

Joaquin Rams

List of Publications by Year in descending order

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127
papers

3,581
citations

136885

32
h-index

182361

51
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127
all docs

127
docs citations

127
times ranked

2687
citing authors

#	ARTICLE	IF	CITATIONS
1	Hydrogen in lithium niobate. <i>Advances in Physics</i> , 1996, 45, 349-392.	35.9	165
2	Dry sliding wear behavior of globular AZ91 magnesium alloy and AZ91/SiCp composites. <i>Wear</i> , 2017, 390-391, 1-10.	1.5	120
3	Electroless nickel coated short carbon fibres in aluminium matrix composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2007, 38, 566-575.	3.8	114
4	Characterization of interfacial mechanical properties in carbon fiber/aluminium matrix composites by the nanoindentation technique. <i>Composites Science and Technology</i> , 2005, 65, 2025-2038.	3.8	108
5	Corrosion resistance of thermally sprayed Al and Al/SiC coatings on Mg. <i>Surface and Coatings Technology</i> , 2009, 203, 3224-3230.	2.2	106
6	Dry sliding wear behavior of AM60B magnesium alloy. <i>Wear</i> , 2013, 301, 615-625.	1.5	81
7	Plastic waste recycling via pyrolysis: A bibliometric survey and literature review. <i>Journal of Analytical and Applied Pyrolysis</i> , 2021, 158, 105265.	2.6	81
8	Dry sliding wear behavior of AM50B magnesium alloy. <i>Materials & Design</i> , 2014, 56, 549-556.	5.1	77
9	Corrosion behaviour of laser surface melted magnesium alloy AZ91D. <i>Materials & Design</i> , 2014, 57, 40-50.	5.1	73
10	Effect of copper electroless coatings on the interaction between a molten Al-Si-Mg alloy and coated short carbon fibres. <i>Composites Part A: Applied Science and Manufacturing</i> , 2007, 38, 1947-1956.	3.8	68
11	Analysis and optimization of process parameters in Al-SiCp laser cladding. <i>Optics and Lasers in Engineering</i> , 2016, 78, 165-173.	2.0	68
12	Dry sliding wear behaviour of ZE41A magnesium alloy. <i>Wear</i> , 2011, 271, 2836-2844.	1.5	67
13	Effect of reinforcement coatings on the dry sliding wear behaviour of aluminium/SiC particles/carbon fibres hybrid composites. <i>Wear</i> , 2009, 266, 1128-1136.	1.5	66
14	Mode gaps in the refractive index properties of low-dose ion-implanted LiNbO3 waveguides. <i>Journal of Applied Physics</i> , 2000, 87, 3199-3202.	1.1	64
15	Characterization of carbon nanofiber/epoxy nanocomposites by the nanoindentation technique. <i>Composites Part B: Engineering</i> , 2011, 42, 638-644.	5.9	62
16	Fabrication of aluminium composites reinforced with carbon fibres by a centrifugal infiltration process. <i>Composites Part A: Applied Science and Manufacturing</i> , 2010, 41, 1605-1611.	3.8	61
17	Microstructure and wear resistance of Al-SiC composites coatings on ZE41 magnesium alloy. <i>Applied Surface Science</i> , 2009, 255, 9174-9181.	3.1	58
18	Refractive indices of rutile as a function of temperature and wavelength. <i>Journal of Applied Physics</i> , 1997, 82, 994-997.	1.1	54

