

# Walter Jos Botta

## List of Publications by Citations

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295  
papers

5,238  
citations

34  
h-index

52  
g-index

305  
ext. papers

6,034  
ext. citations

4.1  
avg, IF

5.76  
L-index

#	Paper	IF	Citations
295	Excess free volume in metallic glasses measured by X-ray diffraction. <i>Acta Materialia</i> , <b>2005</b> , 53, 1611-1619	4.4	313
294	Improvement in H-sorption kinetics of MgH <sub>2</sub> powders by using Fe nanoparticles generated by reactive FeF <sub>3</sub> addition. <i>Scripta Materialia</i> , <b>2005</b> , 52, 719-724	5.6	146
293	Shear delocalization and crack blunting of a metallic glass containing nanoparticles: In situ deformation in TEM analysis. <i>Scripta Materialia</i> , <b>2006</b> , 54, 1829-1834	5.6	109
292	An investigation of hydrogen storage in a magnesium-based alloy processed by equal-channel angular pressing. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 8306-8312	6.7	81
291	High Strength AA7050 Al alloy processed by ECAP: Microstructure and mechanical properties. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2011</b> , 528, 5804-5811	5.3	72
290	Nanoscale Grain Refinement and H-Sorption Properties of MgH <sub>2</sub> Processed by High-Pressure Torsion and Other Mechanical Routes. <i>Advanced Engineering Materials</i> , <b>2010</b> , 12, 786-792	3.5	70
289	Plasticity induced by nanoparticle dispersions in bulk metallic glasses. <i>Journal of Non-Crystalline Solids</i> , <b>2007</b> , 353, 327-331	3.9	70
288	Topological instability as a criterion for design and selection of aluminum-based glass-former alloys. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 211904	3.4	68
287	Structural characterization and dehydrogenation behavior of Mg <sub>5</sub> at.%Nb nano-composite processed by reactive milling. <i>Journal of Alloys and Compounds</i> , <b>2004</b> , 376, 251-256	5.7	67
286	H-sorption in MgH <sub>2</sub> nanocomposites containing Fe or Ni with fluorine. <i>Journal of Alloys and Compounds</i> , <b>2005</b> , 404-406, 409-412	5.7	66
285	Corrosion resistance of Fe-based amorphous alloys. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 586, S105-S110	4.9	65
284	Microstructure and wear behavior of Fe-based amorphous HVOF coatings produced from commercial precursors. <i>Surface and Coatings Technology</i> , <b>2017</b> , 309, 938-944	4.4	64
283	Influence of processing parameters on the fabrication of a Cu-Al-Ni-Mn shape-memory alloy by selective laser melting. <i>Additive Manufacturing</i> , <b>2016</b> , 11, 23-31	6.1	61
282	Hydrogen-induced phase transition of MgZrTiFe <sub>0.5</sub> Co <sub>0.5</sub> Ni <sub>0.5</sub> high entropy alloy. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 1702-1708	6.7	60
281	Microstructure evolution and mechanical properties of Al <sub>70</sub> Zn <sub>10</sub> Mg <sub>10</sub> Ti alloy reprocessed by spray-forming and heat treated at peak aged condition. <i>Journal of Alloys and Compounds</i> , <b>2013</b> , 579, 169-173	5.7	56
280	Improving H-sorption in MgH <sub>2</sub> powders by addition of nanoparticles of transition metal fluoride catalysts and mechanical alloying. <i>Journal of Alloys and Compounds</i> , <b>2005</b> , 389, 270-274	5.7	54
279	Mg alloy for hydrogen storage processed by SPD. <i>International Journal of Materials Research</i> , <b>2009</b> , 100, 1739-1746	0.5	53

278	Correlation between hydrogen storage properties and textures induced in magnesium through ECAP and cold rolling. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 3810-3821	6.7	49
277	Nanostructured composites obtained by reactive milling. <i>Scripta Materialia</i> , <b>2001</b> , 44, 1735-1740	5.6	49
276	Nanostructured MgH <sub>2</sub> prepared by cold rolling and cold forging. <i>Journal of Alloys and Compounds</i> , <b>2011</b> , 509, S444-S448	5.7	47
275	Consolidation of partially amorphous aluminium-alloy powders by severe plastic deformation. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2004</b> , 375-377, 936-941	5.3	47
274	Iron and niobium based additives in magnesium hydride: Microstructure and hydrogen storage properties. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 6810-6819	6.7	46
273	Microstructure evolution in copper under severe plastic deformation detected by in situ X-ray diffraction using monochromatic synchrotron light. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2009</b> , 503, 10-13	5.3	46
272	Corrosion properties of Fe <sub>70</sub> Nb <sub>30</sub> amorphous alloys and coatings. <i>Surface and Coatings Technology</i> , <b>2014</b> , 254, 238-243	4.4	42
271	Mechanical activation of TiFe for hydrogen storage by cold rolling under inert atmosphere. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 2913-2918	6.7	39
270	Formation of Fe-based glassy matrix composite coatings by laser processing. <i>Surface and Coatings Technology</i> , <b>2014</b> , 240, 336-343	4.4	39
269	Magnetic properties of spray-formed Fe <sub>80</sub> .5%Si and Fe <sub>80</sub> .5%Si <sub>10</sub> .0%Al after rolling and heat treatment. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2008</b> , 320, e653-e656	2.8	39
268	Magnetic properties evaluation of spray formed and rolled Fe <sub>80</sub> .5wt.% Si <sub>10</sub> .0wt.% Al alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2007</b> , 449-451, 375-377	5.3	38
267	Microstructure and mechanical properties of spray deposited hypoeutectic AlBi alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2004</b> , 375-377, 577-580	5.3	37
266	Sliding wear of spray-formed high-chromium white cast iron alloys. <i>Wear</i> , <b>2005</b> , 259, 445-452	3.5	37
265	Metastable phases in Zr-based bulk glass-forming alloys detected using a synchrotron beam in transmission. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2001</b> , 304-306, 34-38	5.3	37
264	Hydrogen storage properties of pure Mg after the combined processes of ECAP and cold-rolling. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 586, S405-S408	5.7	36
263	Topological instability and electronegativity effects on the glass-forming ability of metallic alloys. <i>Philosophical Magazine Letters</i> , <b>2008</b> , 88, 785-791	1	35
262	Reaction sintering of titanium carbide and titanium silicide prepared by high-energy milling. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2002</b> , 336, 202-208	5.3	35
261	Homogenization of plastic deformation in metallic glass foils less than one micrometer thick. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	34

