

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	In vitro degradation and mechanical integrity of calcium-containing magnesium alloys in modified-simulated body fluid. <i>Biomaterials</i> , 2008, 29, 2306-2314.	5.7	491
2	Magnesium alloys as body implants: Fracture mechanism under dynamic and static loadings in a physiological environment. <i>Acta Biomaterialia</i> , 2012, 8, 916-923.	4.1	157
3	A Review of Stress-Corrosion Cracking and Corrosion Fatigue of Magnesium Alloys for Biodegradable Implant Applications. <i>Jom</i> , 2015, 67, 1143-1153.	0.9	102
4	Graphene: The Thinnest Known Coating for Corrosion Protection. <i>Jom</i> , 2014, 66, 637-642.	0.9	100
5	The role of microstructure in localized corrosion of magnesium alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2004, 35, 2525-2531.	1.1	98
6	In-vitro characterization of stress corrosion cracking of aluminium-free magnesium alloys for temporary bio-implant applications. <i>Materials Science and Engineering C</i> , 2014, 42, 629-636.	3.8	88
7	Stress corrosion cracking and corrosion fatigue characterisation of MgZn1Ca0.3 (ZX10) in a simulated physiological environment. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 65, 634-643.	1.5	66
8	Influence of bovine serum albumin in Hanks' solution on the corrosion and stress corrosion cracking of a magnesium alloy. <i>Materials Science and Engineering C</i> , 2017, 80, 335-345.	3.8	62
9	In vitro investigation of biodegradable polymeric coating for corrosion resistance of Mg-6Zn-Ca alloy in simulated body fluid. <i>Materials Science and Engineering C</i> , 2014, 42, 91-101.	3.8	60
10	Role of Nanostructure in Electrochemical Corrosion and High Temperature Oxidation: A Review. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 5799-5822.	1.1	56
11	Graphene and Graphene Oxide as a Support for Biomolecules in the Development of Biosensors. <i>Nanotechnology, Science and Applications</i> , 2021, Volume 14, 197-220.	4.6	54
12	Influence of grain size on the oxidation resistance of 2 4 1 Cr-1Mo steel. <i>Oxidation of Metals</i> , 1992, 37, 1-12.	1.0	51
13	Crack Growth in a Range of Additively Manufactured Aerospace Structural Materials. <i>Aerospace</i> , 2018, 5, 118.	1.1	43
14	Effect of Fibers Configuration and Thickness on Tensile Behavior of GFRP Laminates Exposed to Harsh Environment. <i>Polymers</i> , 2019, 11, 1401.	2.0	41
15	Influence of circumferential notch and fatigue crack on the mechanical integrity of biodegradable magnesium-based alloy in simulated body fluid. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2011, 96B, 303-309.	1.6	40
16	Influence of microstructural variations in the weldment on the high-temperature corrosion of 2.25Cr-1Mo steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1995, 26, 1847-1858.	1.1	31
17	Influence of Zeolite Coating on the Corrosion Resistance of AZ91D Magnesium Alloy. <i>Materials</i> , 2014, 7, 6092-6104.	1.3	30
18	In-vitro biodegradation and corrosion-assisted cracking of a coated magnesium alloy in modified-simulated body fluid. <i>Materials Science and Engineering C</i> , 2017, 78, 278-287.	3.8	30

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19	Laser assisted modification of surface microstructure for localised corrosion resistance of magnesium alloys. <i>Surface Engineering</i> , 2007, 23, 107-111.	1.1	29
20	Bimodal grain size distribution: an effective approach for improving the mechanical and corrosion properties of Fe-Cr-Ni alloys. <i>Journal of Materials Science</i> , 2012, 47, 7735-7743.	1.7	29
21	A novel approach to the determination of the threshold for stress corrosion cracking (K ISCC) using round tensile specimens. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2006, 37, 2963-2973.	1.1	27
22	Resistance of Magnesium Alloys to Corrosion Fatigue for Biodegradable Implant Applications: Current Status and Challenges. <i>Materials</i> , 2017, 10, 1316.	1.3	26
23	Evaluation of caustic embrittlement susceptibility of steels by slow strain rate testing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2005, 36, 1817-1823.	1.1	25
24	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. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1998, 29, 577-586.	1.1	23
25	Understanding Fibre-Matrix Degradation of FRP Composites for Advanced Civil Engineering Applications: An Overview. <i>Corrosion and Materials Degradation</i> , 2018, 1, 27-41.	1.0	22
26	Hydrogen embrittlement of a low carbon steel during slow strain testing in chloride solutions containing sulphate reducing bacteria. <i>Materials Science and Technology</i> , 2005, 21, 1094-1098.	0.8	21
27	Long-Term Corrosion Protection of a Cupro-Nickel Alloy Due to Graphene Coating. <i>Coatings</i> , 2017, 7, 210.	1.2	21
28	On the Growth of Fatigue Cracks from Material and Manufacturing Discontinuities Under Variable Amplitude Loading. <i>Jom</i> , 2015, 67, 1385-1391.	0.9	20
29	Stress Corrosion Cracking of an Austenitic Stainless Steel in Nitrite-Containing Chloride Solutions. <i>Materials</i> , 2014, 7, 7799-7808.	1.3	18
30	Appropriate Mechanochemical Conditions for Corrosion-Fatigue Testing of Magnesium Alloys for Temporary Bioimplant Applications. <i>Jom</i> , 2015, 67, 1137-1142.	0.9	16
31	A Two-Step Silane Coating Incorporated with Quaternary Ammonium Silane for Mitigation of Microbial Corrosion of Mild Steel. <i>ACS Omega</i> , 2021, 6, 16913-16923.	1.6	16
32	Oxidation behaviour of 21/4Cr-1Mo steel with prior tempering treatments at 998 K for different durations. <i>Journal of Materials Science</i> , 1992, 27, 3435-3441.	1.7	15
33	Caustic stress corrosion cracking of a spheroidal graphite cast iron: laboratory investigation. <i>Materials Science and Technology</i> , 2003, 19, 1751-1754.	0.8	15
34	Cracking of magnesium-based biodegradable implant alloys under the combined action of stress and corrosive body fluid: a review. <i>Emerging Materials Research</i> , 2013, 2, 219-228.	0.4	15
35	Influence of prior-austenite grain size on the oxidation behavior of 9 wt.% Cr-1 wt.% Mo steel. <i>Oxidation of Metals</i> , 1992, 38, 483-496.	1.0	13
36	Influence of Laser Processing Parameters on Microstructure and Corrosion Kinetics of Laser-Treated ZE41 Magnesium Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013, 44, 2346-2357.	1.1	13

