Baran Sarac

List of Publications by Year in Descending Order

65 papers	888 citations	14 h-index	27 g-index
77 ext. papers	1,163 ext. citations	6.4 avg, IF	4.53 L-index

#	Paper	IF	Citations
65	Structure-dynamics relationships in cryogenically deformed bulk metallic glass.. *Nature Communications*, **2022**, 13, 127	17.4	3
64	Multilayer crystal-amorphous Pd-based nanosheets on Si/SiO2 with interface-controlled ion transport for efficient hydrogen storage. *International Journal of Hydrogen Energy*, **2022**, 47, 6777-6788	6.7	0
63	Thermoplasticity of metallic glasses: Processing and applications. *Progress in Materials Science*, **2022**, 127, 100941	42.2	0
62	Transition metal-based high entropy alloy microfiber electrodes: Corrosion behavior and hydrogen activity. *Corrosion Science*, **2021**, 193, 109880	6.8	0
61	Origin of Electrocatalytic Activity in Amorphous Nickel-Metalloid Electrodeposits. *ACS Applied Materials & Interfaces*, **2021**, 13, 23689-23701	9.5	1
60	Effect of high pressure torsion on crystallization and magnetic properties of Fe73.9Cu1Nb3Si15.5B6.6. *Journal of Magnetism and Magnetic Materials*, **2021**, 525, 167679	2.8	3
59	Cryo-Casting for Controlled Decomposition of Cu□r□Al Bulk Metallic Glass into Nanomaterials: Implications for Design Optimization. *ACS Applied Nano Materials*, **2021**, 4, 7771-7780	5.6	1
58	Interfacial structure and wear properties of selective laser melted Ti/(TiC+TiN) composites with high content of reinforcements. *Journal of Alloys and Compounds*, **2021**, 870, 159436	5.7	9
57	Deformation-Mode-Sensitive Behavior of CuZr-Based Bulk Metallic Glasses Under Dynamic Loading. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2021**, 52, 8-13	2.3	0
56	Thermomechanical and structural characterization of polybutadiene/poly(ethylene oxide)/ CNT stretchable electrospun fibrous membranes. *Polymers for Advanced Technologies*, **2021**, 32, 248-261	3.2	2
55	X-ray Diffraction Computed Nanotomography Applied to Solve the Structure of Hierarchically Phase-Separated Metallic Glass. *ACS Nano*, **2021**, 15, 2386-2398	16.7	2
54	Electrospun polyacrylonitrile/2-(acryloyloxy)ethyl ferrocenecarboxylate polymer blend nanofibers. *Molecular Systems Design and Engineering*, **2021**, 6, 476-492	4.6	0
53	Functionalized highly electron-rich redox-active electropolymerized 3,4-propylenedioxythiophenes as precursors and targets for bioelectronics and supercapacitors. *Molecular Systems Design and Engineering*, **2021**, 6, 214-233	4.6	3
52	Nanoporous Pd□Cu□Si Amorphous Thin Films for Electrochemical Hydrogen Storage and Sensing. *ACS Applied Energy Materials*, **2021**, 4, 2672-2680	6.1	2
51	Effective Methanol Oxidation with Platinum Nanoparticles-Decorated Poly(2-bromomethyl-2-methyl-3,4-propylenedioxythiophene)-Coated Glassy Carbon Electrode. *Journal of the Electrochemical Society*, **2021**, 168, 086503	3.9	0
50	Effects of Ni and Co alloying on thermal, magnetic and structural properties of Fe-(Ni,Co)-P-C metallic glass ribbons. *Journal of Alloys and Compounds*, **2021**, 872, 159620	5.7	4
49	Enhancement of Interfacial Hydrogen Interactions with Nanoporous Gold-Containing Metallic Glass. *ACS Applied Materials & Interfaces*, **2021**, 13, 42613-42623	9.5	2

