Jean-Marc Pelletier

List of Publications by Year
in descending order

97 papers	3,085 citations	186265 28 h-index	182427 51 g-index
97 all docs	97 docs citations	97 times ranked	1407 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	Dynamic Mechanical Relaxation in Bulk Metallic Glasses: A Review. Journal of Materials Science and Technology, 2014, 30, 523-545.	10.7	229
3	Understanding of micro-alloying on plasticity in Cu 46 Zr 47â^'x Al 7 Dy x (0â‰ÂxÂâ‰Â8) bulk metallic glasses under compression: Based on mechanical relaxations and theoretical analysis. International Journal of Plasticity, 2016, 82, 62-75.	8.8	153
4	Viscoelasticity and viscosity of Pdâ€“Niâ€“Cuâ€“P bulk metallic glasses. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 336, 190-195.	5.6	121
5	Crystallization kinetics in Cu46Zr45Al7Y2 bulk metallic glass by differential scanning calorimetry (DSC). Journal of Non-Crystalline Solids, 2011, 357, 2590-2594.	3.1	107
6	Characteristics of stress relaxation kinetics of La 60 Ni 15 Al 25 bulk metallic glass. Acta Materialia, 2015, 98, 43-50.	7.9	89
7	Relaxation of Bulk Metallic Glasses Studied by Mechanical Spectroscopy. Journal of Physical Chemistry B, 2013, 117, 13658-13666.	2.6	79
8	Enthalpy relaxation in Cu46Zr45Al7Y2 and Zr55Cu30Ni5Al10 bulk metallic glasses by differential scanning calorimetry (DSC). Intermetallics, 2011, 19, 9-18.	3.9	74
9	Modification of atomic mobility in a Ti-based bulk metallic glass by plastic deformation or thermal annealing. Intermetallics, 2012, 28, 128-137.	3.9	54
10	Relaxation of non-crystalline solids under mechanical stress. Journal of Non-Crystalline Solids, 2000, 274, 181-187.	3.1	52
11	Characteristics of the Structural and Johariâ€“Goldstein Relaxations in Pd-Based Metallic Glass-Forming Liquids. Journal of Physical Chemistry B, 2014, 118, 3720-3730.	2.6	52
12	Microstructural, thermal and mechanical behavior of co-sputtered binary Zrâ€“Cu thin film metallic glasses. Thin Solid Films, 2014, 561, 53-59.	1.8	52
13	Poly(ethylene oxide)/polybutadiene based IPNs synthesis and characterization. Polymer, 2007, 48, 696-703.	3.8	50
14	Mechanical properties of Ti16.7Zr16.7Hf16.7Cu16.7Ni16.7Be16.7 high-entropy bulk metallic glass. Journal of Non-Crystalline Solids, 2016, 452, 57-61.	3.1	46
15	Impact of the structural state on the mechanical properties in a Zrâ€“Coâ€“Al bulk metallic glass. Journal of Alloys and Compounds, 2014, 607, 139-149.	5.5	45
16	Phase separation and crystallization in the Zr41.2â€“Ti13.8â€“Cu12.5â€“Ni10â€“Be22.5 bulk metallic glass determined by physical measurements and electron microscopy. Journal of Non-Crystalline Solids, 2003, 325, 133-141.	3.1	43
17	Elastic and viscoelastic properties of glassy, quasicrystalline and crystalline phases in Zr65Cu5Ni10Al7.5Pd12.5 alloys. Acta Materialia, 2011, 59, 2797-2806.	7.9	43
18	Precipitation effects on thermopower in Al-Cu alloys. Acta Metallurgica, 1984, 32, 1069-1078.	2.1	42

