

Daniel Crespo

List of Publications by Year in descending order

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130
papers

3,076
citations

172207

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h-index

182168

51
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133
all docs

133
docs citations

133
times ranked

2768
citing authors

#	ARTICLE	IF	CITATIONS
1	Structural heterogeneities and mechanical behavior of amorphous alloys. <i>Progress in Materials Science</i> , 2019, 104, 250-329.	16.0	428
2	Crystallisation kinetics and microstructure development in metallic systems. <i>Progress in Materials Science</i> , 2002, 47, 559-619.	16.0	165
3	Stable silver colloidal dispersions using short chain polyethylene glycol. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2007, 303, 184-190.	2.3	148
4	Element-Resolved Corrosion Analysis of Stainless-Type Glass-Forming Steels. <i>Science</i> , 2013, 341, 372-376.	6.0	136
5	Diffusion controlled grain growth in primary crystallization: Avrami exponents revisited. <i>Journal of Physics Condensed Matter</i> , 1998, 10, 3833-3844.	0.7	105
6	Synthesis and Structural Characterization of Single-Phase BiFeO ₃ Powders from a Polymeric Precursor. <i>Journal of the American Ceramic Society</i> , 2007, 90, 2723-2727.	1.9	95
7	Simplistic correlations between molecular electronic properties and inhibition efficiencies: Do they really exist?. <i>Corrosion Science</i> , 2021, 179, 108856.	3.0	86
8	Microstructural evaluation of primary crystallization with diffusion-controlled grain growth. <i>Physical Review B</i> , 1997, 55, 3435-3444.	1.1	72
9	On the validity of Avrami formalism in primary crystallization. <i>Journal of Applied Physics</i> , 2006, 100, 054907.	1.1	71
10	Transition from stress-driven to thermally activated stress relaxation in metallic glasses. <i>Physical Review B</i> , 2016, 94, .	1.1	65
11	Crystallization, phase evolution and corrosion of Fe-based metallic glasses: An atomic-scale structural and chemical characterization study. <i>Acta Materialia</i> , 2014, 71, 20-30.	3.8	62
12	Ionic-Exchange Mechanism in the Formation of Medieval Luster Decorations. <i>Journal of the American Ceramic Society</i> , 2005, 88, 1281-1289.	1.9	61
13	Cell size distribution in random tessellations of space. <i>Physical Review E</i> , 2004, 70, 066119.	0.8	56
14	Relaxation of rapidly quenched metallic glasses: Effect of the relaxation state on the slow low temperature dynamics. <i>Acta Materialia</i> , 2013, 61, 3002-3011.	3.8	56
15	Mechanical Relaxation of Metallic Glasses: An Overview of Experimental Data and Theoretical Models. <i>Metals</i> , 2015, 5, 1073-1111.	1.0	53
16	Microstructure development in Kolmogorov, Johnson-Mehl, and Avrami nucleation and growth kinetics. <i>Physical Review B</i> , 1999, 60, 3104-3112.	1.1	52
17	Amorphous physics and materials: Secondary relaxation and dynamic heterogeneity in metallic glasses: A brief review. <i>Chinese Physics B</i> , 2017, 26, 016402.	0.7	51
18	Evaluation of time-dependent grain-size populations for nucleation and growth kinetics. <i>Physical Review B</i> , 1996, 54, 3101-3109.	1.1	50