260	Glass forming ability of the AlCeNi system. <i>Journal of Non-Crystalline Solids</i> , <b>2008</b> , 354, 4874-4877	3.9	34
259	Reassessment of the effects of Ce on quasicrystal formation and microstructural evolution in rapidly solidified AlMn alloys. <i>Acta Materialia</i> , <b>2015</b> , 98, 221-228	8.4	33
258	Al <sub>2</sub> O <sub>3</sub> /WC synthesis by high-energy reactive milling. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2007</b> , 464, 47-51	5.3	33
257	Effects of equal-channel angular pressing and accumulative roll-bonding on hydrogen storage properties of a commercial ZK60 magnesium alloy. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 16971-16976	6.7	32
256	Partial crystallization and corrosion resistance of amorphous Fe-Cr-M-B (M = Mo, Nb) alloys. <i>Journal of Non-Crystalline Solids</i> , <b>2010</b> , 356, 2651-2657	3.9	32
255	Cold rolling of MgH <sub>2</sub> powders containing different additives. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 16193-16198	6.7	31
254	Corrosion and wear properties of FeCrMnCoSi HVOF coatings. <i>Surface and Coatings Technology</i> , <b>2019</b> , 357, 993-1003	4.4	31
253	Crystallisation behaviours of Al-based metallic glasses: Compositional and topological aspects. <i>Journal of Alloys and Compounds</i> , <b>2009</b> , 483, 89-93	5.7	30
252	Reduced electronegativity difference as a factor leading to the formation of Al-based glassy alloys with a large supercooled liquid region of 50K. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 011911	3.4	30
251	Crystallization behavior of amorphous Al <sub>84</sub> Y <sub>9</sub> Ni <sub>5</sub> Co <sub>2</sub> alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2001</b> , 304-306, 332-337	5.3	30
250	Amorphous phase formation in spray deposited AlYNiCo and AlYNiCoZr alloys. <i>Scripta Materialia</i> , <b>2001</b> , 44, 1625-1628	5.6	30
249	Mg-Zn-Ca amorphous alloys for application as temporary implant: Effect of Zn content on the mechanical and corrosion properties. <i>Materials and Design</i> , <b>2016</b> , 110, 188-195	8.1	30
248	Design of wear resistant boron-modified supermartensitic stainless steel by spray forming process. <i>Materials and Design</i> , <b>2015</b> , 83, 214-223	8.1	29
247	Wear resistant coatings of boron-modified stainless steels deposited by Plasma Transferred Arc. <i>Surface and Coatings Technology</i> , <b>2016</b> , 302, 255-264	4.4	29
246	Topological Instability as a Criterion for Design and Selection of Easy Glass-Former Compositions in Cu-Zr Based Systems. <i>Materials Transactions</i> , <b>2007</b> , 48, 1739-1742	1.3	29
245	Laser surface remelting of a Cu-Al-Ni-Mn shape memory alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2016</b> , 661, 61-67	5.3	29
244	Microstructural investigation of FeCrNbB amorphous/nanocrystalline coating produced by HVOF. <i>Materials and Design</i> , <b>2016</b> , 111, 608-615	8.1	28
243	Osteoblasts behavior on chemically treated commercially pure titanium surfaces. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2014</b> , 102, 1816-22	5.4	28

242	Amorphous phase formation during spray forming of Al <sub>84</sub> Y <sub>3</sub> Ni <sub>8</sub> Co <sub>4</sub> Zr <sub>1</sub> alloy. <i>Journal of Non-Crystalline Solids</i> , <b>2001</b> , 284, 134-138	3.9	28
241	Spray forming of Cu <sub>1</sub> 1.85Al <sub>0.2</sub> Ni <sub>0.2</sub> Mn (wt%) shape memory alloy. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 615, S602-S606	5.7	27
240	Phase Formation, Thermal Stability and Mechanical Properties of a Cu-Al-Ni-Mn Shape Memory Alloy Prepared by Selective Laser Melting. <i>Materials Research</i> , <b>2015</b> , 18, 35-38	1.5	27
239	Degradation of biodegradable implants: The influence of microstructure and composition of Mg-Zn-Ca alloys. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 774, 168-181	5.7	27
238	Synthesis and hydrogen storage behavior of Mg <sub>0.4</sub> Al <sub>0.4</sub> Cr <sub>0.4</sub> Ni high entropy alloys. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 2351-2361	6.7	27
237	Gene expression of human osteoblasts cells on chemically treated surfaces of Ti-6Al-4V-ELI. <i>Materials Science and Engineering C</i> , <b>2015</b> , 51, 248-55	8.3	26
236	Cold rolling under inert atmosphere: A powerful tool for Mg activation. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 4959-4965	6.7	26
235	Nanomaterials by severe plastic deformation: review of historical developments and recent advances. <i>Materials Research Letters</i> , <b>2022</b> , 10, 163-256	7.4	26
234	Formation, stability and ultrahigh strength of novel nanostructured alloys by partial crystallization of high-entropy (Fe <sub>0.25</sub> Co <sub>0.25</sub> Ni <sub>0.25</sub> Cr <sub>0.125</sub> Mo <sub>0.125</sub> ) <sub>86-89</sub> B <sub>11-14</sub> amorphous phase. <i>Acta Materialia</i> , <b>2019</b> , 170, 50-61	8.4	25
233	Thermodynamic analysis of the effect of annealing on the thermal stability of a Cu <sub>0.1</sub> Al <sub>0.1</sub> Ni <sub>0.1</sub> Mn shape memory alloy. <i>Thermochimica Acta</i> , <b>2015</b> , 608, 1-6	2.9	25
232	Atomization and Selective Laser Melting of a Cu-Al-Ni-Mn Shape Memory Alloy. <i>Materials Science Forum</i> , <b>2014</b> , 802, 343-348	0.4	25
231	Topological instability, average electronegativity difference and glass forming ability of amorphous alloys. <i>Intermetallics</i> , <b>2009</b> , 17, 183-185	3.5	24
230	Evolution of the texture of spray-formed Fe <sub>8</sub> .5wt.% Si <sub>0.0</sub> wt.% Al alloy during warm-rolling. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2007</b> , 449-451, 854-857	5.3	24
229	Phases formed during crystallization of Zr <sub>55</sub> Al <sub>10</sub> Ni <sub>5</sub> Cu <sub>30</sub> metallic glass containing oxygen. <i>Journal of Non-Crystalline Solids</i> , <b>2002</b> , 304, 51-55	3.9	24
228	Crystallization of Fe-based amorphous alloys. <i>Journal of Non-Crystalline Solids</i> , <b>1999</b> , 247, 19-25	3.9	24
227	Phase transformation and shape memory effect of a Cu-Al-Ni-Mn-Nb high temperature shape memory alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2016</b> , 663, 64-68	5.3	24
226	Surface anodization of the biphasic Ti <sub>13</sub> Nb <sub>13</sub> Zr biocompatible alloy: Influence of phases on the formation of TiO <sub>2</sub> nanostructures. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 796, 93-102	5.7	23
225	Processing of Al matrix composites reinforced with Al <sub>3</sub> Ni compounds and Al <sub>2</sub> O <sub>3</sub> by reactive milling and reactive sintering. <i>Journal of Alloys and Compounds</i> , <b>2009</b> , 471, 448-452	5.7	23

