion fatigue characterisation of MgZn1Ca0.3 (ZX10) in a simulated physiological environment. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 65, 634-643.	1.5	66
14	Structural Evolution during Milling, Annealing, and Rapid Consolidation of Nanocrystalline Feâ€“10Crâ€“3Al Powder. Materials, 2017, 10, 272.	1.3	10
15	Long-Term Corrosion Protection of a Cupro-Nickel Alloy Due to Graphene Coating. Coatings, 2017, 7, 210.	1.2	21
16	Resistance of Magnesium Alloys to Corrosion Fatigue for Biodegradable Implant Applications: Current Status and Challenges. Materials, 2017, 10, 1316.	1.3	26
17	Understanding Corrosion-Assisted Cracking of Magnesium Alloys for Bioimplant Applications. , 2016, , 343-346.		0
18	Appropriate Corrosion-Fatigue Testing of Magnesium Alloys for Temporary Bioimplant Applications. , 2016, , 353-356.		0

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19	On the Growth of Fatigue Cracks from Material and Manufacturing Discontinuities Under Variable Amplitude Loading. Jom, 2015, 67, 1385-1391.	0.9	20
20	A Review of Stress-Corrosion Cracking and Corrosion Fatigue of Magnesium Alloys for Biodegradable Implant Applications. Jom, 2015, 67, 1143-1153.	0.9	102
21	Appropriate Mechanochemical Conditions for Corrosion-Fatigue Testing of Magnesium Alloys for Temporary Bioimplant Applications. Jom, 2015, 67, 1137-1142.	0.9	16
22	Stress Corrosion Cracking of an Austenitic Stainless Steel in Nitrite-Containing Chloride Solutions. Materials, 2014, 7, 7799-7808.	1.3	18
23	Influence of Zeolite Coating on the Corrosion Resistance of AZ91D Magnesium Alloy. Materials, 2014, 7, 6092-6104.	1.3	30
24	Role of Nanostructure in Electrochemical Corrosion and High Temperature Oxidation: A Review. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 5799-5822.	1.1	56
25	Graphene: The Thinnest Known Coating for Corrosion Protection. Jom, 2014, 66, 637-642.	0.9	100
26	In-vitro characterization of stress corrosion cracking of aluminium-free magnesium alloys for temporary bio-implant applications. Materials Science and Engineering C, 2014, 42, 629-636.	3.8	88
27	In vitro investigation of biodegradable polymeric coating for corrosion resistance of Mg-6Zn-Ca alloy in simulated body fluid. Materials Science and Engineering C, 2014, 42, 91-101.	3.8	60
28	Influence of Laser Processing Parameters on Microstructure and Corrosion Kinetics of Laser-Treated ZE41 Magnesium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 2346-2357.	1.1	13
29	Cracking of magnesium-based biodegradable implant alloys under the combined action of stress and corrosive body fluid: a review. Emerging Materials Research, 2013, 2, 219-228.	0.4	15
30	Bimodal grain size distribution: an effective approach for improving the mechanical and corrosion properties of Feâ€“Crâ€“Ni alloys. Journal of Materials Science, 2012, 47, 7735-7743.	1.7	29
31	Revisiting Stress Corrosion Cracking of Steel in Caustic Solutions for Developing Cracking Susceptibility Diagrams for Improved Applicability. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 1944-1955.	1.1	1
32	Circumventing Practical Difficulties in Determination of Threshold Stress Intensity for Stress Corrosion Cracking of Narrow Regions of Welded Structures. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 3202-3214.	1.1	4
33	Magnesium alloys as body implants: Fracture mechanism under dynamic and static loadings in a physiological environment. Acta Biomaterialia, 2012, 8, 916-923.	4.1	157
34	Influence of circumferential notch and fatigue crack on the mechanical integrity of biodegradable magnesiumâ€based alloy in simulated body fluid. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2011, 96B, 303-309.	1.6	40
35	In vitro degradation and mechanical integrity of calcium-containing magnesium alloys in modified-simulated body fluid. Biomaterials, 2008, 29, 2306-2314.	5.7	491
36	Circumferential Notch Tensile Testing. Journal of the Electrochemical Society, 2007, 154, C658.	1.3	8