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19	Generalized grating imaging using an extended monochromatic light source. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2000, 17, 1231.	0.8	49
20	Kinetics and crystallization path of a Fe-based metallic glass alloy. <i>Acta Materialia</i> , 2017, 127, 341-350.	3.8	47
21	Preparation of core-shell nanospheres of silica-silver: SiO ₂ @Ag. <i>Journal of Non-Crystalline Solids</i> , 2008, 354, 5435-5439.	1.5	46
22	Optical encoder based on the Lau effect. <i>Optical Engineering</i> , 2000, 39, 817.	0.5	42
23	Dynamic mechanical relaxation and thermal creep of high-entropy La ₃₀ Ce ₃₀ Ni ₁₀ Al ₂₀ Co ₁₀ bulk metallic glass. <i>Science China: Physics, Mechanics and Astronomy</i> , 2021, 64, 1.	2.0	37
24	Polyamorphic transitions in Ce-based metallic glasses by synchrotron radiation. <i>Physical Review B</i> , 2011, 84, .	1.1	35
25	Role of Nb in glass formation of Fe-Cr-Mo-Ca-B-Nb BMGs. <i>Journal of Alloys and Compounds</i> , 2014, 604, 157-163.	2.8	35
26	Silver nanoprism coatings on optical glass substrates. <i>Microelectronic Engineering</i> , 2007, 84, 1665-1668.	1.1	34
27	Viscoelastic behavior of a novel aluminum metal matrix composite and comparison with pure aluminum, aluminum alloys, and a composite made of Al-Mg-Si alloy reinforced with SiC particles. <i>Journal of Alloys and Compounds</i> , 2018, 744, 445-452.	2.8	33
28	LaNiO ₃ nanopowder prepared by an amorphous citrate™ route. <i>Journal of the European Ceramic Society</i> , 2006, 26, 403-407.	2.8	32
29	Dynamic mechanical relaxation behavior of Zr ₃₅ Hf _{17.5} Ti _{5.5} Al _{12.5} Co _{7.5} Ni ₁₂ Cu ₁₀ high entropy bulk metallic glass. <i>Journal of Materials Science and Technology</i> , 2021, 83, 248-255.	5.6	32
30	Domain-size distribution in a Poisson-Voronoi nucleation and growth transformation. <i>Physical Review E</i> , 2007, 75, 040107.	0.8	29
31	Key Parameters in the Production of Medieval Luster Colors and Shines. <i>Journal of the American Ceramic Society</i> , 2007, 90, 2245-2254.	1.9	29
32	Variations in morphologies of silver nanoshells on silica spheres. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2008, 330, 86-90.	2.3	27
33	Non-random nucleation and the Avrami kinetics. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 2002, 82, 107-121.	0.8	25
34	Metallic and nonmetallic shine in luster: An elastic ion backscattering study. <i>Journal of Applied Physics</i> , 2007, 101, 103518.	1.1	24
35	QUBIC4plus: a cost-effective BiCMOS manufacturing technology with elite passive enhancements optimized for 'silicon-based' RF-system-in-package environment. , 0, , .		23
36	Color and dichroism of silver-stained glasses. <i>Journal of Nanoparticle Research</i> , 2013, 15, 1.	0.8	23