224	Unusual room temperature ductility of glassy copper-zirconium caused by nanoparticle dispersions that grow during shear. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2007</b> , 449-451, 105-110	5.3	23
223	Microstructure and wear resistance of spray formed high chromium white cast iron. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2004</b> , 375-377, 589-594	5.3	23
222	Production and Corrosion Resistance of Thermally Sprayed Fe-Based Amorphous Coatings from Mechanically Milled Feedstock Powders. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2018</b> , 49, 4860-4870	2.3	23
221	Electrochemical impedance analysis of TiO <sub>2</sub> nanotube porous layers based on an alternative representation of impedance data. <i>Journal of Electroanalytical Chemistry</i> , <b>2015</b> , 737, 54-64	4.1	22
220	Microstructure study of Al 7050 alloy reprocessed by spray forming and hot-extrusion and aged at 121°C. <i>Intermetallics</i> , <b>2013</b> , 43, 182-187	3.5	22
219	Synthesis and hydrogen sorption properties of Mg <sub>2</sub> FeH <sub>6</sub> /MgH <sub>2</sub> nanocomposite prepared by reactive milling. <i>Journal of Alloys and Compounds</i> , <b>2012</b> , 536, S250-S254	5.7	22
218	Structural, mechanical and thermal characterization of an Al-Co-Fe-Cr alloy for wear and thermal barrier coating applications. <i>Surface and Coatings Technology</i> , <b>2017</b> , 319, 241-248	4.4	21
217	Severely deformed ZK60 + 2.5% Mn alloy for hydrogen storage produced by two different processing routes. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 11284-11292	6.7	21
216	MgH <sub>2</sub> + FeNb nanocomposites for hydrogen storage. <i>Materials Chemistry and Physics</i> , <b>2014</b> , 147, 557-562	4.4	21
215	Processing and characterization of amorphous magnesium based alloy for application in biomedical implants. <i>Journal of Materials Research and Technology</i> , <b>2014</b> , 3, 203-209	5.5	21
214	MgH <sub>2</sub> -based nanocomposites prepared by short-time high energy ball milling followed by cold rolling: A new processing route. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 4404-4413	6.7	21
213	Microstructural characterization of a laser remelted coating of Al <sub>91</sub> Fe <sub>4</sub> Cr <sub>3</sub> Ti <sub>2</sub> quasicrystalline alloy. <i>Scripta Materialia</i> , <b>2009</b> , 61, 709-712	5.6	21
212	Spray forming of glass former Fe <sub>63</sub> Nb <sub>10</sub> Al <sub>4</sub> Si <sub>3</sub> B <sub>20</sub> alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2007</b> , 449-451, 884-889	5.3	21
211	Anelastic behaviour in Nb-Ti alloys containing interstitial elements. <i>Journal of Alloys and Compounds</i> , <b>1994</b> , 211-212, 37-40	5.7	21
210	Fabrication of Al-matrix composite reinforced with quasicrystals using conventional metallurgical fabrication methods. <i>Scripta Materialia</i> , <b>2019</b> , 173, 21-25	5.6	20
209	Nanoquasicrystalline Al <sub>88</sub> Fe <sub>8</sub> Nb alloys produced by powder metallurgy. <i>Journal of Alloys and Compounds</i> , <b>2013</b> , 577, 650-657	5.7	20
208	Severe plastic deformation of Mg-Fe powders to produce bulk hydrides. <i>Journal of Physics: Conference Series</i> , <b>2009</b> , 144, 012015	0.3	20
207	Processing of aluminium alloys containing titanium addition by mechanical alloying. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2004</b> , 375-377, 1201-1205	5.3	20



206	Application of mathematical simulation and the factorial design method to the optimization of the atomization stage in the spray forming of a Cu $\beta$ % Zn alloy. <i>Journal of Materials Processing Technology</i> , <b>2000</b> , 102, 221-229	5.3	20
205	In situ crystallization of Zr <sub>55</sub> Cu <sub>30</sub> Al <sub>10</sub> Ni <sub>5</sub> bulk glass forming from the glassy and undercooled liquid states using synchrotron radiation. <i>Journal of Non-Crystalline Solids</i> , <b>1999</b> , 247, 31-34	3.9	20
204	Enhancement of Mechanical Properties of Aluminum and 2124 Aluminum Alloy by the Addition of Quasicrystalline Phases. <i>Materials Research</i> , <b>2016</b> , 19, 74-79	1.5	20
203	Effect of boron addition on the solidification sequence and microstructure of AlCoCrFeNi alloys. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 775, 1235-1243	5.7	20
202	H-sorption properties and structural evolution of Mg processed by severe plastic deformation. <i>Journal of Alloys and Compounds</i> , <b>2013</b> , 580, S187-S191	5.7	19
201	2MgBe alloys processed by hot-extrusion: Influence of processing temperature and the presence of MgO and MgH <sub>2</sub> on hydrogenation sorption properties. <i>Journal of Alloys and Compounds</i> , <b>2011</b> , 509, S460-S463	5.7	19
200	Amorphous phase formation in Fe-6.0wt%Si alloy by mechanical alloying. <i>Scripta Materialia</i> , <b>1999</b> , 42, 213-217	5.6	19
199	The formation of quasicrystals in Al-Cu-Fe-(M=Cr,Ni) melt-spun ribbons. <i>Journal of Alloys and Compounds</i> , <b>2018</b> , 731, 1288-1294	5.7	18
198	Microstructure and mechanical properties of spray deposited and extruded/heat treated hypoeutectic AlSi alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2007</b> , 449-451, 850-853	5.3	18
197	Synthesis of Al <sub>2</sub> O <sub>3</sub> /bC by reactive milling and production of nanocomposites. <i>Journal of Materials Processing Technology</i> , <b>2003</b> , 143-144, 185-190	5.3	18
196	Amorphous and nanostructured AlBeNd powders obtained by gas atomization. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2001</b> , 315, 89-97	5.3	18
195	Mechanical multiple relaxation spectra in Nb $\beta$ Ze $\beta$ O alloys. <i>Acta Metallurgica Et Materialia</i> , <b>1990</b> , 38, 391-396		18
194	Corrosion properties of amorphous, partially, and fully crystallized Fe <sub>68</sub> Cr <sub>8</sub> Mo <sub>4</sub> Nb <sub>4</sub> B <sub>16</sub> alloy. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 826, 154123	5.7	17
193	An alternative route to produce easily activated nanocrystalline TiFe powder. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 16107-16116	6.7	17
192	Wear and corrosion properties of HVOF coatings from Superduplex alloy modified with addition of boron. <i>Surface and Coatings Technology</i> , <b>2017</b> , 309, 911-919	4.4	17
191	Microstructure and mechanical properties of AlSiMg ribbons. <i>Journal of Alloys and Compounds</i> , <b>2010</b> , 495, 386-390	5.7	17
190	Effect of Cr addition on the formation of the decagonal quasicrystalline phase of a rapidly solidified Al-Ni-Co alloy. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 707, 41-45	5.7	16
189	Mg-containing multi-principal element alloys for hydrogen storage: A study of the MgTiNbCr <sub>0.5</sub> Mn <sub>0.5</sub> Ni <sub>0.5</sub> and Mg <sub>0.68</sub> TiNbNi <sub>0.55</sub> compositions. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 19539-19552	6.7	16