48	Effect of nanoparticles on morphology and size of primary silicon and property of selective laser melted Al-high Si content alloys. *Vacuum*, **2021**, 191, 110405	3.7	2
47	Porosity and thickness effect of PdCuSi metallic glasses on electrocatalytic hydrogen production and storage. *Materials and Design*, **2021**, 210, 110099	8.1	0
46	Oligoether Ester-Functionalized ProDOT Copolymers on Si/Monolayer Graphene as Capacitive Thin Film Electrodes. *Journal of the Electrochemical Society*, **2020**, 167, 070543	3.9	6
45	Hydrogen storage performance of the multi-principal-component CoFeMnTiVZr alloy in electrochemical and gas-solid reactions.. *RSC Advances*, **2020**, 10, 24613-24623	3.7	14
44	Fabrication of Metastable Crystalline Nanocomposites by Flash Annealing of CuZrAl Metallic Glass Using Joule Heating. *Nanomaterials*, **2020**, 10,	5.4	5
43	Stability, elasticity and electronic structures of Co-Zr binary intermetallic compounds. *Philosophical Magazine*, **2020**, 100, 874-893	1.6	1
42	Metallic Glass Films with Nanostructured Periodic Density Fluctuations Supported on Si/SiO as an Efficient Hydrogen Sorber. *Chemistry - A European Journal*, **2020**, 26, 8244-8253	4.8	8
41	Electrocatalytic Behavior of Hydrogenated Pd-Metallic Glass Nanofilms: Butler-Volmer, Tafel, and Impedance Analyses. *Electrocatalysis*, **2020**, 11, 94-109	2.7	17
40	Surface-governed electrochemical hydrogenation in FeNi-based metallic glass. *Journal of Power Sources*, **2020**, 475, 228700	8.9	4
39	Influence of combinatorial annealing and plastic deformation treatments on the intrinsic properties of Cu46Zr46Al8 bulk metallic glass. *Intermetallics*, **2020**, 127, 106986	3.5	3
38	Mg-Based Metallic Glass-Polymer Composites: Investigation of Structure, Thermal Properties, and Biocompatibility. *Metals*, **2020**, 10, 867	2.3	5
37	Effective electrocatalytic methanol oxidation of Pd-based metallic glass nanofilms. *Nanoscale*, **2020**, 12, 22586-22595	7.7	10
36	Evaluation of hydrogen storage performance of ZrTiVNiCrFe in electrochemical and gas-solid reactions. *International Journal of Hydrogen Energy*, **2020**, 45, 5347-5355	6.7	22
35	Tuning the glass forming ability and mechanical properties of Ti-based bulk metallic glasses by Ga additions. *Journal of Alloys and Compounds*, **2019**, 793, 552-563	5.7	10
34	Ultrahigh hydrogen-sorbing palladium metallic-glass nanostructures. *Materials Horizons*, **2019**, 6, 1481-1487	14.4	11
33	Polymorphic Transformation and Magnetic Properties of Rapidly Solidified FeCoNiSiB High-Entropy Alloys. *Materials*, **2019**, 12,	3.5	6
32	Annealing-assisted high-pressure torsion in Zr55Cu30Al10Ni5 metallic glass. *Journal of Alloys and Compounds*, **2019**, 784, 1323-1333	5.7	10
31	Origin of large plasticity and multiscale effects in iron-based metallic glasses. *Nature Communications*, **2018**, 9, 1333	17.4	61