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37	Dynamic microstructural evolution of an Al–Zn–Mg–Cu alloy (7075) during continuous heating and the influence on the viscoelastic response. <i>Materials Characterization</i> , 2017, 134, 319-328.	1.9	22
38	KINETICS OF MICROSTRUCTURAL DEVELOPMENT IN NANOCRYSTALLINE MATERIALS. <i>Scripta Materialia</i> , 1997, 8, 345-357.	0.5	21
39	A Method for Studying Natural Ventilation by Thermal Effects in a Tunnel Greenhouse using Laboratory-Scale Models. <i>Biosystems Engineering</i> , 1999, 72, 93-104.	0.4	21
40	Experimental measurements of generalized grating images. <i>Applied Optics</i> , 2002, 41, 1223.	2.1	21
41	Temporal evolution of the domain structure in a Poisson-Voronoi nucleation and growth transformation: Results for one and three dimensions. <i>Physical Review E</i> , 2008, 78, 021110.	0.8	20
42	On the static strength of aluminium and carbon fibre aircraft lap joint repairs. <i>Composite Structures</i> , 2018, 201, 276-290.	3.1	19
43	Spiral vortices between concentric cylinders. <i>Flow, Turbulence and Combustion</i> , 1993, 51, 55-59.	0.2	18
44	Study Of Mercaptobenzimidazoles As Inhibitors For Copper Corrosion: Down to the Molecular Scale. <i>Journal of the Electrochemical Society</i> , 2021, 168, 051504.	1.3	18
45	Temporal evolution of the domain structure in a Poisson–Voronoi transformation. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2007, 2007, P06007-P06007.	0.9	17
46	Modeling of the Effect of Temperature, Frequency, and Phase Transformations on the Viscoelastic Properties of AA 7075-T6 and AA 2024-T3 Aluminum Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012, 43, 4633-4646.	1.1	16
47	Sub-T relaxation times of the $\hat{\Gamma}$ process in metallic glasses. <i>Journal of Non-Crystalline Solids</i> , 2017, 471, 322-327.	1.5	16
48	How relevant are molecular electronic parameters for predicting corrosion inhibition efficiency: imidazoles as corrosion inhibitors of Cu/Zr materials in NaCl solution. <i>Corrosion Science</i> , 2021, 193, 109900.	3.0	16
49	Kinetic theory of microstructural evolution in nucleation and growth processes. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997, 238, 160-165.	2.6	15
50	Viscoelasticity of Cu- and La-based bulk metallic glasses: Interpretation based on the quasi-point defects theory. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 719, 164-170.	2.6	15
51	Reflection optical encoders as three-grating moiré systems. <i>Applied Optics</i> , 2000, 39, 3805.	2.1	14
52	BiFeO ₃ films on steel substrate by the citrate method. <i>Thin Solid Films</i> , 2009, 517, 2581-2585.	0.8	14
53	Onset Frequency of Fatigue Effects in Pure Aluminum and 7075 (AlZnMg) and 2024 (AlCuMg) Alloys. <i>Metals</i> , 2016, 6, 50.	1.0	14
54	Phonon dispersion relation of metallic glasses. <i>Physical Review B</i> , 2016, 94, .	1.1	14

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55	Characterization of mechanical relaxation in a Cu–Zr–Al metallic glass. <i>Journal of Alloys and Compounds</i> , 2015, 643, S17-S21.	2.8	13
56	Aging and structural relaxation of hyper-quenched Mg ₆₅ Cu ₂₅ Y ₁₀ metallic glass. <i>Journal of Alloys and Compounds</i> , 2014, 615, S9-S12.	2.8	12
57	Corrosion resistance of crystalline and amorphous CuZr alloys in NaCl aqueous environment and effect of corrosion inhibitors. <i>Journal of Alloys and Compounds</i> , 2021, 879, 160464.	2.8	12
58	Magnetic properties of dense graphitic filaments formed via thermal decomposition of mesitylene in an applied electric field. <i>Carbon</i> , 2006, 44, 2864-2867.	5.4	10
59	Magnetic properties of dense carbon nanospheres prepared by chemical vapor deposition. <i>Chemical Physics Letters</i> , 2007, 447, 295-299.	1.2	10
60	Structural study of conventional and bulk metallic glasses during annealing. <i>Journal of Alloys and Compounds</i> , 2009, 483, 578-581.	2.8	10
61	Phase-field modelling of microstructural evolution in primary crystallization. <i>Journal of Alloys and Compounds</i> , 2009, 483, 645-649.	2.8	10
62	Physical aging effects on the dynamic relaxation behavior and mechanical properties of Cu ₄₆ Zr ₄₆ Al ₈ metallic glass. <i>Journal of Alloys and Compounds</i> , 2017, 726, 195-200.	2.8	10
63	Link between shear modulus and enthalpy changes of Ti _{16.7} Zr _{16.7} Hf _{16.7} Cu _{16.7} Ni _{16.7} Be _{16.7} high entropy bulk metallic glass. <i>Journal of Alloys and Compounds</i> , 2020, 830, 154564.	2.8	10
64	On the equations describing the grain size distribution change for KJMA kinetics. <i>Journal of Non-Crystalline Solids</i> , 2001, 287, 88-91.	1.5	9
65	Microstructural implications of non-random nucleation protocols in nanocrystallized metallic glasses. <i>Journal of Non-Crystalline Solids</i> , 2003, 317, 85-90.	1.5	9
66	Relaxation of internal friction and shear viscosity in Zr ₅₇ Nb ₅ Al ₁₀ Cu _{15.4} Ni _{12.6} metallic glass. <i>Intermetallics</i> , 2020, 124, 106846.	1.8	9
67	Comprehensive insights into the thermal and mechanical effects of metallic glasses via creep. <i>Journal of Materials Science and Technology</i> , 2022, 99, 39-47.	5.6	9
68	Nanoporous Copper Ribbons Prepared by Chemical Dealloying of a Melt-Spun ZnCu Alloy. <i>Journal of Physical Chemistry C</i> , 2022, 126, 212-226.	1.5	9
69	Kinetic simulation of primary transformations in glassy alloys. <i>Journal of Non-Crystalline Solids</i> , 2001, 287, 92-95.	1.5	8
70	Fragility measurement of Pd-based metallic glass by dynamic mechanical analysis. <i>Journal of Alloys and Compounds</i> , 2010, 504, S215-S218.	2.8	8
71	Unified perspective on structural heterogeneity of a LaCe-based metallic glass from versatile dynamic stimuli. <i>Intermetallics</i> , 2020, 125, 106922.	1.8	8
72	A model study on controlling dealloying corrosion attack by lateral modification of surfactant inhibitors. <i>Npj Materials Degradation</i> , 2021, 5, .	2.6	8