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19	Characterization of the Drastic Increase in Molecular Mobility of a Deformed Amorphous Polymer. Physical Review Letters, 2006, 97, 207801.	7.8	42
20	Mechanical properties over the glass transition of Zr41.2Ti13.8Cu12.5Ni10Be22.5 bulk metallic glass. Journal of Non-Crystalline Solids, 2005, 351, 2224-2231.	3.1	40
21	Dynamic universal characteristic of the main (Î±) relaxation in bulk metallic glasses. Journal of Alloys and Compounds, 2014, 589, 263-270.	5.5	39
22	Isochronal and isothermal crystallization in Zr55Cu30Ni5 Al10 bulk metallic glass. Transactions of Nonferrous Metals Society of China, 2012, 22, 577-584.	4.2	37
23	Dynamic mechanical properties in a Zr46.8Ti13.8Cu12.5Ni10Be27.5 bulk metallic glass. Journal of Alloys and Compounds, 2005, 393, 223-230.	5.5	36
24	Effect of physical aging on Johari-Goldstein relaxation in La-based bulk metallic glass. Journal of Chemical Physics, 2014, 141, 104510.	3.0	35
25	Abnormal internal friction in the in-situ Ti60Zr15V10Cu5Be10 metallic glass matrix composite. Journal of Alloys and Compounds, 2017, 724, 921-931.	5.5	33
26	Non-isothermal crystallization transformation kinetics analysis and isothermal crystallization kinetics in super-cooled liquid region (SLR) of (Ce0.72Cu0.28)90â^'xAl10Fex (x=0, 5 or 10) bulk metallic glasses. Journal of Non-Crystalline Solids, 2015, 415, 42-50.	3.1	32
27	Dynamic mechanical relaxation behavior of Zr35Hf17.5Ti5.5Al12.5Co7.5Ni12Cu10 high entropy bulk metallic glass. Journal of Materials Science and Technology, 2021, 83, 248-255.	10.7	32
28	Main Î± relaxation and slow Î² relaxation processes in a La30Ce30Al15Co25 metallic glass. Journal of Materials Science and Technology, 2019, 35, 982-986.	10.7	31
29	On the Potential of Bulk Metallic Glasses for Dental Implantology: Case Study on Ti40Zr10Cu36Pd14. Materials, 2018, 11, 249.	2.9	30
30	Kinetics of structural relaxation in bulk metallic glasses by mechanical spectroscopy: Determination of the stretching parameter Î²KWW. Intermetallics, 2012, 28, 40-44.	3.9	29
31	A hierarchically correlated flow defect model for metallic glass: Universal understanding of stress relaxation and creep. International Journal of Plasticity, 2022, 154, 103288.	8.8	29
32	Modelling and physical analysis of the high-temperature rheological behavior of a metallic glass. International Journal of Plasticity, 2021, 146, 103107.	8.8	28
33	Physical properties of bulk amorphous glasses: influence of physical aging and onset of crystallisation. Journal of Non-Crystalline Solids, 2000, 274, 301-306.	3.1	26
34	Influence of structural relaxation on atomic mobility in a Zr41.2Ti13.8Cu125Ni10.0Be22.5 (Vit1) bulk metallic glass. Journal of Non-Crystalline Solids, 2008, 354, 3666-3670.	3.1	25
35	Analysis of atomic mobility in a Cu38Zr46Ag8Al8 bulk metallic glass. Journal of Alloys and Compounds, 2013, 549, 370-374.	5.5	25
36	Molecular mobility of crosslinked elastomers stretched above Tg. Polymer, 2006, 47, 3477-3485.	3.8	24

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37	On calorimetric study of the fragility in bulk metallic glasses with low glass transition temperature: (Ce0.72Cu0.28)90â^'x Al10Fex (xÂ=Â0, 5 or 10) and Zn38Mg12Ca32Yb18. Intermetallics, 2011, 19, 1367-1373.	3.9	24
38	Influence of spark plasma sintering parameters on the mechanical properties of Cu50Zr45Al5 bulk metallic glass obtained using metallic glass powder. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 677, 116-124.	5.6	24
39	Mechanical response of an oxide glass to mechanical loadingâ€"shear and volume relaxation effects: physical analysis. Acta Materialia, 2000, 48, 1397-1408.	7.9	22
40	Mechanical properties of bulk metallic glasses: Elastic, visco-elastic and visco-plastic components in the deformation. Journal of Non-Crystalline Solids, 2007, 353, 3750-3753.	3.1	22
41	The viscoelastic properties of bulk Zr55Cu25Ni5Al10Nb5 metallic glass. Journal of Alloys and Compounds, 2006, 413, 181-187.	5.5	21
42	Polybutadiene/poly(ethylene oxide) based IPNs, Part II: Mechanical modelling and LiClO4 loading as tools for IPN morphology investigation. Polymer, 2007, 48, 7476-7483.	3.8	21
43	Manufacturing of Cu-based metallic glasses matrix composites by spark plasma sintering. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 711, 405-414.	5.6	21
44	Main (Î±) relaxation and excess wing in Zr 50 Cu 40 Al 10 bulk metallic glass investigated by mechanical spectroscopy. Journal of Non-Crystalline Solids, 2015, 407, 106-109.	3.1	19
45	Thermal activation in the Zr 65 Cu 18 Ni 7 Al 10 metallic glass by creep deformation and stress relaxation. Scripta Materialia, 2016, 113, 180-184.	5.2	19
46	Creep in bulk metallic glasses. Transition from linear to non linear regime. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 743, 185-189.	5.6	19
47	Enhanced compressive plasticity in a Cu-Zr-Al â€" Based metallic glass composite. Journal of Alloys and Compounds, 2019, 782, 59-68.	5.5	19
48	Strong metallic glass: TiZrHfCuNiBe high entropy alloy. Journal of Alloys and Compounds, 2020, 820, 153119.	5.5	19
49	Thermal stability of cerium-based bulk metallic glasses. Influence of iron addition. Journal of Alloys and Compounds, 2010, 504, 357-361.	5.5	18
50	High temperature deformation in a lanthanum based bulk metallic glass showing a pronounced secondary relaxation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 586, 57-61.	5.6	18
51	Characterization and modeling of dynamic relaxation of a Zr-based bulk metallic glass. Journal of Alloys and Compounds, 2017, 690, 212-220.	5.5	17
52	Rate-dependent plastic deformation of TiZrHfCuNiBe high entropy bulk metallic glass. Journal of Alloys and Compounds, 2019, 785, 542-552.	5.5	17
53	Aspect ratio effects on the serrated flow dynamic of TiZrHfCuNiBe high entropy metallic glass. Intermetallics, 2020, 119, 106726.	3.9	17
54	Influence of thermal treatments and plastic deformation on the atomic mobility in Zr50.7Cu28Ni9Al12.3 bulk metallic glass. Journal of Alloys and Compounds, 2014, 615, S85-S89.	5.5	16