188	Fast hydrogen absorption/desorption kinetics in reactive milled Mg-8 mol% Fe nanocomposites. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 12408-12418	6.7	16
187	Hydrogen storage in heavily deformed ZK60 alloy modified with 2.5 wt.% Mn addition. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 4177-4184	6.7	16
186	Hydrogen storage properties of MgH <sub>2</sub> processed by cold forging. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 615, S719-S724	5.7	16
185	The formation of quasicrystal phase in Al-Cu-Fe system by mechanical alloying. <i>Materials Research</i> , <b>2012</b> , 15, 749-752	1.5	16
184	Ordered phases and texture in spray-formed Fe- $\beta$ wt%Si. <i>Journal of Alloys and Compounds</i> , <b>2011</b> , 509, S260-S264	5.7	16
183	Crystallisation behaviour and glass-forming ability in Al-Cu-Ni system. <i>Journal of Alloys and Compounds</i> , <b>2010</b> , 495, 334-337	5.7	16
182	Microstructural characterization and hydrogenation study of extruded MgFe alloy. <i>Journal of Alloys and Compounds</i> , <b>2010</b> , 504, S299-S301	5.7	16
181	Out-of-plane magnetic patterning based on indentation-induced nanocrystallization of a metallic glass. <i>Small</i> , <b>2010</b> , 6, 1543-9	11	16
180	Glass transition T <sub>g</sub> , thermal expansion, and quenched-in free volume $\Delta V_f$ in pyrex glass measured by time-resolved X-ray diffraction. <i>Journal of Alloys and Compounds</i> , <b>2005</b> , 388, L1-L3	5.7	16
179	Thermodynamic predictions for the formation of ceramic-metal composite by self-propagating high-temperature synthesis. <i>Journal of Materials Science Letters</i> , <b>1991</b> , 10, 819-823		16
178	Room temperature hydrogen absorption by Mg and Mg-TiFe nanocomposites processed by high-energy ball milling. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 12251-12259	6.7	16
177	Hydrogen storage in MgH <sub>2</sub> -LaNi <sub>5</sub> composites prepared by cold rolling under inert atmosphere. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 13348-13355	6.7	16
176	Single step fabrication by spray forming of large volume Al-based composites reinforced with quasicrystals. <i>Scripta Materialia</i> , <b>2020</b> , 181, 86-91	5.6	15
175	Wear-resistant boride reinforced steel coatings produced by non-vacuum electron beam cladding. <i>Surface and Coatings Technology</i> , <b>2020</b> , 386, 125466	4.4	15
174	Hydrogen Storage in Mg and Mg-Based Alloys and Composites Processed by Severe Plastic Deformation. <i>Materials Transactions</i> , <b>2019</b> , 60, 1561-1570	1.3	15
173	Surface chemical treatment of ultrafine-grained Ti-3Al-1Nb alloy processed by severe plastic deformation. <i>Journal of Alloys and Compounds</i> , <b>2015</b> , 643, S241-S245	5.7	15
172	Metastable phases, quasicrystals and solid solutions in Zr-based bulk glass-forming alloys. <i>Scripta Materialia</i> , <b>2001</b> , 44, 1239-1244	5.6	15
171	Fe-Ni-B-based metallic glasses with fcc crystallisation products. <i>Journal of Non-Crystalline Solids</i> , <b>2002</b> , 304, 44-50	3.9	15



170	Structural characterization and hydrogen storage properties of MgH <sub>2</sub> /Mg <sub>2</sub> CoH <sub>5</sub> nanocomposites. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 14593-14601	6.7	14
169	Formation and stability of complex metallic phases including quasicrystals explored through combinatorial methods. <i>Scientific Reports</i> , <b>2019</b> , 9, 7136	4.9	14
168	Predicting the Formation of Intermetallic Phases in the Al-Si-Fe System with Mn Additions. <i>Journal of Phase Equilibria and Diffusion</i> , <b>2017</b> , 38, 298-304	1	14
167	High-Yield Direct Synthesis of Mg <sub>2</sub> FeH <sub>6</sub> from the Elements by Reactive Milling. <i>Solid State Phenomena</i> , <b>2011</b> , 170, 259-262	0.4	14
166	Electromechanical shaping, assembly and engraving of bulk metallic glasses. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2004</b> , 375-377, 227-234	5.3	14
165	Microstructure and wear resistance of spray-formed supermartensitic stainless steel. <i>Materials Research</i> , <b>2013</b> , 16, 642-646	1.5	14
164	Wear and Corrosion Performance of Al-Cu-Fe-(Cr) Quasicrystalline Coatings Produced by HVOF. <i>Journal of Thermal Spray Technology</i> , <b>2020</b> , 29, 1195-1207	2.5	14
163	Controlled mechanochemical synthesis and hydrogen desorption mechanisms of nanostructured Mg <sub>2</sub> CoH <sub>5</sub> . <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 1504-1515	6.7	13
162	Effect of cold rolling on the structure and hydrogen properties of AZ91 and AM60D magnesium alloys processed by ECAP. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 21822-21831	6.7	13
161	Design of TiVNb-(Cr, Ni or Co) multicomponent alloys with the same valence electron concentration for hydrogen storage. <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 865, 158767	5.7	13
160	Hydrogen storage properties of 2MgFe after the combined processes of hot extrusion and cold rolling. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 586, S409-S412	5.7	12
159	Microstructural characterization of Ti-6Al-7Nb alloy after severe plastic deformation. <i>Materials Research</i> , <b>2012</b> , 15, 786-791	1.5	12
158	Magnesium-Nickel alloy for hydrogen storage produced by melt spinning followed by cold rolling. <i>Materials Research</i> , <b>2012</b> , 15, 813-817	1.5	12
157	Laser remelting of Al <sub>91</sub> Fe <sub>4</sub> Cr <sub>3</sub> Ti <sub>2</sub> quasicrystalline phase former alloy. <i>Journal of Alloys and Compounds</i> , <b>2010</b> , 495, 646-649	5.7	12
156	Spray forming of the glass former Fe <sub>83</sub> Zr <sub>3.5</sub> Nb <sub>3.5</sub> B <sub>9</sub> Cu <sub>1</sub> alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2004</b> , 375-377, 571-576	5.3	12
155	Heat treatment of amorphous Al <sub>90</sub> Fe <sub>5</sub> Nd <sub>5</sub> and Al <sub>88</sub> FeNi <sub>6</sub> Nd <sub>5</sub> alloys. <i>Journal of Non-Crystalline Solids</i> , <b>2000</b> , 273, 266-270	3.9	12
154	Effects of friction stir processing on hydrogen storage of ZK60 alloy. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 11085-11091	6.7	12
153	Nanoporous titanium obtained from a spinodally decomposed Ti alloy. <i>Microporous and Mesoporous Materials</i> , <b>2016</b> , 222, 23-26	5.3	11