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73	Analysis of the anelastic deformation of high-entropy Pd ₂₀ Pt ₂₀ Cu ₂₀ Ni ₂₀ P ₂₀ metallic glass under stress relaxation and recovery. <i>Journal of Materials Science and Technology</i> , 2022, 107, 82-91.	5.6	8
74	Direct evidence of two different relaxation processes induced by heat treatment on Fe ₄₀ Ni ₄₀ B ₂₀ glassy ribbons. <i>Journal of Physics F: Metal Physics</i> , 1988, 18, 2669-2681.	1.6	7
75	Correlation functions in first-order phase transitions. <i>Physical Review E</i> , 1997, 56, 2781-2792.	0.8	7
76	Size distribution evolution equations in space-competing domain growth systems. <i>Philosophical Magazine</i> , 2004, 84, 2023-2039.	0.7	7
77	Phase-field modeling of glass crystallization: Change of the transport properties and crystallization kinetic. <i>Journal of Non-Crystalline Solids</i> , 2007, 353, 1002-1004.	1.5	7
78	Plastic deformation induced anisotropy in metallic glasses: A molecular dynamics study. <i>Journal of Alloys and Compounds</i> , 2017, 707, 102-107.	2.8	7
79	Study on Mechanical Relaxations of 7075 (Al-Zn-Mg) and 2024 (Al-Cu-Mg) Alloys by Application of the Time-Temperature Superposition Principle. <i>Advances in Materials Science and Engineering</i> , 2017, 1-12.	1.0	7
80	Influence of carbon content on microstructure and properties of a steel matrix cermet. <i>International Journal of Refractory Metals and Hard Materials</i> , 2018, 75, 78-84.	1.7	7
81	Dynamic Mechanical Relaxation in LaCe-Based Metallic Glasses: Influence of the Chemical Composition. <i>Metals</i> , 2019, 9, 1013.	1.0	7
82	Effect of minor addition on dynamic mechanical relaxation in ZrCu-based metallic glasses. <i>Journal of Non-Crystalline Solids</i> , 2021, 553, 120496.	1.5	7
83	Single-Phase MnFe ₂ O ₄ Powders Obtained by the Polymerized Complex Method. <i>Journal of the American Ceramic Society</i> , 2008, 91, 2488-2494.	1.9	6
84	Microstructural characterisation and kinetics modelling of vermicular cast irons. <i>Materials Science and Technology</i> , 2008, 24, 1214-1221.	0.8	6
85	Effect of temperature and frequency of dynamic loading in the viscoelastic properties of aluminium alloy 7075-T6. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2011, 8, 3111-3114.	0.8	6
86	Communication: Are metallic glasses different from other glasses? A closer look at their high frequency dynamics. <i>Journal of Chemical Physics</i> , 2011, 135, 101101.	1.2	6
87	Inelastic deformation of metallic glasses under dynamic cyclic loading. <i>Scripta Materialia</i> , 2021, 194, 113675.	2.6	6
88	Geometrical effects on line shape and background in experimental Mössbauer spectra. <i>Hyperfine Interactions</i> , 1986, 29, 1539-1542.	0.2	5
89	Fast algorithm for estimation of the orientation term of a general quadrature transform with application to demodulation of an n-dimensional fringe pattern. <i>Applied Optics</i> , 2004, 43, 6139.	2.1	5
90	Stress relaxation in high-entropy Pd ₂₀ Pt ₂₀ Cu ₂₀ Ni ₂₀ P ₂₀ metallic glass: Experiments, modeling and theory. <i>Mechanics of Materials</i> , 2021, 160, 103959.	1.7	5

