

Daniel Crespo

List of Publications by Year in descending order

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130
papers

3,076
citations

172457
29
h-index

182427
51
g-index

133
all docs

133
docs citations

133
times ranked

2768
citing authors

#	ARTICLE	IF	CITATIONS
1	Structural heterogeneities and mechanical behavior of amorphous alloys. Progress in Materials Science, 2019, 104, 250-329.	32.8	428
2	Crystallisation kinetics and microstructure development in metallic systems. Progress in Materials Science, 2002, 47, 559-619.	32.8	165
3	Stable silver colloidal dispersions using short chain polyethylene glycol. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 303, 184-190.	4.7	148
4	Element-Resolved Corrosion Analysis of Stainless-Type Glass-Forming Steels. Science, 2013, 341, 372-376.	12.6	136
5	Diffusion controlled grain growth in primary crystallization: Avrami exponents revisited. Journal of Physics Condensed Matter, 1998, 10, 3833-3844.	1.8	105
6	Synthesis and Structural Characterization of Single-Phase BiFeO ₃ Powders from a Polymeric Precursor. Journal of the American Ceramic Society, 2007, 90, 2723-2727.	3.8	95
7	Simplistic correlations between molecular electronic properties and inhibition efficiencies: Do they really exist?. Corrosion Science, 2021, 179, 108856.	6.6	86
8	Microstructural evaluation of primary crystallization with diffusion-controlled grain growth. Physical Review B, 1997, 55, 3435-3444.	3.2	72
9	On the validity of Avrami formalism in primary crystallization. Journal of Applied Physics, 2006, 100, 054907.	2.5	71
10	Transition from stress-driven to thermally activated stress relaxation in metallic glasses. Physical Review B, 2016, 94, .	3.2	65
11	Crystallization, phase evolution and corrosion of Fe-based metallic glasses: An atomic-scale structural and chemical characterization study. Acta Materialia, 2014, 71, 20-30.	7.9	62
12	Ionic-Exchange Mechanism in the Formation of Medieval Luster Decorations. Journal of the American Ceramic Society, 2005, 88, 1281-1289.	3.8	61
13	Cell size distribution in random tessellations of space. Physical Review E, 2004, 70, 066119.	2.1	56
14	Relaxation of rapidly quenched metallic glasses: Effect of the relaxation state on the slow low temperature dynamics. Acta Materialia, 2013, 61, 3002-3011.	7.9	56
15	Mechanical Relaxation of Metallic Glasses: An Overview of Experimental Data and Theoretical Models. Metals, 2015, 5, 1073-1111.	2.3	53
16	Microstructure development in Kolmogorov, Johnson-Mehl, and Avrami nucleation and growth kinetics. Physical Review B, 1999, 60, 3104-3112.	3.2	52
17	Amorphous physics and materials: Secondary relaxation and dynamic heterogeneity in metallic glasses: A brief review. Chinese Physics B, 2017, 26, 016402.	1.4	51
18	Evaluation of time-dependent grain-size populations for nucleation and growth kinetics. Physical Review B, 1996, 54, 3101-3109.	3.2	50