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19	Corrosion behaviour of thermally sprayed Al and Al/SiCp composite coatings on ZE41 magnesium alloy in chloride medium. <i>Corrosion Science</i> , 2010, 52, 761-768.	3.0	54
20	316L stainless steel coatings on ZE41 magnesium alloy using HVOF thermal spray for corrosion protection. <i>Surface and Coatings Technology</i> , 2016, 287, 9-19.	2.2	54
21	ANALYTICAL ESTIMATES OF THE EFFECT OF NONLINEAR DAMPING IN SOME NONLINEAR OSCILLATORS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2000, 10, 2257-2267.	0.7	49
22	Influence of the chloride ion concentration on the corrosion of high-purity Mg, ZE41 and AZ91 in buffered Hank's solution. <i>Journal of Materials Science: Materials in Medicine</i> , 2014, 25, 329-345.	1.7	49
23	Selective laser surface melting of a magnesium-aluminium alloy. <i>Materials Letters</i> , 2012, 85, 98-101.	1.3	47
24	Effect of silica coatings on interfacial mechanical properties in aluminium-SiC composites characterized by nanoindentation. <i>Scripta Materialia</i> , 2005, 52, 977-982.	2.6	45
25	Influence of high velocity oxygen-fuel spraying parameters on the wear resistance of Al-SiC composite coatings deposited on ZE41A magnesium alloy. <i>Materials & Design</i> , 2013, 43, 144-152.	5.1	45
26	Microstructural, mechanical and corrosion characterization of an as-cast Mg-3Zn-0.4Ca alloy for biomedical applications. <i>Journal of Magnesium and Alloys</i> , 2020, 8, 510-522.	5.5	44
27	Wear behaviour of thermal spray Al/SiCp coatings. <i>Wear</i> , 2010, 268, 828-836.	1.5	40
28	Effects of pump heating on laser and spectroscopic properties of the Nd:YAl ₃ (BO ₃) ₄ self-frequency-doubling laser. <i>Journal of Applied Physics</i> , 2000, 87, 1042-1048.	1.1	37
29	Effect of alloy elements added on microstructure and hardening of Al/SiC laser clad coatings. <i>Journal of Alloys and Compounds</i> , 2017, 727, 671-682.	2.8	36
30	Mg-1Zn-1Ca alloy for biomedical applications. Influence of the secondary phases on the mechanical and corrosion behaviour. <i>Journal of Alloys and Compounds</i> , 2020, 831, 154735.	2.8	35
31	High-temperature corrosion behavior of Ni-50Cr coating deposited by high velocity oxygen-fuel technique on low alloy ferritic steel. <i>Materials & Design</i> , 2014, 59, 94-102.	5.1	34
32	Novel laser surface treatments on AZ91 magnesium alloy. <i>Surface and Coatings Technology</i> , 2013, 222, 118-127.	2.2	33
33	Protection of carbon steel against molten aluminum attack and high temperature corrosion using high velocity oxygen-fuel WC-Co coatings. <i>Surface and Coatings Technology</i> , 2015, 262, 123-133.	2.2	33
34	Effect of graphene nanoplatelets thickness on strain sensitivity of nanocomposites: A deeper theoretical to experimental analysis. <i>Composites Science and Technology</i> , 2019, 181, 107697.	3.8	33
35	Sol-gel coatings of low sintering temperature for corrosion protection of ZE41 magnesium alloy. <i>Surface and Coatings Technology</i> , 2011, 205, 4183-4191.	2.2	32
36	Optimisation of the high velocity oxygen fuel (HVOF) parameters to produce effective corrosion control coatings on AZ91 magnesium alloy. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2015, 66, 423-433.	0.8	32

