

# Paulo Branicio

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

89  
papers

2,274  
citations

25  
h-index

45  
g-index

96  
ext. papers

2,619  
ext. citations

4.1  
avg. IF

5.23  
L-index

#	Paper	IF	Citations
89	Atomistic modeling of physical vapor deposition on complex topology substrates. <i>Computational Materials Science</i> , <b>2022</b> , 203, 111111	3.2	0
88	High pressure shear induced microstructural evolution in nanocrystalline aluminum. <i>Computational Materials Science</i> , <b>2022</b> , 203, 111105	3.2	
87	Ultralow friction of graphene-coated silica nanoparticle film. <i>Computational Materials Science</i> , <b>2022</b> , 204, 111184	3.2	1
86	Structural phase transition and amorphization in hexagonal SiC subjected to dynamic loading. <i>Mechanics of Materials</i> , <b>2022</b> , 164, 104139	3.3	2
85	Defect reversibility regulates dynamic tensile strength in silicon carbide at high strain rates. <i>Scripta Materialia</i> , <b>2022</b> , 213, 114593	5.6	0
84	Rate dependence and anisotropy of SiC response to ramp and wave-free quasi-isentropic compression. <i>International Journal of Plasticity</i> , <b>2021</b> , 138, 102923	7.6	6
83	Atomistic insights on the pressure-induced multi-layer graphene to diamond-like structure transformation. <i>Carbon</i> , <b>2021</b> , 175, 243-253	10.4	3
82	Bicontinuous nanoporous design induced homogenization of strain localization in metallic glasses. <i>Scripta Materialia</i> , <b>2021</b> , 192, 67-72	5.6	7
81	Tuning the mechanical properties of nanoglass-metallic glass composites with brick and mortar designs. <i>Scripta Materialia</i> , <b>2021</b> , 194, 113639	5.6	3
80	Excess free volume and structural properties of inert gas condensation synthesized nanoparticles based CuZr nanoglasses. <i>Scientific Reports</i> , <b>2021</b> , 11, 19246	4.9	0
79	Intrinsic and extrinsic effects on the fracture toughness of ductile metallic glasses. <i>Mechanics of Materials</i> , <b>2021</b> , 162, 104066	3.3	2
78	Pore Size Dependence of Permeability in Bicontinuous Nanoporous Media.. <i>Langmuir</i> , <b>2021</b> , 37, 14866-14877	4.8	0
77	Memristive Device Characteristics Engineering by Controlling the Crystallinity of Switching Layer Materials. <i>ACS Applied Electronic Materials</i> , <b>2020</b> , 2, 1529-1537	4	3
76	Synthesis of metallic glass nanoparticles by inert gas condensation. <i>Physical Review Materials</i> , <b>2020</b> , 4,	3.2	3
75	Tuning the Mechanical Properties of Shape Memory Metallic Glass Composites with Brick and Mortar Designs. <i>Scripta Materialia</i> , <b>2020</b> , 186, 69-73	5.6	8
74	Mechanical properties of nanoporous metallic glasses: Insights from large-scale atomic simulations. <i>International Journal of Plasticity</i> , <b>2020</b> , 127, 102657	7.6	22
73	Differences in Sb <sub>2</sub> Te <sub>3</sub> growth by pulsed laser and sputter deposition. <i>Acta Materialia</i> , <b>2020</b> , 200, 811-820	8.4	4

