

# Ibrahim Karaman

## List of Publications by Citations

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|                    |                          |                |                 |
|--------------------|--------------------------|----------------|-----------------|
| 377<br>papers      | 12,616<br>citations      | 62<br>h-index  | 91<br>g-index   |
| 390<br>ext. papers | 14,339<br>ext. citations | 4.9<br>avg, IF | 6.66<br>L-index |

| #   | Paper   | IF   | Citations |
|-----|---|------|-----------|
| 377 | High temperature shape memory alloys. <i>International Materials Reviews</i> , <b>2010</b> , 55, 257-315  | 16.1 | 591       |
| 376 | Magnetic Field-Induced Phase Transformation in NiMnCoIn Magnetic Shape-Memory Alloys: A New Actuation Mechanism with Large Work Output. <i>Advanced Functional Materials</i> , <b>2009</b> , 19, 983-998  | 15.6 | 320       |
| 375 | Deformation of single crystal Hadfield steel by twinning and slip. <i>Acta Materialia</i> , <b>2000</b> , 48, 1345-1359   | 8.4  | 298       |
| 374 | Magnetic field and stress induced martensite reorientation in NiMnGa ferromagnetic shape memory alloy single crystals. <i>Acta Materialia</i> , <b>2006</b> , 54, 233-245   | 8.4  | 261       |
| 373 | Modeling the deformation behavior of Hadfield steel single and polycrystals due to twinning and slip. <i>Acta Materialia</i> , <b>2000</b> , 48, 2031-2047  | 8.4  | 229       |
| 372 | Compressive response of NiTi single crystals. <i>Acta Materialia</i> , <b>2000</b> , 48, 3311-3326  | 8.4  | 205       |
| 371 | Competing mechanisms and modeling of deformation in austenitic stainless steel single crystals with and without nitrogen. <i>Acta Materialia</i> , <b>2001</b> , 49, 3919-3933  | 8.4  | 166       |
| 370 | Thermomechanical cyclic response of an ultrafine-grained NiTi shape memory alloy. <i>Acta Materialia</i> , <b>2008</b> , 56, 3630-3646  | 8.4  | 149       |
| 369 | Mechanical twinning and texture evolution in severely deformed Ti <sub>6</sub> Al <sub>4</sub> V at high temperatures. <i>Acta Materialia</i> , <b>2006</b> , 54, 3755-3771   | 8.4  | 146       |
| 368 | TEM study of structural and microstructural characteristics of a precipitate phase in Ni-rich Ni <sub>40</sub> Ti <sub>60</sub> Hf and Ni <sub>40</sub> Ti <sub>60</sub> Zr shape memory alloys. <i>Acta Materialia</i> , <b>2013</b> , 61, 6191-6206         | 8.4  | 133       |
| 367 | A method to enhance cyclic reversibility of NiTiHf high temperature shape memory alloys. <i>Scripta Materialia</i> , <b>2006</b> , 54, 2203-2208  | 5.6  | 129       |
| 366 | Energy harvesting using martensite variant reorientation mechanism in a NiMnGa magnetic shape memory alloy. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 172505   | 3.4  | 127       |
| 365 | Shape memory and pseudoelastic behavior of 51.5%NiTi single crystals in solutionized and overaged state. <i>Acta Materialia</i> , <b>2001</b> , 49, 3609-3620   | 8.4  | 115       |
| 364 | On the stress-assisted magnetic-field-induced phase transformation in Ni <sub>2</sub> MnGa ferromagnetic shape memory alloys. <i>Acta Materialia</i> , <b>2007</b> , 55, 4253-4269  | 8.4  | 111       |
| 363 | Mechanical and wear properties of ultrafine-grained pure Ti produced by multi-pass equal-channel angular extrusion. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2009</b> , 517, 97-104 | 5.3  | 106       |
| 362 | On the mechanical behavior of single crystal NiTi shape memory alloys and related polycrystalline phenomenon. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2001</b> , 317, 85-92        | 5.3  | 101       |
| 361 | Effect of grain size on prismatic slip in Mg <sub>92</sub> Al <sub>8</sub> Zn alloy. <i>Scripta Materialia</i> , <b>2012</b> , 67, 439-442  | 5.6  | 100       |