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37	Second harmonic generation capabilities of ion implanted LiNbO ₃ waveguides. Journal of Applied Physics, 1998, 84, 5180-5183.	1.1	31
38	Optical damage inhibition and thresholding effects in lithium niobate above room temperature. Optics Communications, 2000, 178, 211-216.	1.0	31
39	Role of Laser Cladding Parameters in Composite Coating (Al-SiC) on Aluminum Alloy. Journal of Thermal Spray Technology, 2016, 25, 1177-1191.	1.6	31
40	PLA deposition on surface treated magnesium alloy: Adhesion, toughness and corrosion behaviour. Surface and Coatings Technology, 2020, 388, 125593.	2.2	30
41	Comparison of Different Additive Manufacturing Methods for 316L Stainless Steel. Materials, 2021, 14, 6504.	1.3	30
42	Thermal spray coatings of highly reinforced aluminium matrix composites with sol-gel silica coated SiC particles. Surface and Coatings Technology, 2007, 201, 7552-7559.	2.2	29
43	Preparation of proton-exchange LiNbO ₃ waveguides in benzoic acid vapor. Journal of the Optical Society of America B: Optical Physics, 1999, 16, 401.	0.9	28
44	Effect of Reinforcement Coating on the Oxidation Behavior of AA6061/SiC/20p Composite. Oxidation of Metals, 2005, 63, 215-227.	1.0	28
45	Wear resistant coatings: Silica sol-gel reinforced with carbon nanotubes. Thin Solid Films, 2011, 519, 7904-7910.	0.8	28
46	Experimental study of W-Eurofer laser brazing for divertor application. Journal of Nuclear Materials, 2011, 418, 239-248.	1.3	28
47	Sol-gel silica coatings on ZE41 magnesium alloy for corrosion protection. Surface and Coatings Technology, 2010, 205, 2375-2385.	2.2	27
48	Al/SiCp and Al ₁₁ Si/SiCp coatings on AZ91 magnesium alloy by HVOF. Surface and Coatings Technology, 2015, 261, 130-140.	2.2	27
49	Tough ceramic coatings: Carbon nanotube reinforced silica sol-gel. Applied Surface Science, 2010, 256, 6375-6384.	3.1	25
50	Characterisation and mechanical properties of Al/SiC metal matrix composite coatings formed on ZE41 magnesium alloys by laser cladding. Results in Physics, 2019, 13, 102160.	2.0	25
51	Hard Anodizing and Plasma Electrolytic Oxidation of an Additively Manufactured Al-Si alloy. Surface and Coatings Technology, 2021, 420, 127339.	2.2	25
52	Surface treatment of aluminum matrix composites using a high power diode laser. Surface and Coatings Technology, 2007, 202, 1199-1203.	2.2	24
53	Properties and microstructure of Al ₁₁ Si/SiCp composite coatings fabricated by thermal spray. Surface and Coatings Technology, 2009, 203, 1947-1955.	2.2	24
54	Effect of the process parameters in the additive manufacturing of in situ Al/AlN samples. Journal of Manufacturing Processes, 2019, 46, 271-278.	2.8	24