72	Photoexcitation Induced Ultrafast Nonthermal Amorphization in SbTe. <i>Journal of Physical Chemistry Letters</i> , <b>2020</b> , 11, 10242-10249	6.4	5
71	Gradient microstructure induced shear band constraint, delocalization, and delayed failure in CuZr nanoglasses. <i>International Journal of Plasticity</i> , <b>2020</b> , 134, 102845	7.6	9
70	Nanoglass-based balloon expandable stents. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2020</b> , 108, 73-79	3.5	6
69	Applying a machine learning interatomic potential to unravel the effects of local lattice distortion on the elastic properties of multi-principal element alloys. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 803, 1054-1062	5.7	18
68	Ultra-low friction of graphene/C60/graphene coatings for realistic rough surfaces. <i>Carbon</i> , <b>2019</b> , 152, 727-737	10.4	6
67	Transition of deformation mechanisms in nanotwinned single crystalline SiC. <i>Philosophical Magazine</i> , <b>2019</b> , 99, 2636-2660	1.6	1
66	Efficient generation of non-cubic stochastic periodic bicontinuous nanoporous structures. <i>Computational Materials Science</i> , <b>2019</b> , 169, 109101	3.2	6
65	Hydrogen Bond Preserving Stress Release Mechanism Is Key to the Resilience of Aramid Fibers. <i>Journal of Physical Chemistry B</i> , <b>2019</b> , 123, 9719-9723	3.4	2
64	Shock-induced microstructural response of mono- and nanocrystalline SiC ceramics. <i>Journal of Applied Physics</i> , <b>2018</b> , 123, 145902	2.5	19
63	Local structure of Ge <sub>2</sub> Sb <sub>2</sub> Te <sub>5</sub> during crystallization under pressure. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 151901	3.4	5
62	Plane shock loading on mono- and nano-crystalline silicon carbide. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 111909	3.4	15
61	A Critical Review on Metallic Glasses as Structural Materials for Cardiovascular Stent Applications. <i>Journal of Functional Biomaterials</i> , <b>2018</b> , 9,	4.8	41
60	Atomistic insights into the nanosecond long amorphization and crystallization cycle of nanoscale Ge <sub>2</sub> Sb <sub>2</sub> Te <sub>5</sub> : An ab initio molecular dynamics study. <i>Physical Review Materials</i> , <b>2018</b> , 2,	3.2	12
59	Strong and ductile nanolaminate composites combining metallic glasses and nanoglasses. <i>International Journal of Plasticity</i> , <b>2017</b> , 90, 231-241	7.6	61
58	Atomistic origin of size effects in fatigue behavior of metallic glasses. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2017</b> , 104, 84-95	5	52
57	Shock-induced spall in single and nanocrystalline SiC. <i>Acta Materialia</i> , <b>2017</b> , 140, 274-289	8.4	34
56	Adsorbed Conformations of PCE Superplasticizers in Cement Pore Solution Unraveled by Molecular Dynamics Simulations. <i>Scientific Reports</i> , <b>2017</b> , 7, 16599	4.9	24
55	Atomistic dynamics simulation to solve conformation of model PCE superplasticisers in water and cement pore solution. <i>Advances in Cement Research</i> , <b>2017</b> , 29, 418-428	1.8	18