152	Processing of MgH <sub>2</sub> by extensive cold rolling under protective atmosphere. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 2201-2208	6.7	11
151	Effect of iron on the microstructure and mechanical properties of the spray-formed and rotary-swaged 319 aluminum alloy. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2019</b> , 102, 3879-3894	3.2	11
150	Designing new quasicrystalline compositions in Al-based alloys. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 823, 153765	5.7	11
149	Characterization of hydrogen storage properties of Mg-Fe-CNT composites prepared by ball milling, hot-extrusion and severe plastic deformation methods. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 23092-23098	6.7	11
148	Formation of Metallic Glass Coatings by Detonation Spraying of a Fe <sub>66</sub> Cr <sub>10</sub> Nb <sub>5</sub> B <sub>19</sub> Powder. <i>Metals</i> , <b>2019</b> , 9, 846	2.3	11
147	The role of yttrium and oxygen on the crystallization behavior of a Cu <sub>47</sub> Al metallic glass. <i>Journal of Non-Crystalline Solids</i> , <b>2014</b> , 406, 79-87	3.9	11
146	Low temperature rolling of AZ91 alloy for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 29394-29405	6.7	11
145	Mechanochemistry and H-sorption properties of Mg <sub>2</sub> FeH <sub>6</sub> -based nanocomposites. <i>International Journal of Materials Research</i> , <b>2012</b> , 103, 1147-1154	0.5	11
144	Nanostructured MgH <sub>2</sub> obtained by cold rolling combined with short-time high-energy ball milling. <i>Materials Research</i> , <b>2013</b> , 16, 158-163	1.5	11
143	Hydrogen Activation Behavior of Commercial Magnesium Processed by Different Severe Plastic Deformation Routes. <i>Materials Science Forum</i> , <b>2010</b> , 667-669, 1047-1051	0.4	11
142	Mechanical behavior under nanoindentation of a new Ni-based glassy alloy produced by melt-spinning and copper mold casting. <i>Journal of Non-Crystalline Solids</i> , <b>2010</b> , 356, 2251-2257	3.9	11
141	Thermodynamic and topological instability approaches for forecasting glass-forming ability in the ternary AlNi <sub>3</sub> system. <i>Journal of Alloys and Compounds</i> , <b>2008</b> , 464, 118-121	5.7	11
140	In-situ crystallization of amorphous Fe <sub>73</sub> Nb <sub>x</sub> Al <sub>4</sub> Si <sub>3</sub> B <sub>20</sub> alloys through synchrotron radiation. <i>Journal of Non-Crystalline Solids</i> , <b>2006</b> , 352, 3404-3409	3.9	11
139	Wear Resistant Duplex Stainless Steels Produced by Spray Forming. <i>Metals and Materials International</i> , <b>2019</b> , 25, 456-464	2.4	11
138	Severe plastic deformation and different surface treatments on the biocompatible Ti <sub>13</sub> Nb <sub>13</sub> Zr and Ti <sub>35</sub> Nb <sub>7</sub> Zr <sub>5</sub> Ta alloys: Microstructural and phase evolutions, mechanical properties, and bioactivity analysis. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 812, 152116	5.7	11
137	Challenges in optimizing the resistance to corrosion and wear of amorphous Fe-Cr-Nb-B alloy containing crystalline phases. <i>Journal of Non-Crystalline Solids</i> , <b>2021</b> , 555, 120537	3.9	11
136	Characterization and Corrosion Resistance of Boron-Containing-Austenitic Stainless Steels Produced by Rapid Solidification Techniques. <i>Materials</i> , <b>2018</b> , 11,	3.5	11
135	Selection of good glass former compositions in Ni <sub>40</sub> system using a combination of topological instability and thermodynamic criteria. <i>Journal of Non-Crystalline Solids</i> , <b>2008</b> , 354, 1932-1935	3.9	10