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91	Non-random nucleation and the Avrami kinetics. , 0, .		5
92	Structural evolution of metallic glasses during annealing through in situ synchrotron X-ray diffraction. Journal of Non-Crystalline Solids, 2008, 354, 5140-5142.	1.5	4
93	Deposition of Silver Nanoshell and Reactivity of Silver Nanoparticles with Surface Silanols of Submicrospherical Silica. Journal of Nanoscience and Nanotechnology, 2009, 9, 3177-3180.	0.9	4
94	High frequency dynamics of BMG determined by synchrotron radiation: A microscopic picture. Journal of Alloys and Compounds, 2010, 495, 319-322.	2.8	4
95	Acoustic properties of metallic glasses in the mesoscopic regime by inelastic X-ray scattering. Journal of Alloys and Compounds, 2011, 509, S95-S98.	2.8	4
96	Modeling of the Sub- <i>T_g</i> Relaxation Spectrum of Pd _{42.5} Ni _{7.5} Cu ₃₀ P ₂₀ Metallic Glass. Journal of Physical Chemistry B, 2016, 120, 2838-2844.	1.2	4
97	An Experimental and Numerical Study of Repairs on Composite Substrates with Composite and Aluminum Doublers Using Riveted, Bonded, and Hybrid Joints. Materials, 2019, 12, 2978.	1.3	4
98	Stability in Air of Silver and Silver Oxide Nanoparticle Shells Deposited Over Silica Spheres Without Using Coupling Agents. Journal of Nanoscience and Nanotechnology, 2012, 12, 8158-8164.	0.9	3
99	Inelastic X-ray scattering in metallic glasses. Intermetallics, 2012, 30, 148-153.	1.8	3
100	Identifying the high entropy characteristic in La-based metallic glasses. Applied Physics Letters, 2021, 119, .	1.5	3
101	Role of Mo in the local configuration and structure stabilization of amorphous steels, a Synchrotron X-ray diffraction and Mössbauer study. Journal of Alloys and Compounds, 2011, 509, S56-S59.	2.8	2
102	Molecular dynamics computation of the dynamical structure factor of a Lennard-Jones glass: Propagation of acoustic modes at the nm-scale. Journal of Alloys and Compounds, 2014, 586, S250-S253.	2.8	2
103	Innovative NDT Technique Based on Ferrofluids for Detection of Surface Cracks. Journal of Nondestructive Evaluation, 2015, 34, 1.	1.1	2
104	Relaxation dynamics of Fe ₅₅ Cr ₁₀ Mo ₁₄ C ₁₅ B ₆ metallic glass explored by mechanical spectroscopy and calorimetry measurements. Journal of Thermal Analysis and Calorimetry, 2016, 125, 711-719.	2.0	2
105	Nanocrystallisation in Finemet Alloys with Different Si/B Ratios. Materials Science Forum, 1999, 307, 83-88.	0.3	1
106	Nanostructured precipitates: Experimental versus exact theoretical saxs profiles. Scripta Materialia, 1999, 12, 649-652.	0.5	1
107	Characteristic functions of nanostructured materials. Scripta Materialia, 1999, 12, 879-882.	0.5	1
108	Modeling of Non-Random Nucleation Protocols. Materials Research Society Symposia Proceedings, 1999, 580, 411.	0.1	1