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55	Dynamics of the strong metallic glass Zn38Mg12Ca32Yb18. Journal of Non-Crystalline Solids, 2016, 447, 85-90.	3.1	16
56	Effects of iron addition on the dynamic mechanical relaxation of Zr55Cu30Ni5Al10 bulk metallic glasses. Journal of Alloys and Compounds, 2018, 749, 262-267.	5.5	16
57	Correlation between microstructure and internal friction in a Zr41.2â€"Ti13.8â€"Cu12.5â€"Ni8â€" Be22.5â€"Fe2 bulk metallic glass. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 379, 197-203.	5.6	15
58	Bulk metallic glasses based on precious metals: Thermal treatments and mechanical properties. Intermetallics, 2015, 63, 73-79.	3.9	15
59	Viscoelasticity of Cu- and La-based bulk metallic glasses: Interpretation based on the quasi-point defects theory. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 719, 164-170.	5.6	15
60	Influence of short range ordering and clustering on transport properties. Acta Metallurgica, 1982, 30, 1851-1859.	2.1	14
61	Evidence for a residual elastic modulus in inorganic glasses by mechanical spectroscopy. Journal of Non-Crystalline Solids, 1999, 258, 119-130.	3.1	14
62	Viscoelasticity of metallic, polymeric and oxide glasses. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 442, 250-255.	5.6	14
63	High temperature homogeneous plastic flow behavior of a Zr based bulk metallic glass matrix composite. Journal of Alloys and Compounds, 2010, 495, 50-54.	5.5	14
64	Study of internal friction behavior in a Zr base bulk amorphous alloy around the glass transition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 403, 328-333.	5.6	13
65	Three-dimensional structure and formation mechanisms of Y2O3 hollow-precipitates in a Cu-based metallic glass. Materials and Design, 2019, 168, 107660.	7.0	13
66	Phase separation before crystallization in Zrâ€"Tiâ€"Cuâ€"Niâ€"Be bulk metallic glasses: influence of the chemical composition. Journal of Non-Crystalline Solids, 2004, 345-346, 169-172.	3.1	12
67	Insight on the process ability of bulk metallic glasses by thermo-mechanical analysis and dynamic mechanical analysis. Journal of Alloys and Compounds, 2015, 628, 357-363.	5.5	12
68	Main and secondary relaxations in an Au-based bulk metallic glass investigated by mechanical spectroscopy. Journal of Alloys and Compounds, 2016, 684, 530-536.	5.5	12
69	The dynamic mechanical characteristics of Zr-based bulk metallic glasses and composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 711, 356-363.	5.6	12
70	Deformation and crystallization of a Zr41.2Ti13.8Cu12.5Ni10Be22.5 bulk metallic glass in the supercooled liquid region. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 435-436, 405-411.	5.6	11
71	Influence of the poly(ethylene oxide)/polybutadiene IPN morphology on the ionic conductivity of ionic liquid. European Polymer Journal, 2013, 49, 2670-2679.	5.4	11
72	Distinctive slow Î² relaxation and structural heterogeneity in (LaCe)-based metallic glass. Journal of Alloys and Compounds, 2018, 742, 536-541.	5.5	11