134	Phase separation and nanocrystallization in Al <sub>92</sub> Sm <sub>8</sub> metallic glass. <i>Philosophical Magazine</i> , <b>2006</b> , 86, 4235-4242	1.6	10
133	Design and production of Al-Mn-Ce alloys with tailored properties. <i>Materials and Design</i> , <b>2016</b> , 110, 436-448	4.48	10
132	Recent developments on fabrication of Al-matrix composites reinforced with quasicrystals: From metastable to conventional processing. <i>Journal of Materials Research</i> , <b>2021</b> , 36, 281-297	2.5	10
131	Changing the solidification sequence and the morphology of iron-containing intermetallic phases in AA6061 aluminum alloy processed by spray forming. <i>Materials Characterization</i> , <b>2018</b> , 145, 507-515	3.9	10
130	Microstructure and mechanical behavior of Al <sub>92</sub> Fe <sub>3</sub> Cr <sub>2</sub> X <sub>3</sub> (X = Ce, Mn, Ti, and V) alloys processed by centrifugal force casting. <i>Journal of Materials Research and Technology</i> , <b>2019</b> , 8, 2092-2097	5.5	9
129	Insight into the complex ternary phase behavior in Al-Mn-Ce alloys. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 727, 460-468	5.7	9
128	Topological instability and glass forming ability of AlNiBm alloys. <i>Journal of Alloys and Compounds</i> , <b>2011</b> , 509, S141-S144	5.7	9
127	Amorphous phase formation by spray forming of alloys [(Fe <sub>0.6</sub> Co <sub>0.4</sub> ) <sub>0.75</sub> B <sub>0.2</sub> Si <sub>0.05</sub> ] <sub>96</sub> Nb <sub>4</sub> and Fe <sub>66</sub> B <sub>30</sub> Nb <sub>4</sub> modified with Ti. <i>Journal of Alloys and Compounds</i> , <b>2011</b> , 509, S148-S154	5.7	9
126	Prediction of good glass formers in the Al-Ni-La and Al-Ni-Gd systems using topological instability and electronegativity. <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 093509	2.5	9
125	Glass transition, thermal expansion and relaxation in B <sub>2</sub> O <sub>3</sub> glass measured by time-resolved X-ray diffraction. <i>Journal of Non-Crystalline Solids</i> , <b>2008</b> , 354, 325-327	3.9	9
124	Rapidly solidified Al <sub>92</sub> Fe <sub>3</sub> Cr <sub>2</sub> Mn <sub>3</sub> alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2007</b> , 449-451, 1057-1061	5.3	9
123	Microstructures and mechanical properties of bulk AlFeNd(Cu,Si) alloys obtained through centrifugal force casting. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2007</b> , 452-453, 161-169	5.3	9
122	Microstructure and mechanical properties of spray co-deposited Al <sub>89</sub> wt.% Si <sub>8.2</sub> wt.% Cu <sub>0.9</sub> wt.% Fe+(Al <sub>8</sub> wt.% Mn <sub>8</sub> wt.% Si) <sub>p</sub> composite. <i>Journal of Alloys and Compounds</i> , <b>2007</b> , 434-435, 371-374	5.7	9
121	Directional and rapid solidification of Al <sub>89</sub> wt.% Ni <sub>8.2</sub> wt.% Si <sub>8.2</sub> wt.% ternary eutectic alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2004</b> , 375-377, 565-570	5.3	9
120	Improved ball milling method for the synthesis of nanocrystalline TiFe compound ready to absorb hydrogen. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 2084-2093	6.7	9
119	Wear Resistance of Boron-Modified Supermartensitic Stainless Steel Coatings Produced by High-Velocity Oxygen Fuel Process. <i>Journal of Thermal Spray Technology</i> , <b>2019</b> , 28, 2003-2014	2.5	9
118	Assessing technological developments in amorphous/glassy metallic alloys using patent indicators. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 716, 330-335	5.7	8
117	Mechanical spectroscopy study on the Cu <sub>54</sub> Zr <sub>40</sub> Al <sub>6</sub> amorphous matrix alloy at low temperature. <i>Journal of Alloys and Compounds</i> , <b>2015</b> , 621, 319-323	5.7	8

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115	Residual glass and crystalline phases in a barium disilicate glass/ceramic. <i>Materials Characterization</i> , <b>2015</b> , 110, 192-196	3.9	8
114	Formation reaction of Mg <sub>2</sub> FeH <sub>6</sub> : effect of hydrogen absorption/desorption kinetics. <i>Materials Research</i> , <b>2013</b> , 16, 1373-1378	1.5	8
113	Glass formation of alloys selected by lambda and electronegativity criteria in the Ti-Zr-Be-Co system. <i>Journal of Alloys and Compounds</i> , <b>2010</b> , 495, 316-318	5.7	8
112	Processing of glass former alloys by spray forming. <i>Materialwissenschaft Und Werkstofftechnik</i> , <b>2010</b> , 41, 513-523	0.9	8
111	Solution hardening and softening of Nb-Zr single crystals. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , <b>1988</b> , 57, 703-716		8
110	Mg-based Nanocomposites for Hydrogen Storage Containing Ti-Cr-V Alloys as Additives. <i>Materials Research</i> , <b>2016</b> , 19, 80-85	1.5	8
109	Microstructure formation and abrasive wear resistance of a boron-modified superduplex stainless steel produced by spray forming. <i>Journal of Materials Research</i> , <b>2016</b> , 31, 2987-2993	2.5	8
108	Corrosion resistance of WE43 Mg alloy in sodium chloride solution. <i>Materials Chemistry and Physics</i> , <b>2021</b> , 272, 124930	4.4	8
107	Electrochemical Corrosion Behavior of Spray-Formed Boron-Modified Supermartensitic Stainless Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2017</b> , 48, 2077-2089	2.3	7
106	FCC phase formation in immiscible Mg-Ni (magnesium-nickel) system by high-pressure torsion. <i>AIP Advances</i> , <b>2020</b> , 10, 055222	1.5	7
105	Formation, thermal stability and mechanical properties of high-entropy (Fe <sub>0.25</sub> Co <sub>0.25</sub> Ni <sub>0.25</sub> Cr <sub>0.125</sub> Mo <sub>0.0625</sub> Nb <sub>0.0625</sub> ) <sub>100-x</sub> B <sub>x</sub> (x = 7-4) amorphous alloys. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 825, 153858	5.7	7
104	Rapid solidification of an Al-5Ni alloy processed by spray forming. <i>Materials Research</i> , <b>2012</b> , 15, 779-785	1.5	7
103	Comparative study of nanoindentation on melt-spun ribbon and bulk metallic glass with Ni <sub>60</sub> Nb <sub>37</sub> B <sub>3</sub> composition. <i>Journal of Materials Research</i> , <b>2013</b> , 28, 2740-2746	2.5	7
102	Microstructural characterization of high-silicon iron alloys produced by spray forming and co-injection of Si particles. <i>Journal of Alloys and Compounds</i> , <b>2011</b> , 509, S254-S259	5.7	7
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99	Characterization of Glass Forming Alloy Fe <sub>43.2</sub> Co <sub>28.8</sub> B <sub>19.2</sub> Si <sub>4.8</sub> Nb <sub>4</sub> Processed by Spray Forming and Wedge Mold Casting Techniques. <i>Materials Science Forum</i> , <b>2011</b> , 691, 23-26	0.4	7