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109	<title>Automatic techniques for evaluation of moire deflectograms</title>. , 1999, 3744, 328.		1
110	Optical autofocus for high resolution laser photoplotting. , 2005, , .		1
111	Optoelectronic device for the measurement of the absolute linear position in the micrometric displacement range. , 2005, , .		1
112	Mössbauer characterization of an amorphous steel with optimal Mo content. Journal of Non-Crystalline Solids, 2008, 354, 5138-5139.	1.5	1
113	Cobalt nanocrystallites encapsulated in boron nitride shells. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 162, 106-110.	1.7	1
114	Slow $\hat{\rho}^2$ relaxation in La-based metallic glasses based on mechanical spectroscopy measurements. Journal of Iron and Steel Research International, 2017, 24, 397-401.	1.4	1
115	Comparison of fatigue crack growth of riveted and bonded aircraft lap joints made of Aluminium alloy 2024-T3 substrates – A numerical study. Journal of Physics: Conference Series, 2017, 843, 012035.	0.3	1
116	Dynamic mechanical relaxation behavior of binary metallic glasses. Intermetallics, 2021, 130, 107075.	1.8	1
117	Recent advances in automatic demodulation of single fringe patterns. , 2006, , 90-97.		1
118	AVRAMI EXPONENTS VERSUS CRYSTALLIZATION MECHANISMS. , 1998, , .		1
119	Correlation Functions for Nanostructures Obtained by Nucleation and Growth Kinetics. Materials Research Society Symposia Proceedings, 1997, 481, 143.	0.1	0
120	Refinement of Size Distributions for Primary Crystallizations. Materials Research Society Symposia Proceedings, 1997, 481, 213.	0.1	0
121	Microstructure Evaluation for Time Dependent Nucleation Protocols in KJMA Kinetics. Materials Research Society Symposia Proceedings, 1999, 580, 321.	0.1	0
122	Fuzzy logic control applied to neonatal life support units. , 0, , .		0
123	Small-angle scattering curves of densely packed particulate solids obtained by nucleation and growth kinetics. Journal of Applied Crystallography, 2003, 36, 836-839.	1.9	0
124	Effects of Soft-Impingement and Non-random Nucleation on the Kinetics and Microstructural Development of Primary Crystallization. , 2005, , 126-134.		0
125	Formation and Deposition of Stable Silver Nanoparticles Encapsulated in Solid Spheres. Journal of Nanoscience and Nanotechnology, 2014, 14, 6394-6398.	0.9	0
126	Pair distribution function analysis of amorphous compounds using TEM – electron diffraction. Acta Crystallographica Section A: Foundations and Advances, 2015, 71, s401-s401.	0.0	0

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127	Study of medium range reordering by plastic deformation in Cu46Zr46Al8. Journal of Alloys and Compounds, 2018, 744, 34-40.	2.8	0
128	THERMODYNAMIC AND KINETIC FACTORS DRIVING PRIMARY CRYSTALLIZATION. , 1998, , .		0
129	EVALUATION OF MICROSTRUCTURAL DEVELOPMENT IN CRYSTALLIZATION PROCESSES. , 1998, , .		0
130	Amélioration des performances du four d'une ligne de recuit à capage de bandes d'acier inoxydable par oxycombustion. Revue De Metallurgie, 1999, 96, 951-958.	0.3	0