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73	Dynamic mechanical response of ZrCu-based bulk metallic glasses. International Journal of Mechanical Sciences, 2021, 211, 106770.	6.7	11
74	Physical aging effects on the dynamic relaxation behavior and mechanical properties of Cu46Zr46Al8 metallic glass. Journal of Alloys and Compounds, 2017, 726, 195-200.	5.5	10
75	Physical mechanism of internal friction behavior of Î²-type bulk metallic glass composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 739, 193-197.	5.6	10
76	Dynamic mechanical behaviors of a metastable <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"><mml:mrow><mml:mi mathvariant="bold">Î²</mml:mi></mml:mrow></mml:math>-type bulk metallic glass composite. Journal of Alloys and Compounds, 2020, 819, 153040.	5.5	10
77	Relaxation of internal friction and shear viscosity in Zr57Nb5Al10Cu15.4Ni12.6 metallic glass. Intermetallics, 2020, 124, 106846.	3.9	9
78	Increase in molecular mobility of an amorphous polymer deformed below <i>T</i>_g. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 497-505.	2.1	8
79	Bulk metallic glasses: â€œDefectsâ€• determines performance. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 675, 379-385.	5.6	8
80	Arrhenius activation of Zr65Cu18Ni7Al10 bulk metallic glass in the supercooled liquid region. Intermetallics, 2017, 86, 88-93.	3.9	8
81	Improvement of mechanical, thermal, and corrosion properties of Ni- and Al-free Cuâ€“Zrâ€“Ti metallic glass with yttrium addition. Materialia, 2018, 1, 249-257.	2.7	8
82	Unified perspective on structural heterogeneity of a LaCe-based metallic glass from versatile dynamic stimuli. Intermetallics, 2020, 125, 106922.	3.9	8
83	Dynamic Mechanical Relaxation in LaCe-Based Metallic Glasses: Influence of the Chemical Composition. Metals, 2019, 9, 1013.	2.3	7
84	Effect of minor addition on dynamic mechanical relaxation in ZrCu-based metallic glasses. Journal of Non-Crystalline Solids, 2021, 553, 120496.	3.1	7
85	Mechanical spectroscopy: some applications to material science. International Journal of Materials and Product Technology, 2006, 26, 312.	0.2	6
86	Pd-Cu-Ni-P Bulk Metallic Glass: A Very Low Damping Material. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 1791-1796.	2.2	6
87	Experimental analysis to the structural relaxation of Ti48Zr20V12Cu5Be15 metallic glass matrix composite. Journal of Alloys and Compounds, 2018, 769, 443-452.	5.5	6
88	Dynamic mechanical behavior of (La0.7Ce0.3)65Al10Co25 bulk metallic glass: Influence of the physical aging and heat treatment. Journal of Alloys and Compounds, 2021, 869, 159271.	5.5	6
89	Metallic Glasses. Springer Handbooks, 2019, , 617-643.	0.6	6
90	Effect of physical aging and cyclic loading on power-law creep of high-entropy metallic glass. Journal of Materials Science and Technology, 2022, 115, 1-9.	10.7	6

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91	Relaxation of Ni-free Ti40Zr10Cu36Pd14 bulk metallic glass under mechanical stress. Intermetallics, 2018, 102, 6-10.	3.9	5
92	Effect of Zener-Hollomon parameter on the flow behavior of Zr-based metallic glass. Journal of Alloys and Compounds, 2020, 819, 152987.	5.5	4
93	Reversible and irreversible changes in amorphous alloys: Detection by thermoelectric power measurements. Materials Science and Engineering, 1986, 77, 175-179.	0.1	3
94	Mechanical relaxation behavior of Zr64.13Cu15.75Ni10.12Al10 bulk metallic glass. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 738, 57-62.	5.6	3
95	Identifying the high entropy characteristic in La-based metallic glasses. Applied Physics Letters, 2021, 119, .	3.3	3
96	High Temperature Deformation in the Amorphous or Partially Crystallized Zr41.2Ti13.8Cu12.5Ni10Be22.5 Bulk Metallic Glass. Materials Research Society Symposia Proceedings, 2002, 754, 1.	0.1	1
97	Slow Î² 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