98	Correlation between heat- and deformation-induced crystallization of amorphous Al alloys. <i>Philosophical Magazine Letters</i> , <b>2008</b> , 88, 863-870	1	7
97	Effect of interstitial impurities on internal friction measurements in niobium. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2004</b> , 370, 131-134	5.3	7
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95	Synthesis of Ti-Nb alloys from elemental powders by high-energy ball milling and their hydrogenation features. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 18382-18391	6.7	7
94	Hydrogen storage properties of 2Mg-Fe mixtures processed by hot extrusion at different temperatures. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 11493-11500	6.7	6
93	Thermodynamic Calculations for the Investigation of Phase Formation in Boron-Modified Ferritic Stainless Steel. <i>Journal of Phase Equilibria and Diffusion</i> , <b>2017</b> , 38, 343-349	1	6
92	Effects of graphite addition and air exposure on ball-milled Mg-Al alloys for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 23257-23266	6.7	6
91	Synthesis of Nanostructured TiFe Hydrogen Storage Material by Mechanical Alloying via High-Pressure Torsion. <i>Advanced Engineering Materials</i> , <b>2020</b> , 22, 2000011	3.5	6
90	Ultrafine-Grained Ti-13Nb-13Zr Alloy Produced by Severe Plastic Deformation. <i>Materials Research</i> , <b>2017</b> , 20, 404-410	1.5	6
89	Development of Ultrafine-Grained Metals by Equal-Channel Angular Pressing <b>2014</b> , 187-209		6
88	Comparative study between two die cast methods for processing Cu <sub>40</sub> Zr <sub>60</sub> Al bulk metallic glasses. <i>Journal of Materials Research and Technology</i> , <b>2013</b> , 2, 125-129	5.5	6
87	Microstructure of a recycled AA7050 alloy processed by spray forming followed by hot extrusion and rotary swaging. <i>Materialwissenschaft Und Werkstofftechnik</i> , <b>2014</b> , 45, 568-573	0.9	6
86	Reactive Milling of Magnesium under Hydrogen Using Transition Metals and their Fluorides as Additives. <i>Solid State Phenomena</i> , <b>2012</b> , 194, 232-236	0.4	6
85	A synchrotron X-ray diffraction study of hydrogen storage and enhanced sorption kinetics in a mini-tank of Mg with crystalline and amorphous catalytic particle additions. <i>Journal of Alloys and Compounds</i> , <b>2012</b> , 540, 57-61	5.7	6
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83	2MgBe and 2MgBe+5%C mixtures processed by hot extrusion: Influence of carbon on hydrogen sorption properties. <i>Journal of Alloys and Compounds</i> , <b>2011</b> , 509, S464-S467	5.7	6
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81	Electromechanical engraving and writing on bulk metallic glasses. <i>Applied Physics Letters</i> , <b>2002</b> , 81, 16063-1608		6



80	Severe Plastic Deformation and Additive Distribution in Mg-Fe to Improve Hydrogen Storage Properties. <i>Materials Research</i> , <b>2017</b> , 20, 61-70	1.5	6
79	An approach to design single BCC Mg-containing high entropy alloys for hydrogen storage applications. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 25555-25561	6.7	6
78	Interaction between Fe <sub>66</sub> Cr <sub>10</sub> Nb <sub>5</sub> B <sub>19</sub> metallic glass and aluminum during spark plasma sintering. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2021</b> , 799, 140165	5.3	6
77	Thermodynamic modelling of hydrogen-multicomponent alloy systems: Calculating pressure-composition-temperature diagrams. <i>Acta Materialia</i> , <b>2021</b> , 215, 117070	8.4	6
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73	Tailoring the microstructure of recycled 319 aluminum alloy aiming at high ductility. <i>Journal of Materials Research and Technology</i> , <b>2019</b> , 8, 3539-3549	5.5	5
72	Formation and microstructure of Ni <sub>62-x</sub> Nb <sub>38</sub> Ti <sub>x</sub> (x = 3, 6, 10 at.%) bulk metallic glasses. <i>International Journal of Materials Research</i> , <b>2012</b> , 103, 1096-1101	0.5	5
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69	Shaping of Bulk Metallic Glasses by Simultaneous Application of Electrical Current and Low Stress. <i>Materials Research Society Symposia Proceedings</i> , <b>2000</b> , 644, 12201		5
68	The deformation of Nb single crystals at low temperatures. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , <b>1989</b> , 60, 205-225		5
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64	Synthesis by High-Energy Ball Milling of MgH <sub>2</sub> -TiFe Composites for Hydrogen Storage. <i>Materials Science Forum</i> , <b>2017</b> , 899, 13-18	0.4	4
63	Exploring several different routes to produce Mg- based nanomaterials for Hydrogen storage. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2014</b> , 63, 012115	0.4	4



62	Mechanical spectroscopy study of the Cu <sub>36</sub> Zr <sub>59</sub> Al <sub>5</sub> and Cu <sub>54</sub> Zr <sub>40</sub> Al <sub>6</sub> amorphous alloys. <i>Materials Research</i> , <b>2012</b> , 15, 1070-1074	1.5	4
61	Corrosion resistance and glass forming ability of Fe <sub>47</sub> Co <sub>7</sub> Cr <sub>15</sub> M <sub>9</sub> Si <sub>5</sub> B <sub>15</sub> Y <sub>2</sub> (M=Mo, Nb) amorphous alloys. <i>Materials Research</i> , <b>2013</b> , 16, 1294-1298	1.5	4
60	Effect of Dislocation Mechanisms during Extrusion of Nanostructured Aluminum Powder Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2009</b> , 40, 3322	2.3	4
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58	Influence of chromium concentration and partial crystallization on the corrosion resistance of FeCrNiB amorphous alloys. <i>Materials Characterization</i> , <b>2021</b> , 179, 111369	3.9	4
57	Corrosion resistant and tough multi-principal element Cr-Co-Ni alloys. <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 884, 161107	5.7	4
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51	A ceramic matrix composite obtained by highly exothermic reaction. <i>Journal of the European Ceramic Society</i> , <b>1992</b> , 9, 67-73	6	3
50	Effects of the Chromium Content in (TiVNb) <sub>100-x</sub> Cr <sub>x</sub> Body-Centered Cubic High Entropy Alloys Designed for Hydrogen Storage Applications. <i>Energies</i> , <b>2021</b> , 14, 3068	3.1	3
49	Hydrogen storage properties of filings of the ZK60 alloy modified with 2.5wt% mischmetal. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 5375-5383	6.7	3
48	On the ternary eutectic reaction in the Fe <sub>60</sub> Cr <sub>8</sub> Nb <sub>8</sub> B <sub>24</sub> quaternary alloy. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 707, 281-286	5.7	2
47	Experimental and thermodynamic investigation of the microstructural evolution of a boron-rich Fe-Cr-Nb-B alloy. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 713, 119-124	5.7	2
46	The effect of oxygen on the microstructural evolution in crystallized Cu <sub>47</sub> Zr <sub>53</sub> Al metallic glasses. <i>Intermetallics</i> , <b>2015</b> , 65, 51-55	3.5	2
45	Hydrogen storage properties of 2 Mg-Be mixtures processed by hot extrusion: Effect of ram speeds. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 20203-20212	6.7	2