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37	Influence of variation in grain size on the oxidation behaviour of low-chromium steels vis-à-vis that of high-chromium steels. <i>Journal of Materials Science Letters</i> , 1990, 9, 353-354.	0.5	12
38	Secondary ion mass spectrometry and scanning electron microscopy analysis of grain boundary oxides in 9Cr-1Mo steel and influence of grain size on scale spalling. <i>Materials Science and Technology</i> , 1994, 10, 27-34.	0.8	12
39	Structural Evolution during Milling, Annealing, and Rapid Consolidation of Nanocrystalline Fe-10Cr-3Al Powder. <i>Materials</i> , 2017, 10, 272.	1.3	10
40	Caustic stress corrosion cracking of a spheroidal graphite cast iron: characterisation of ex-service component. <i>Materials Science and Technology</i> , 2003, 19, 1746-1750.	0.8	9
41	Oxidation behavior of 2.25Cr-1Mo steel with prior tempering at different temperatures. <i>Oxidation of Metals</i> , 1993, 40, 21-36.	1.0	8
42	Circumferential Notch Tensile Testing. <i>Journal of the Electrochemical Society</i> , 2007, 154, C658.	1.3	8
43	Effect of tempering time on the oxidation behavior of 2 1/4 Cr-1Mo steel. <i>Oxidation of Metals</i> , 1988, 30, 345-359.	1.0	7
44	Role of gaseous environment and secondary precipitation in microstructural degradation of Cr-Mo steel weldments at high temperatures. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1999, 30, 2103-2113.	1.1	6
45	Role of Imposed Potential in Expanding the Regime of Strain Rates for Caustic Cracking. <i>Journal of the Electrochemical Society</i> , 2007, 154, C451.	1.3	6
46	Mechanical Alloying of Elemental Powders into Nanocrystalline (NC) Fe-Cr Alloys: Remarkable Oxidation Resistance of NC Alloys. <i>Metals</i> , 2021, 11, 695.	1.0	6
47	Grain size effect on the oxidation behaviour of 2 1/4 Cr-1 Mo steel. <i>Journal of Materials Science Letters</i> , 1989, 8, 277-278.	0.5	5
48	Durability of Fibre Reinforced Polymers in Exposure to Dual Environment of Seawater Sea Sand Concrete and Seawater. <i>Materials</i> , 2022, 15, 4967.	1.3	5
49	Secondary ion mass spectrometry and scanning electron microscopy characterisation of grain boundary oxide ridges in 9Cr-1Mo steels having different silicon contents, and influence of grain size on scale spalling. <i>Materials Science and Technology</i> , 1994, 10, 592-598.	0.8	4
50	Investigation of caustic stress corrosion cracking of a carbon steel by slow strain rate testing. <i>Materials Science and Technology</i> , 2003, 19, 642-644.	0.8	4
51	Circumventing Practical Difficulties in Determination of Threshold Stress Intensity for Stress Corrosion Cracking of Narrow Regions of Welded Structures. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012, 43, 3202-3214.	1.1	4
52	Role of Surface Preparation in Corrosion Resistance Due to Silane Coatings on a Magnesium Alloy. <i>Molecules</i> , 2021, 26, 6663.	1.7	4
53	Distinct Advantages of Circumferential Notch Tensile (CNT) Testing in the Determination of a Threshold for Stress Corrosion Cracking (KISCC). <i>Materials</i> , 2021, 14, 5620.	1.3	2
54	IMPROVEMENT OF OXIDATION RESISTANCE OF METALS AND ALLOYS BY HIGH TEMPERATURE COATING AND LASER TREATMENT. <i>Surface Engineering</i> , 1994, 10, 141-146.	1.1	1

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55	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
56	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
57	Understanding Corrosion-Assisted Cracking of Magnesium Alloys for Bioimplant Applications. , 2016, , 343-346.		0
58	Appropriate Corrosion-Fatigue Testing of Magnesium Alloys for Temporary Bioimplant Applications. , 2016, , 353-356.		0
59	Effect of Nanocrystalline Structure on the Oxidation Behavior of Fe-20Cr-3Al Alloy at High Temperatures. Oxidation of Metals, 2022, 97, 307.	1.0	0