54	Elastic interaction of hydrogen atoms on graphene: A multiscale approach from first principles to continuum elasticity. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	1
53	Compromising high strength and ductility in nanoglass/metallic glass nanolaminates. <i>RSC Advances</i> , <b>2016</b> , 6, 13548-13553	3.7	22
52	Unravelling the anomalous electrical and optical phase-change characteristics in FeTe. <i>Acta Materialia</i> , <b>2016</b> , 112, 67-76	8.4	11
51	Time-temperature-transformation and continuous-heating-transformation diagrams of GeSb <sub>2</sub> Te <sub>4</sub> from nanosecond-long ab initio molecular dynamics simulations. <i>Acta Materialia</i> , <b>2016</b> , 121, 257-265	8.4	12
50	Surface roughness imparts tensile ductility to nanoscale metallic glasses. <i>Extreme Mechanics Letters</i> , <b>2015</b> , 5, 88-95	3.9	22
49	Strong and superplastic nanoglass. <i>Nanoscale</i> , <b>2015</b> , 7, 17404-9	7.7	31
48	Suppression of Shear Banding and Transition to Necking and Homogeneous Flow in Nanoglass Nanopillars. <i>Scientific Reports</i> , <b>2015</b> , 5, 15611	4.9	41
47	Fullerenes generated from porous structures. <i>Physical Chemistry Chemical Physics</i> , <b>2014</b> , 16, 25515-22	3.6	28
46	Molecular dynamics simulations on the frictional behavior of a perfluoropolyether film sandwiched between diamond-like-carbon coatings. <i>Langmuir</i> , <b>2014</b> , 30, 1573-9	4	14
45	Molecular Dynamics Simulations of Plane Shock Loading in SiC. <i>Procedia Engineering</i> , <b>2014</b> , 75, 150-153		15
44	Composition and grain size effects on the structural and mechanical properties of CuZr nanoglasses. <i>Journal of Applied Physics</i> , <b>2014</b> , 116, 043522	2.5	55
43	Planar fault energies of copper at large strain: A density functional theory study. <i>Journal of Applied Physics</i> , <b>2014</b> , 116, 103512	2.5	3
42	Atomistic Molecular Dynamics Study of Structural and Thermomechanical Properties of Zdol Lubricants on Hydrogenated Diamond-Like Carbon. <i>IEEE Transactions on Magnetics</i> , <b>2013</b> , 49, 5227-5235 <sup>2</sup>		8
41	On the notch sensitivity of CuZr metallic glasses. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 081903	3.4	60
40	Effect of strain on the stacking fault energy of copper: A first-principles study. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	55
39	Shock loading on AlN ceramics: A large scale molecular dynamics study. <i>International Journal of Plasticity</i> , <b>2013</b> , 51, 122-131	7.6	41
38	Superplastic nanocrystalline ceramics at room temperature and high strain rates. <i>Scripta Materialia</i> , <b>2013</b> , 69, 525-528	5.6	16
37	A transition from localized shear banding to homogeneous superplastic flow in nanoglass. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 211905	3.4	93

36	A modified Tersoff potential for pure and hydrogenated diamond-like carbon. <i>Computational Materials Science</i> , <b>2013</b> , 67, 146-150	3.2	37
35	Large-scale molecular dynamics simulations of wear in diamond-like carbon at the nanoscale. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 073118	3.4	55
34	Atomistic Modeling of Shock Loading in SiC Ceramics. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1535, 6501		1
33	Correlation between optical absorption redshift and carrier density in phase change materials. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 123504	2.5	5
32	The amorphization and crystallization of Ge <sub>2</sub> Sb <sub>2</sub> Te <sub>5</sub> : an ab initio molecular dynamics study. <i>Materials Research Society Symposia Proceedings</i> , <b>2012</b> , 1431, 14		1
31	Atomistic Mechanisms in Silicon Carbide Nanostructures. <i>Journal of Computational and Theoretical Nanoscience</i> , <b>2012</b> , 9, 1870-1880	0.3	8
30	Engineering materials properties in codimension > 0. <i>Journal of Materials Research</i> , <b>2012</b> , 27, 619-626	2.5	1
29	Dynamic behaviour of silicon carbide nanowires under high and extreme strain rates: a molecular dynamics study. <i>Journal Physics D: Applied Physics</i> , <b>2011</b> , 44, 055405	3	24
28	Effects of grain size and temperature on mechanical and failure properties of ultrananocrystalline diamond. <i>Diamond and Related Materials</i> , <b>2011</b> , 20, 1303-1309	3.5	25
27	Properties on the edge: graphene edge energies, edge stresses, edge warping, and the Wulff shape of graphene flakes. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2011</b> , 19, 054002	2	16
26	Material Properties in Codimension > 0: graphene edge properties. <i>Materials Research Society Symposia Proceedings</i> , <b>2010</b> , 1258, 1		
25	Nanoductility induced brittle fracture in shocked high performance ceramics. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 111903	3.4	23
24	Interaction potential for indium phosphide: a molecular dynamics and first-principles study of the elastic constants, generalized stacking fault and surface energies. <i>Journal of Physics Condensed Matter</i> , <b>2009</b> , 21, 095002	1.8	13
23	Local stress calculation in simulations of multicomponent systems. <i>Journal of Computational Physics</i> , <b>2009</b> , 228, 8467-8479	4.1	43
22	Molecular dynamics simulation of fast dislocations in copper. <i>Acta Materialia</i> , <b>2009</b> , 57, 1843-1855	8.4	35
21	Deformation mechanisms and damage in Alumina under hypervelocity impact loading. <i>Journal of Applied Physics</i> , <b>2008</b> , 103, 083508	2.5	36
20	Accelerating copper dissociated dislocations to transonic and supersonic speeds. <i>Materials Research Society Symposia Proceedings</i> , <b>2008</b> , 1137, 100801		
19	Accelerating dislocations to transonic and supersonic speeds in anisotropic metals. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 191909	3.4	31