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55	Dry sliding wear behaviour of laser surface melting treated AM60B magnesium alloy. <i>Surface and Coatings Technology</i> , 2013, 236, 368-379.	2.2	23
56	Silicon oxide multilayer coatings doped with carbon nanotubes and graphene nanoplatelets for corrosion protection of AZ31B magnesium alloy. <i>Progress in Organic Coatings</i> , 2020, 148, 105836.	1.9	23
57	High power diode laser treatments for improving corrosion resistance of A380/SiCp aluminium composites. <i>Surface and Coatings Technology</i> , 2008, 202, 4291-4301.	2.2	22
58	Corrosion behavior of 316L stainless steel coatings on ZE41 magnesium alloy in chloride environments. <i>Surface and Coatings Technology</i> , 2019, 378, 124994.	2.2	22
59	Al/SiC composite coatings of steels by thermal spraying. <i>Materials Letters</i> , 2008, 62, 2114-2117.	1.3	21
60	Characterization and mechanical properties of stainless steel coatings deposited by HVOF on ZE41 magnesium alloy. <i>Surface and Coatings Technology</i> , 2019, 359, 73-84.	2.2	21
61	Sol-gel coatings to improve processing of aluminium matrix SiC reinforced composite materials. <i>Journal of Materials Research</i> , 2004, 19, 2109-2116.	1.2	20
62	Comparative study of helium effects on EU-ODS EUROFER and EUROFER97 by nanoindentation and TEM. <i>Journal of Nuclear Materials</i> , 2015, 460, 226-234.	1.3	20
63	Influence of roughness and grinding direction on the thickness and adhesion of sol-gel coatings deposited by dip-coating on AZ31 magnesium substrates. A Landau-Levich equation revision. <i>Surface and Coatings Technology</i> , 2021, 408, 126798.	2.2	20
64	Proton exchange of quasistoichiometric LiNbO ₃ . <i>Journal of Applied Physics</i> , 1997, 82, 4752-4757.	1.1	19
65	Sol-Gel Coatings as Active Barriers to Protect Ceramic Reinforcement in Aluminum Matrix Composites. <i>Advanced Engineering Materials</i> , 2004, 6, 57-61.	1.6	19
66	Assessment of tensile behaviour of an Al-Mg alloy composite reinforced with NiAl and oxidized NiAl powder particles helped by nanoindentation. <i>Composites Part A: Applied Science and Manufacturing</i> , 2007, 38, 2536-2540.	3.8	19
67	Protection against corrosion of aluminium-SiC composites by sol-gel silica coatings. <i>Surface and Coatings Technology</i> , 2008, 202, 3755-3763.	2.2	19
68	Light-induced damage mechanisms in λ -phase proton-exchanged LiNbO ₃ waveguides. <i>Applied Physics B: Lasers and Optics</i> , 1999, 68, 989-993.	1.1	18
69	CdTe epilayers for uses in optical waveguides. <i>Applied Physics A: Materials Science and Processing</i> , 2000, 71, 277-279.	1.1	18
70	Electroless multilayer coatings on aluminium-silicon carbide composites for electronics packaging. <i>Journal of the European Ceramic Society</i> , 2007, 27, 3983-3986.	2.8	18
71	Fracture behaviour of a magnesium-aluminium alloy treated by selective laser surface melting treatment. <i>Materials & Design</i> , 2014, 55, 361-365.	5.1	18
72	Interfacial characterization by TEM and nanoindentation of W-Eurofer brazed joints for the first wall component of the DEMO fusion reactor. <i>Materials Characterization</i> , 2018, 142, 162-169.	1.9	18

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73	Structure of high index proton exchange LiNbO ₃ waveguides with undegraded nonlinear optical coefficients. Applied Physics Letters, 1997, 71, 3356-3358.	1.5	17
74	Dual layer silica coatings of SiC particle reinforcements in aluminium matrix composites. Surface and Coatings Technology, 2006, 200, 4017-4026.	2.2	17
75	Oxy-acetylene flame thermal sprayed coatings of aluminium matrix composites reinforced with MoSi ₂ intermetallic particles. Surface and Coatings Technology, 2013, 236, 274-283.	2.2	17
76	Influence of process parameters in additive manufacturing of highly reinforced 316L / SiCp composites. Journal of Materials Processing Technology, 2022, 299, 117325.	3.1	17
77	High-index proton-exchanged waveguides in Z-cut LiNbO ₃ with undegraded nonlinear optical coefficients. Applied Physics Letters, 1997, 70, 2076-2078.	1.5	16
78	Cathodoluminescence enhancement in porous silicon cracked in vacuum. Applied Physics Letters, 1999, 74, 1728-1730.	1.5	16
79	Oxidation Mechanisms of Copper and Nickel Coated Carbon Fibers. Oxidation of Metals, 2008, 69, 327-341.	1.0	16
80	Laser densification of sol-gel silica coatings on aluminium matrix composites for corrosion and hardness improvement. Surface and Coatings Technology, 2009, 203, 1474-1480.	2.2	16
81	Analysis of the brazability of W-W joints using a high temperature Ni-based alloy. Materials & Design, 2014, 54, 900-905.	5.1	16
82	Effect of helium implantation on mechanical properties of EUROFER97 evaluated by nanoindentation. Journal of Nuclear Materials, 2014, 448, 301-309.	1.3	16
83	Structural health monitoring of a CFRP structural bonded repair by using a carbon nanotube modified adhesive film. Composite Structures, 2021, 270, 114091.	3.1	16
84	SHG-capabilities of reverse PE-LiNbO ₃ waveguides. Electronics Letters, 1997, 33, 322.	0.5	15
85	Temperature effects in proton exchanged LiNbO ₃ waveguides. Applied Physics B: Lasers and Optics, 2004, 79, 845-849.	1.1	15
86	Characterisation of multilayered sol-gel silica coatings on aluminium-SiC composites. Surface and Coatings Technology, 2006, 201, 3715-3722.	2.2	15
87	Application of DOE and ANOVA in Optimization of HVOF Spraying Parameters in the Development of New Ti Coatings. Journal of Thermal Spray Technology, 2020, 29, 384-399.	1.6	15
88	Use of carbon nanotubes for strain and damage sensing of epoxy-based composites. International Journal of Smart and Nano Materials, 2012, 3, 152-161.	2.0	14
89	Application of computational approach in plastic pyrolysis kinetic modelling: a review. Reaction Kinetics, Mechanisms and Catalysis, 2021, 134, 591-614.	0.8	14
90	Characterization of the Corrosion Behavior of a Mg Alloy in Chloride Solution. Corrosion, 2013, 69, 497-508.	0.5	13