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37	Role of Imposed Potential in Expanding the Regime of Strain Rates for Caustic Cracking. Journal of the Electrochemical Society, 2007, 154, C451.	1.3	6
38	Laser assisted modification of surface microstructure for localised corrosion resistance of magnesium alloys. Surface Engineering, 2007, 23, 107-111.	1.1	29
39	A novel approach to the determination of the threshold for stress corrosion cracking (K ISCC) using round tensile specimens. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 2963-2973.	1.1	27
40	Evaluation of caustic embrittlement susceptibility of steels by slow strain rate testing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 1817-1823.	1.1	25
41	Hydrogen embrittlement of a low carbon steel during slow strain testing in chloride solutions containing sulphate reducing bacteria. Materials Science and Technology, 2005, 21, 1094-1098.	0.8	21
42	The role of microstructure in localized corrosion of magnesium alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 2525-2531.	1.1	98
43	Caustic stress corrosion cracking of a spheroidal graphite cast iron: characterisation of ex-service component. Materials Science and Technology, 2003, 19, 1746-1750.	0.8	9
44	Caustic stress corrosion cracking of a spheroidal graphite cast iron: laboratory investigation. Materials Science and Technology, 2003, 19, 1751-1754.	0.8	15
45	Investigation of caustic stress corrosion cracking of a carbon steel by slow strain rate testing. Materials Science and Technology, 2003, 19, 642-644.	0.8	4
46	Role of gaseous environment and secondary precipitation in microstructural degradation of Cr-Mo steel weldments at high temperatures. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 2103-2113.	1.1	6
47	Role of microstructural degradation in the heat-affected zone of 2.25Cr-1Mo steel weldments on subscale features during steam oxidation and their role in weld failures. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1998, 29, 577-586.	1.1	23
48	Secondary ion mass spectroscopy and surface profilometric characterisation of oxide scales developed over weld metal,heat affected zone, and base metal regions of 9Cr-1 Mo steel weldments. Materials Science and Technology, 1998, 14, 362-366.	0.8	1
49	Influence of microstructural variations in the weldment on the high-temperature corrosion of 2.25Cr-1Mo steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1995, 26, 1847-1858.	1.1	31
50	Secondary ion mass spectrometry and scanning electron microscopy characterisation of grain boundary oxide ridges in 9Crâ€“1Mo steels having different silicon contents, and influence of grain size on scale spalling. Materials Science and Technology, 1994, 10, 592-598.	0.8	4
51	Secondary ion mass spectrometry and scanning electron microscopy analysis of grain boundary oxides in 9Crâ€“1Mo steel and influence of grain size on scale spalling. Materials Science and Technology, 1994, 10, 27-34.	0.8	12
52	IMPROVEMENT OF OXIDATION RESISTANCE OF METALS AND ALLOYS BY HIGH TEMPERATURE COATING AND LASER TREATMENT. Surface Engineering, 1994, 10, 141-146.	1.1	1
53	Oxidation behavior of 2.25Cr-1Mo steel with prior tempering at different temperatures. Oxidation of Metals, 1993, 40, 21-36.	1.0	8
54	Oxidation behaviour of 21/4Cr-1Mo steel with prior tempering treatments at 998 K for different durations. Journal of Materials Science, 1992, 27, 3435-3441.	1.7	15

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55	Influence of grain size on the oxidation resistance of 2 4 1 Cr-1Mo steel. Oxidation of Metals, 1992, 37, 1-12.	1.0	51
56	Influence of prior-austenite grain size on the oxidation behavior of 9 wt.% cr-1 wt.% Mo steel. Oxidation of Metals, 1992, 38, 483-496.	1.0	13
57	Influence of variation in grain size on the oxidation behaviour of low-chromium steelsvis-ï¿½-vis that of high-chromium steels. Journal of Materials Science Letters, 1990, 9, 353-354.	0.5	12
58	Grain size effect on the oxidation behaviour of 2 1/4 Cr-1 Mo steel. Journal of Materials Science Letters, 1989, 8, 277-278.	0.5	5
59	Effect of tempering time on the oxidation behavior of 21/4Cr-1Mo steel. Oxidation of Metals, 1988, 30, 345-359.	1.0	7