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|-----|---|------|----|
| 360 | Microstructural characterization and shape memory characteristics of the Ni <sub>50.3</sub> Ti <sub>34.7</sub> Hf <sub>15</sub> shape memory alloy. <i>Acta Materialia</i> , <b>2015</b> , 83, 48-60  | 8.4  | 97 |
| 359 | Transformation behaviour and unusual twinning in a NiTi shape memory alloy ausformed using equal channel angular extrusion. <i>Philosophical Magazine</i> , <b>2005</b> , 85, 1729-1745   | 1.6  | 94 |
| 358 | Cyclic deformation behavior of single crystal NiTi. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2001</b> , 314, 67-74  | 5.3  | 93 |
| 357 | Microstructure evolution and mechanical behavior of bulk copper obtained by consolidation of micro- and nanopowders using equal-channel angular extrusion. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2004</b> , 35, 2935-2949     | 2.3  | 90 |
| 356 | Giant elastocaloric effect in directionally solidified Ni <sub>45</sub> Mn <sub>45</sub> magnetic shape memory alloy. <i>Scripta Materialia</i> , <b>2015</b> , 105, 42-45  | 5.6  | 86 |
| 355 | Microstructure, crystallographic texture, and plastic anisotropy evolution in an Mg alloy during equal channel angular extrusion processing. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2011</b> , 528, 7616-7627 | 5.3  | 86 |
| 354 | Grain refinement vs. crystallographic texture: Mechanical anisotropy in a magnesium alloy. <i>Scripta Materialia</i> , <b>2011</b> , 64, 193-196  | 5.6  | 85 |
| 353 | Cyclic stress-strain response of ultrafine grained copper. <i>International Journal of Fatigue</i> , <b>2006</b> , 28, 243-250  | 5.0  | 84 |
| 352 | The effect of heat treatments on Ni <sub>43</sub> Mn <sub>42</sub> Co <sub>4</sub> Sn <sub>11</sub> meta-magnetic shape memory alloys for magnetic refrigeration. <i>Acta Materialia</i> , <b>2014</b> , 74, 66-84  | 8.4  | 82 |
| 351 | Recoverable stress-induced martensitic transformation in a ferromagnetic CoNiAl alloy. <i>Scripta Materialia</i> , <b>2003</b> , 49, 831-836  | 5.6  | 82 |
| 350 | Assessing printability maps in additive manufacturing of metal alloys. <i>Acta Materialia</i> , <b>2019</b> , 176, 199-218  | 8.4  | 81 |
| 349 | An inverse optimization strategy to determine single crystal mechanical behavior from polycrystal tests: Application to AZ31 Mg alloy. <i>International Journal of Plasticity</i> , <b>2014</b> , 57, 1-15  | 7.6  | 81 |
| 348 | Extrinsic stacking faults and twinning in hadfield manganese steel single crystals. <i>Scripta Materialia</i> , <b>2001</b> , 44, 337-343   | 5.6  | 80 |
| 347 | Spatial Control of Functional Response in 4D-Printed Active Metallic Structures. <i>Scientific Reports</i> , <b>2017</b> , 7, 46707   | 4.9  | 78 |
| 346 | Effect of precipitation on mechanical and wear properties of ultrafine-grained Cu <sub>40</sub> Zr alloy. <i>Wear</i> , <b>2014</b> , 311, 149-158  | 3.5  | 78 |
| 345 | The effect of precipitates on the superelastic response of [1 0 0] oriented FeMnAlNi single crystals under compression. <i>Acta Materialia</i> , <b>2015</b> , 97, 234-244  | 8.4  | 77 |
| 344 | Long-Term Oxidation of Ti <sub>2</sub> AlC in Air and Water Vapor at 1000-1300°C Temperature Range. <i>Journal of the Electrochemical Society</i> , <b>2011</b> , 159, C90-C96  | 3.9  | 77 |
| 343 | A comparative study of the cytotoxicity and corrosion resistance of nickel-titanium and titanium-niobium shape memory alloys. <i>Acta Biomaterialia</i> , <b>2012</b> , 8, 2863-70  | 10.8 | 75 |