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91	Wear Resistance of Stainless Steel Coatings on ZE41 Magnesium Alloy. Journal of Thermal Spray Technology, 2018, 27, 1615-1631.	1.6	13
92	Nonlinear optical efficient LiNbO3 waveguides proton exchanged in benzoic acid vapor: Effect of the vapor pressure. Journal of Applied Physics, 1999, 85, 1322-1328.	1.1	12
93	High Power Diode Laser (HPDL) surface treatments to improve the mechanical properties and the corrosion behaviour of Mg-Zn-Ca alloys for biodegradable implants. Surface and Coatings Technology, 2020, 402, 126314.	2.2	12
94	Modification of microstructure and superficial properties of A356 and A356/10%SiCp by Selective Laser Surface Melting (SLSM). Surface and Coatings Technology, 2017, 309, 1001-1009.	2.2	11
95	Nanoindentation and TEM to Study the Cavity Fate after Post-Irradiation Annealing of He Implanted EUROFER97 and EU-ODS EUROFER. Micromachines, 2018, 9, 633.	1.4	11
96	Fabrication, Wear, and Corrosion Resistance of HVOF Sprayed WC-12Co on ZE41 Magnesium Alloy. Coatings, 2020, 10, 502.	1.2	11
97	Fabrication of novel sol-gel silica coatings reinforced with multi-walled carbon nanotubes. Materials Letters, 2010, 64, 924-927.	1.3	10
98	Corrosion Resistance of Al/SiC Laser Cladding Coatings on AA6082. Coatings, 2020, 10, 673.	1.2	10
99	Evaluation of the Wear Resistance and Corrosion Behavior of Laser Cladding Al/SiC Metal Matrix Composite Coatings on ZE41 Magnesium Alloy. Coatings, 2021, 11, 639.	1.2	10
100	Second harmonic generation in the strong absorption regime. Journal of Modern Optics, 2000, 47, 1659-1669.	0.6	8
101	Hardness recovery of ceramic coated aluminium matrix composites using thermal-shock resistant sol-gel silica coatings. Materials Letters, 2008, 62, 4315-4318.	1.3	8
102	Oxy-Acetylene Flame Thermal Spray of Al/SiCp Composites with High Fraction of Reinforcements. Journal of Thermal Spray Technology, 2009, 18, 642-651.	1.6	8
103	Wear improvement of sol-gel silica coatings on A380/SiCp aluminium composite substrate by diode laser sintering. Materials & Design, 2011, 32, 3865-3875.	5.1	8
104	Wear Resistance of Aluminum Matrix Composites™ Coatings Added on AA6082 Aluminum Alloy by Laser Cladding. Coatings, 2022, 12, 41.	1.2	8
105	Additively Manufactured Al/SiC Cylindrical Structures by Laser Metal Deposition. Materials, 2020, 13, 3331.	1.3	7
106	Local Induction Heating Capabilities of Zeolites Charged with Metal and Oxide MNPs for Application in HDPE Hydrocracking: A Proof of Concept. Materials, 2021, 14, 1029.	1.3	7
107	Sol-gel coatings doped with graphene nanoplatelets for improving the degradation rate and the cytocompatibility of AZ31 alloy for biomedical applications. Surface and Coatings Technology, 2021, 426, 127745.	2.2	7
108	The Role of the Sol-Gel Synthesis Process in the Biomedical Field and Its Use to Enhance the Performance of Bioabsorbable Magnesium Implants. Gels, 2022, 8, 426.	2.1	7