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43	Atomic structure of bulk metallic glasses and their supercooled liquid states probed by high-energy synchrotron light. <i>Comptes Rendus Physique</i> , <b>2012</b> , 13, 218-226	1.4 2
42	Stability of an amorphous alloy of the Mm-Al-Ni-Cu system. <i>Materials Research</i> , <b>2012</b> , 15, 757-762	1.5 2
41	Processing and microstructural characterization of a Ti-Cr-Nb alloy synthesized by high-energy ball-milling. <i>Materials Research</i> , <b>2012</b> , 15, 753-756	1.5 2
40	Microstructure evolution of AA7050 Al alloy during Equal-Channel Angular Pressing. <i>Materials Research</i> , <b>2012</b> , 15, 732-738	1.5 2
39	Selection of new glass-forming compositions in Al <sub>2</sub> O <sub>3</sub> system using a combination of topological instability and thermodynamic criteria. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2009</b> , 512, 53-57	5.3 2
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37	Anelastic Relaxation Measurements in Nb-46wt%Ti Alloys with Interstitial Solutes in Solid Solution. <i>Solid State Phenomena</i> , <b>2012</b> , 184, 92-97	0.4 2
36	Diffusion of Interstitial Solutes in Nb-46wt% Ti Alloys Measured by Mechanical Spectroscopy. <i>Defect and Diffusion Forum</i> , <b>2012</b> , 326-328, 708-712	0.7 2
35	Influence of the atomization gas on the microstructure and magnetic properties of spray-formed Fe <sub>80</sub> Si <sub>10</sub> Al alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2008</b> , 477, 9-14	5.3 2
34	Microstructural Characterization of Spray Formed Al <sub>72</sub> Si <sub>14</sub> Fe <sub>14</sub> Alloy. <i>Journal of Metastable and Nanocrystalline Materials</i> , <b>2004</b> , 20-21, 659-664	0.2 2
33	Consolidation of Mechanically Alloyed Aluminium Matrix Composite Powders by Severe Plastic Deformation. <i>Journal of Metastable and Nanocrystalline Materials</i> , <b>2003</b> , 15-16, 307-312	0.2 2
32	On the B2 $\rightarrow$ fcc transformation of Fe <sub>80</sub> during deformation. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , <b>2000</b> , 80, 1779-1793	2
31	Hot Consolidation of Partially Amorphous Cu-Ti Based Alloy: a Comparison Between Hot Extrusion and Hot Compaction by Sintering. <i>Materials Research</i> , <b>2015</b> , 18, 448-452	1.5 2
30	Room temperature conversion of Mg to MgH <sub>2</sub> assisted by low fractions of additives. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> ,	6.7 2
29	Metallurgical processing of Mg alloys and MgH <sub>2</sub> for hydrogen storage. <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 162798	5.7 2
28	Functionally graded aluminum reinforced with quasicrystal approximant phases $\rightarrow$ Improving the wear resistance at high temperatures. <i>Wear</i> , <b>2020</b> , 462-463, 203507	3.5 2
27	Strong and ductile recycled Al-7Si-3Cu-1Fe alloy: Controlling the morphology of quasicrystal approximant $\phi$ phase by Mn and V addition. <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 888, 161508	5.7 2

26	Influence of Al Additions on the Microstructure and Mechanical Properties of a C and Si-Free High-Mn Steel. <i>Metals</i> , <b>2020</b> , 10, 352	2.3	1
25	Thermal Spraying Processes and Amorphous Alloys: Macro-Indicators of Patent Activity. <i>Materials Research</i> , <b>2017</b> , 20, 89-95	1.5	1
24	Study of Glass Forming on Cu <sub>60.0</sub> Zr <sub>32.5</sub> Ti <sub>7.5</sub> Alloy by Molecular Dynamics Simulation. <i>Materials Research</i> , <b>2018</b> , 21,	1.5	1
23	New Zr-based glass-forming alloys containing Gd and Sm. <i>Materials Research</i> , <b>2012</b> , 15, 723-727	1.5	1
22	Consolidation of the Cu <sub>46</sub> Zr <sub>42</sub> Al <sub>7</sub> Y <sub>5</sub> amorphous ribbons and powder alloy by hot extrusion. <i>Materials Research</i> , <b>2012</b> , 15, 728-738	1.5	1
21	Overspray Powder Characterization of Fe-Based Glassy Alloy. <i>Materials Science Forum</i> , <b>2012</b> , 727-728, 468-475	0.4	1
20	Consolidation of Easy Glass Former Zr <sub>55</sub> Cu <sub>30</sub> Al <sub>10</sub> Ni <sub>5</sub> Alloy Ribbons by Severe Plastic Deformation. <i>Journal of Metastable and Nanocrystalline Materials</i> , <b>2004</b> , 20-21, 253-256	0.2	1
19	The deformation of a model metal-ceramic material; Nb-ZrO <sub>2</sub> single crystals. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , <b>1989</b> , 59, 603-628		1
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17	Hydrogen absorption/desorption reactions of the (TiV Nb) <sub>85</sub> Cr <sub>15</sub> multicomponent alloy. <i>Journal of Alloys and Compounds</i> , <b>2022</b> , 901, 163620	5.7	1
16	Microstructure Characterization and Kinetics of Crystallization Behavior of Tubular Spray Formed Fe <sub>43.2</sub> Co <sub>28.8</sub> B <sub>19.2</sub> Si <sub>4.8</sub> Nb <sub>4</sub> Bulk Metallic Glass*. <i>HTM - Journal of Heat Treatment and Materials</i> , <b>2014</b> , 69, 312-321	0.7	1
15	A wear-resistant Al <sub>85</sub> Cu <sub>6</sub> Fe <sub>3</sub> Cr <sub>6</sub> spray-formed quasicrystalline composite. <i>Materialia</i> , <b>2022</b> , 101367	3.2	0
14	Recent developments on fabrication of Al-matrix composites reinforced with quasicrystals: From metastable to conventional processing. <i>Journal of Materials Research</i> , <b>2021</b> , 36, 1-17	2.5	0
13	Structural transformations of a gas-atomized Al <sub>62.5</sub> Cu <sub>25</sub> Fe <sub>12.5</sub> alloy during detonation spraying, spark plasma sintering and hot pressing. <i>Science of Sintering</i> , <b>2021</b> , 53, 379-386	0.7	0
12	Corrosion Resistant Boron-Modified Ferritic and Austenitic Stainless Steels Designed by CALPHAD. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2021</b> , 52, 2708-2719	3.3	0
11	Compositional influence on heating-induced clustered glass formation for multicomponent Zr <sub>55-60</sub> Al <sub>10</sub> (Co,Ni,Cu,Ag) <sub>30-35</sub> alloys. <i>Intermetallics</i> , <b>2021</b> , 135, 107233	3.5	0
10	Study on Cu <sub>48</sub> Zr <sub>43</sub> Al <sub>9</sub> and Cu <sub>54</sub> Zr <sub>40</sub> Al <sub>6</sub> Amorphous Matrix Alloys by Mechanical Spectroscopy. <i>Defect and Diffusion Forum</i> , <b>2015</b> , 365, 317-322	0.7	
9	Micro-structural characterization of supermartensitic stainless steel coating modified with boro processed by HVOF. <i>Microscopy and Microanalysis</i> , <b>2020</b> , 26, 97-98	0.5	

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7	Selection of compositions with high glass forming ability in the Ni-Nb-B alloy system. <i>Materials Research</i> , <b>2012</b> , 15, 718-722	1.5
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