18	Atomistic damage mechanisms during hypervelocity projectile impact on AlN: A large-scale parallel molecular dynamics simulation study. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2008</b> , 56, 1955-1988 <sup>5</sup>		45
17	Structural characterization of deformed crystals by analysis of common atomic neighborhood. <i>Computer Physics Communications</i> , <b>2007</b> , 177, 518-523	4.2	443
16	Vibrational properties of InP under pressure: a molecular-dynamics study. <i>Physica Status Solidi (B): Basic Research</i> , <b>2007</b> , 244, 331-335	1.3	5
15	Structural phase transformations in InP under pressure: A molecular-dynamics study. <i>Physica Status Solidi (B): Basic Research</i> , <b>2007</b> , 244, 239-243	1.3	9
14	A dynamic pathway for the alkaline earth oxides B1 to B2 transformation. <i>Europhysics Letters</i> , <b>2006</b> , 76, 836-841	1.6	11
13	Thermal Conductivity in Nanoscale Lennard-Jones Systems: Size Effects in the Fluid and Solid Phases. <i>Defect and Diffusion Forum</i> , <b>2006</b> , 258-260, 310-315	0.7	2
12	High-pressure phases of InP: An ab initio and molecular-dynamics study. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 1619-19	3.4	12
11	Classical Molecular Dynamics Simulation of Structural and Dynamical Properties of II-VI and III-V Semiconductors. <i>Defect and Diffusion Forum</i> , <b>2006</b> , 258-260, 522-530	0.7	1
10	Shock-induced structural phase transition, plasticity, and brittle cracks in aluminum nitride ceramic. <i>Physical Review Letters</i> , <b>2006</b> , 96, 065502	7.4	60
9	Collision-free spatial hash functions for structural analysis of billion-vertex chemical bond networks. <i>Computer Physics Communications</i> , <b>2006</b> , 175, 339-347	4.2	14
8	Brittle dynamic fracture of crystalline cubic silicon carbide (3C-SiC) via molecular dynamics simulation. <i>Journal of Applied Physics</i> , <b>2005</b> , 98, 103524	2.5	79
7	Short- and intermediate-range structural correlations in amorphous silicon carbide: A molecular dynamics study. <i>Physical Review B</i> , <b>2004</b> , 70,	3.3	59
6	Molecular dynamics study of structural, mechanical, and vibrational properties of crystalline and amorphous Ga <sub>1-x</sub> In <sub>x</sub> As alloys. <i>Journal of Applied Physics</i> , <b>2003</b> , 94, 3840-3848	2.5	27
5	Structural, mechanical, and vibrational properties of Ga <sub>1-x</sub> In <sub>x</sub> As alloys: A molecular dynamics study. <i>Applied Physics Letters</i> , <b>2003</b> , 82, 1057-1059	3.4	24
4	Melting and orientational order of the screened Wigner crystal on helium films. <i>Physical Review B</i> , <b>2001</b> , 64,	3.3	9
3	. <i>IEEE Transactions on Electron Devices</i> , <b>2000</b> , 47, 1804-1810	2.9	15
2	Large deformation and amorphization of Ni nanowires under uniaxial strain: A molecular dynamics study. <i>Physical Review B</i> , <b>2000</b> , 62, 16950-16955	3.3	173
1	Molecular-dynamics studies of charge complexes in liquid helium. <i>Computational and Theoretical Chemistry</i> , <b>1999</b> , 464, 87-93		