30	Thermally-triggered Dual In-situ Self-healing Metallic Materials. *Scientific Reports*, **2018**, 8, 2120	4.9	7
29	Microstructures, Martensitic Transformation, and Mechanical Behavior of Rapidly Solidified Ti-Ni-Hf and Ti-Ni-Si Shape Memory Alloys. *Journal of Materials Engineering and Performance*, **2018**, 27, 1005-1015	1.6	3
28	Dual self-organised shear banding behaviours and enhanced ductility in phase separating Zr-based bulk metallic glasses. *Philosophical Magazine*, **2018**, 98, 1744-1764	1.6	10
27	Cooperative deformation behavior between the shear band and boundary sliding of an Al-based nanostructure-dendrite composite. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 735, 81-88	5.3	19
26	Elastostatic reversibility in thermally formed bulk metallic glasses: nanobeam diffraction fluctuation electron microscopy. *Nanoscale*, **2018**, 10, 1081-1089	7.7	7
25	Rapid and partial crystallization to design ductile CuZr-based bulk metallic glass composites. *Materials and Design*, **2018**, 139, 132-140	8.1	36
24	Electrosorption of Hydrogen in Pd-Based Metallic Glass Nanofilms. *ACS Applied Energy Materials*, **2018**, 1, 2630-2646	6.1	19
23	Activation volume and energy of bulk metallic glasses determined by nanoindentation. *Materials and Design*, **2018**, 155, 116-124	8.1	14
22	Micro-patterning by thermoplastic forming of Ni-free Ti-based bulk metallic glasses. *Materials and Design*, **2017**, 120, 204-211	8.1	17
21	Structural, elastic and electronic properties of CoZr in B2 and B33 structures under high pressure. *Journal of Alloys and Compounds*, **2017**, 705, 445-455	5.7	13
20	Micropatterning kinetics of different glass-forming systems investigated by thermoplastic net-shaping. *Scripta Materialia*, **2017**, 137, 127-131	5.6	10
19	Atomic origin for rejuvenation of a Zr-based metallic glass at cryogenic temperature. *Journal of Alloys and Compounds*, **2017**, 718, 254-259	5.7	16
18	Hierarchical surface patterning of Ni- and Be-free Ti- and Zr-based bulk metallic glasses by thermoplastic net-shaping. *Materials Science and Engineering C*, **2017**, 73, 398-405	8.3	14
17	Designing a multifunctional Ti-2Cu-4Ca porous biomaterial with favorable mechanical properties and high bioactivity. *Journal of Alloys and Compounds*, **2017**, 727, 338-345	5.7	6
16	Structural modifications in sub-Tg annealed CuZr-based metallic glass. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 707, 245-252	5.3	13
15	Stability of shear banding process in bulk metallic glasses and composites. *Journal of Materials Research*, **2017**, 32, 2560-2569	2.5	8
14	Hardening of shear band in metallic glass. *Scientific Reports*, **2017**, 7, 7076	4.9	9
13	Towards the Better: Intrinsic Property Amelioration in Bulk Metallic Glasses. *Scientific Reports*, **2016**, 6, 27271	4.9	14

12	Structure-property relationships in nanoporous metallic glasses. *Acta Materialia*, **2016**, 106, 199-207	8.4	77
11	Mechanical and Structural Investigation of Porous Bulk Metallic Glasses. *Metals*, **2015**, 5, 920-933	2.3	12
10	Fabrication Methods of Artificial Microstructures. *Springer Theses*, **2015**, 17-28	0.1	
9	General Conclusions and Outlook. *Springer Theses*, **2015**, 81-88	0.1	
8	Artificial Microstructure Approach. *Springer Theses*, **2015**, 37-80	0.1	
7	Property optimization of porous metallic glasses via structural design. *Materials Letters*, **2014**, 134, 306-310	3.0	14
6	Materials by design: An experimental and computational investigation on the microanatomy arrangement of porous metallic glasses. *Acta Materialia*, **2014**, 77, 411-422	8.4	32
5	Designing tensile ductility in metallic glasses. *Nature Communications*, **2013**, 4, 2158	17.4	135
4	From brittle to ductile: Density optimization for Zr-BMG cellular structures. *Scripta Materialia*, **2013**, 68, 921-924	5.6	22
3	Microfabrication: Honeycomb Structures of Bulk Metallic Glasses (Adv. Funct. Mater. 15/2012). *Advanced Functional Materials*, **2012**, 22, 3160-3160	15.6	2
2	Honeycomb Structures of Bulk Metallic Glasses. *Advanced Functional Materials*, **2012**, 22, 3161-3169	15.6	66
1	. *Journal of Microelectromechanical Systems*, **2011**, 20, 28-36	2.5	63