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19	Generalized grating imaging using an extended monochromatic light source. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2000, 17, 1231.	1.5	49
20	Kinetics and crystallization path of a Fe-based metallic glass alloy. Acta Materialia, 2017, 127, 341-350.	7.9	47
21	Preparation of core-shell nanospheres of silica-silver: SiO ₂ @Ag. Journal of Non-Crystalline Solids, 2008, 354, 5435-5439.	3.1	46
22	Optical encoder based on the Lau effect. Optical Engineering, 2000, 39, 817.	1.0	42
23	Dynamic mechanical relaxation and thermal creep of high-entropy La ₃₀ Ce ₃₀ Ni ₁₀ Al ₂₀ Co ₁₀ bulk metallic glass. Science China: Physics, Mechanics and Astronomy, 2021, 64, 1.	5.1	37
24	Polyamorphic transitions in Ce-based metallic glasses by synchrotron radiation. Physical Review B, 2011, 84, .	3.2	35
25	Role of Nb in glass formation of Fe-Cr-Mo-Ca-B-Nb BMGs. Journal of Alloys and Compounds, 2014, 604, 157-163.	5.5	35
26	Silver nanoprism coatings on optical glass substrates. Microelectronic Engineering, 2007, 84, 1665-1668.	2.4	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. Journal of Alloys and Compounds, 2018, 744, 445-452.	5.5	33
28	LaNiO ₃ nanopowder prepared by an amorphous citrate™ route. Journal of the European Ceramic Society, 2006, 26, 403-407.	5.7	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. Journal of Materials Science and Technology, 2021, 83, 248-255.	10.7	32
30	Domain-size distribution in a Poisson-Voronoi nucleation and growth transformation. Physical Review E, 2007, 75, 040107.	2.1	29
31	Key Parameters in the Production of Medieval Luster Colors and Shines. Journal of the American Ceramic Society, 2007, 90, 2245-2254.	3.8	29
32	Variations in morphologies of silver nanoshells on silica spheres. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 330, 86-90.	4.7	27
33	Non-random nucleation and the Avrami kinetics. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 107-121.	0.6	25
34	Metallic and nonmetallic shine in luster: An elastic ion backscattering study. Journal of Applied Physics, 2007, 101, 103518.	2.5	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. Journal of Nanoparticle Research, 2013, 15, 1.	1.9	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.	4.4	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.	2.1	20
42	On the static strength of aluminium and carbon fibre aircraft lap joint repairs. <i>Composite Structures</i> , 2018, 201, 276-290.	5.8	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.	2.9	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.	2.3	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.	2.2	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.	3.1	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.	6.6	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.	5.6	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.	5.6	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.	1.8	14
53	Onset Frequency of Fatigue Effects in Pure Aluminum and 7075 (AlZnMg) and 2024 (AlCuMg) Alloys. <i>Metals</i> , 2016, 6, 50.	2.3	14
54	Phonon dispersion relation of metallic glasses. <i>Physical Review B</i> , 2016, 94, .	3.2	14

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55	Characterization of mechanical relaxation in a Cu–Zr–Al metallic glass. Journal of Alloys and Compounds, 2015, 643, S17-S21.	5.5	13
56	Aging and structural relaxation of hyper-quenched Mg ₆₅ Cu ₂₅ Y ₁₀ metallic glass. Journal of Alloys and Compounds, 2014, 615, S9-S12.	5.5	12
57	Corrosion resistance of crystalline and amorphous CuZr alloys in NaCl aqueous environment and effect of corrosion inhibitors. Journal of Alloys and Compounds, 2021, 879, 160464.	5.5	12
58	Magnetic properties of dense graphitic filaments formed via thermal decomposition of mesitylene in an applied electric field. Carbon, 2006, 44, 2864-2867.	10.3	10
59	Magnetic properties of dense carbon nanospheres prepared by chemical vapor deposition. Chemical Physics Letters, 2007, 447, 295-299.	2.6	10
60	Structural study of conventional and bulk metallic glasses during annealing. Journal of Alloys and Compounds, 2009, 483, 578-581.	5.5	10
61	Phase-field modelling of microstructural evolution in primary crystallization. Journal of Alloys and Compounds, 2009, 483, 645-649.	5.5	10
62	Physical aging effects on the dynamic relaxation behavior and mechanical properties of Cu ₄₆ Zr ₄₆ Al ₈ metallic glass. Journal of Alloys and Compounds, 2017, 726, 195-200.	5.5	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. Journal of Alloys and Compounds, 2020, 830, 154564.	5.5	10
64	On the equations describing the grain size distribution change for KJMA kinetics. Journal of Non-Crystalline Solids, 2001, 287, 88-91.	3.1	9
65	Microstructural implications of non-random nucleation protocols in nanocrystallized metallic glasses. Journal of Non-Crystalline Solids, 2003, 317, 85-90.	3.1	9
66	Relaxation of internal friction and shear viscosity in Zr ₅₇ Nb ₅ Al ₁₀ Cu _{15.4} Ni _{12.6} metallic glass. Intermetallics, 2020, 124, 106846.	3.9	9
67	Comprehensive insights into the thermal and mechanical effects of metallic glasses via creep. Journal of Materials Science and Technology, 2022, 99, 39-47.	10.7	9
68	Nanoporous Copper Ribbons Prepared by Chemical Dealloying of a Melt-Spun ZnCu Alloy. Journal of Physical Chemistry C, 2022, 126, 212-226.	3.1	9
69	Kinetic simulation of primary transformations in glassy alloys. Journal of Non-Crystalline Solids, 2001, 287, 92-95.	3.1	8
70	Fragility measurement of Pd-based metallic glass by dynamic mechanical analysis. Journal of Alloys and Compounds, 2010, 504, S215-S218.	5.5	8
71	Unified perspective on structural heterogeneity of a LaCe-based metallic glass from versatile dynamic stimuli. Intermetallics, 2020, 125, 106922.	3.9	8
72	A model study on controlling dealloying corrosion attack by lateral modification of surfactant inhibitors. Npj Materials Degradation, 2021, 5, .	5.8	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. Journal of Materials Science and Technology, 2022, 107, 82-91.	10.7	8
74	Direct evidence of two different relaxation processes induced by heat treatment on Fe ₄₀ Ni ₄₀ B ₂₀ glassy ribbons. Journal of Physics F: Metal Physics, 1988, 18, 2669-2681.	1.6	7
75	Correlation functions in first-order phase transitions. Physical Review E, 1997, 56, 2781-2792.	2.1	7
76	Size distribution evolution equations in space-competing domain growth systems. Philosophical Magazine, 2004, 84, 2023-2039.	1.6	7
77	Phase-field modeling of glass crystallization: Change of the transport properties and crystallization kinetic. Journal of Non-Crystalline Solids, 2007, 353, 1002-1004.	3.1	7
78	Plastic deformation induced anisotropy in metallic glasses: A molecular dynamics study. Journal of Alloys and Compounds, 2017, 707, 102-107.	5.5	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. Advances in Materials Science and Engineering, 2017, 2017, 1-12.	1.8	7
80	Influence of carbon content on microstructure and properties of a steel matrix cermet. International Journal of Refractory Metals and Hard Materials, 2018, 75, 78-84.	3.8	7
81	Dynamic Mechanical Relaxation in LaCe-Based Metallic Glasses: Influence of the Chemical Composition. Metals, 2019, 9, 1013.	2.3	7
82	Effect of minor addition on dynamic mechanical relaxation in ZrCu-based metallic glasses. Journal of Non-Crystalline Solids, 2021, 553, 120496.	3.1	7
83	Single-Phase MnFe ₂ O ₄ Powders Obtained by the Polymerized Complex Method. Journal of the American Ceramic Society, 2008, 91, 2488-2494.	3.8	6
84	Microstructural characterisation and kinetics modelling of vermicular cast irons. Materials Science and Technology, 2008, 24, 1214-1221.	1.6	6
85	Effect of temperature and frequency of dynamic loading in the viscoelastic properties of aluminium alloy 7075-T6. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 3111-3114.	0.8	6
86	Communication: Are metallic glasses different from other glasses? A closer look at their high frequency dynamics. Journal of Chemical Physics, 2011, 135, 101101.	3.0	6
87	Inelastic deformation of metallic glasses under dynamic cyclic loading. Scripta Materialia, 2021, 194, 113675.	5.2	6
88	Geometrical effects on line shape and background in experimental Mössbauer spectra. Hyperfine Interactions, 1986, 29, 1539-1542.	0.5	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. Applied Optics, 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. Mechanics of Materials, 2021, 160, 103959.	3.2	5