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109	Improved surface quality of Nd:YAG monitored by second harmonic generation. Optics Communications, 1999, 167, 171-176.	1.0	6
110	Characterization of LiNbO3 waveguides fabricated by proton exchange in water. Applied Physics A: Materials Science and Processing, 2005, 81, 205-208.	1.1	6
111	Impact of Remelting in the Microstructure and Corrosion Properties of the Ti6Al4V Fabricated by Selective Laser Melting. Coatings, 2022, 12, 284.	1.2	6
112	Manufacturing of Aluminum Matrix Composites Reinforced with Carbon Fiber Fabrics by High Pressure Die Casting. Materials, 2022, 15, 3400.	1.3	6
113	Application of atomic force microscopy to the study of blown polyethylene films. Polymer Testing, 2012, 31, 136-148.	2.3	5
114	A far-field method for characterizing thin planar optical waveguides. Optics Communications, 1997, 139, 205-208.	1.0	4
115	Cathodoluminescence from mechanically cracked porous silicon. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1999, 68, 126-129.	1.7	4
116	Influence of the Feed Powder Composition in Mechanical Properties of AlN-Nano-Reinforced Aluminium Composites Coatings Deposited by Reactive Direct Laser Deposition. Metals, 2020, 10, 926.	1.0	3
117	Interacción entre el aluminio fundido y las fibras de carbono recubiertas con cobre y níquel en materiales compuestos de matriz metálica. Boletín De La Sociedad Española De Cerámica Y Vidrio, 2004, 43, 409-412.	0.9	3
118	Determinación mediante nanoindentación de las propiedades mecánicas de la interfaz en materiales compuestos de aluminio reforzados con partículas de SiC recubiertas de sílice. Boletín De La Sociedad Española De Cerámica Y Vidrio, 2005, 44, 270-277.	0.9	3
119	Analysis of strain sensitivity under flexural load of 3D printed carbon nanotube-doped epoxy circuits. Nanotechnology, 2021, 32, 185501.	1.3	2
120	Las pequeñas y medianas empresas del sector metalúrgico en la zona sur de la Comunidad de Madrid: Gestión medioambiental y necesidades de formación. Revista De Metalurgia, 2004, 40, 209-213.	0.1	2
121	Effect of Magnesium Addition and High Energy Processing on the Degradation Behavior of Iron Powder in Modified Hanks™ Solution for Bioabsorbable Implant Applications. Metals, 2022, 12, 78.	1.0	2
122	Cavity formation and hardness change in He implanted EUROFER97 and EU-ODS EUROFER. Nuclear Materials and Energy, 2020, 22, 100717.	0.6	1
123	Modulation of Crystallinity through Radiofrequency Electromagnetic Fields in PLLA/Magnetic Nanoparticles Composites: A Proof of Concept. Materials, 2021, 14, 4300.	1.3	1
124	Near-field characterization of thin planar optical waveguides. Journal of Modern Optics, 1999, 46, 1137-1147.	0.6	0
125	Second harmonic generation of thin LiNbO3 samples for acoustic wave devices. Electronics Letters, 2000, 36, 1596.	0.5	0
126	Relationship between Laser Parameters - Microstructural Modification - Mechanical Properties of Laser Surface Melted Magnesium Alloy AZ91D. Materials Science Forum, 0, 765, 678-682.	0.3	0

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127	Estudio de la intercara de una preforma hÃbrida infiltrada sin presiÃ³n. Revista De Metalurgia, 2010, 46, 33-39.	0.1	0