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91	Non-random nucleation and the Avrami kinetics. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 107-121.	0.6	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.	3.1	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.	5.5	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.	5.5	4
96	Modeling of the Sub-<i>T</i>_g Relaxation Spectrum of Pd_{42.5}Ni_{7.5}Cu₃₀P₂₀ Metallic Glass. Journal of Physical Chemistry B, 2016, 120, 2838-2844.	2.6	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.	2.9	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.	3.9	3
100	Identifying the high entropy characteristic in La-based metallic glasses. Applied Physics Letters, 2021, 119, .	3.3	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.	5.5	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.	5.5	2
103	Innovative NDT Technique Based on Ferrofluids for Detection of Surface Cracks. Journal of Nondestructive Evaluation, 2015, 34, 1.	2.4	2
104	Relaxation dynamics of Fe55Cr10Mo14C15B6 metallic glass explored by mechanical spectroscopy and calorimetry measurements. Journal of Thermal Analysis and Calorimetry, 2016, 125, 711-719.	3.6	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.	3.1	1
113	Cobalt nanocrystallites encapsulated in boron nitride shells. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 162, 106-110.	3.5	1
114	Slow $\hat{\gamma}^2$ relaxation in La-based metallic glasses based on mechanical spectroscopy measurements. Journal of Iron and Steel Research International, 2017, 24, 397-401.	2.8	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.	0.4	1
116	Dynamic mechanical relaxation behavior of binary metallic glasses. Intermetallics, 2021, 130, 107075.	3.9	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.	4.5	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.	0.1	0

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127	Study of medium range reordering by plastic deformation in Cu ₄₆ Zr ₄₆ Al ₈ . Journal of Alloys and Compounds, 2018, 744, 34-40.	5.5	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 d'acpage de bandes d'acier inoxydable par oxycombustion. Revue De Metallurgie, 1999, 96, 951-958.	0.3	0