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|-----|---|-----|----|
| 342 | The effect of nanoprecipitates on the superelastic properties of FeNiCoAlTa shape memory alloy single crystals. <i>Acta Materialia</i> , <b>2013</b> , 61, 3445-3455  | 8.4 | 75 |
| 341 | Mechanical flow anisotropy in severely deformed pure titanium. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2006</b> , 434, 294-302   | 5.3 | 73 |
| 340 | Detwinning in NiTi alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2003</b> , 34, 5-13  | 2.3 | 73 |
| 339 | An ultra-high strength martensitic steel fabricated using selective laser melting additive manufacturing: Densification, microstructure, and mechanical properties. <i>Acta Materialia</i> , <b>2020</b> , 186, 199-214   | 8.4 | 73 |
| 338 | DFT studies on structure, mechanics and phase behavior of magnetic shape memory alloys: Ni <sub>2</sub> MnGa. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2008</b> , 205, 1026-1035  | 1.6 | 72 |
| 337 | Consolidation of amorphous copper based powder by equal channel angular extrusion. <i>Journal of Non-Crystalline Solids</i> , <b>2003</b> , 317, 144-151  | 3.9 | 72 |
| 336 | Role of starting texture and deformation modes on low-temperature shear formability and shear localization of Mg <sub>3</sub> Al <sub>2</sub> Zn alloy. <i>Acta Materialia</i> , <b>2015</b> , 89, 408-422  | 8.4 | 71 |
| 335 | Characterization and modeling of the magnetic field-induced strain and work output in magnetic shape memory alloys. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2007</b> , 312, 164-175   | 2.8 | 71 |
| 334 | Tailored thermal expansion alloys. <i>Acta Materialia</i> , <b>2016</b> , 102, 333-341  | 8.4 | 70 |
| 333 | Shape memory behavior and tension-compression asymmetry of a FeNiCoAlTa single-crystalline shape memory alloy. <i>Acta Materialia</i> , <b>2012</b> , 60, 2186-2195   | 8.4 | 70 |
| 332 | Flow stress anisotropy and Bauschinger effect in ultrafine grained copper. <i>Acta Materialia</i> , <b>2006</b> , 54, 5477-5488   | 8.4 | 69 |
| 331 | The effect of twinning and slip on the bauschinger effect of hadfield steel single crystals. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2001</b> , 32, 695-706   | 2.3 | 69 |
| 330 | On the effect of gamma phase formation on the pseudoelastic performance of polycrystalline Fe <sub>49</sub> Mn <sub>41</sub> Ni shape memory alloys. <i>Scripta Materialia</i> , <b>2015</b> , 108, 23-26   | 5.6 | 68 |
| 329 | The effect of severe marforming on shape memory characteristics of a Ti-rich NiTi alloy processed using equal channel angular extrusion. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2003</b> , 34, 2527-2539 | 2.3 | 68 |
| 328 | Stress-assisted reversible magnetic field-induced phase transformation in Ni <sub>2</sub> MnGa magnetic shape memory alloys. <i>Scripta Materialia</i> , <b>2006</b> , 55, 403-406  | 5.6 | 67 |
| 327 | Size effects in the superelastic response of Ni <sub>54</sub> Fe <sub>19</sub> Ga <sub>27</sub> shape memory alloy pillars with a two stage martensitic transformation. <i>Acta Materialia</i> , <b>2012</b> , 60, 5670-5685  | 8.4 | 66 |
| 326 | Role of severe plastic deformation on the cyclic reversibility of a Ti <sub>50.3</sub> Ni <sub>33.7</sub> Pd <sub>16</sub> high temperature shape memory alloy. <i>Acta Materialia</i> , <b>2010</b> , 58, 6411-6420  | 8.4 | 66 |
| 325 | Effect of precipitation on the microstructure and the shape memory response of the Ni <sub>50.3</sub> Ti <sub>29.7</sub> Zr <sub>20</sub> high temperature shape memory alloy. <i>Scripta Materialia</i> , <b>2013</b> , 69, 354-357                                | 5.6 | 65 |

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| 324 | Plastic flow anisotropy of pure zirconium after severe plastic deformation at room temperature. <i>Acta Materialia</i> , <b>2009</b> , 57, 4855-4865   | 8.4  | 65 |
| 323 | Compressive response of a single crystalline CoNiAl shape memory alloy. <i>Scripta Materialia</i> , <b>2004</b> , 51, 261-266  | 5.6  | 65 |
| 322 | Deformation of FeNiCoTi shape memory single crystals. <i>Scripta Materialia</i> , <b>2001</b> , 44, 779-784  | 5.6  | 65 |
| 321 | Superelastic response of a single crystalline FeMnAlNi shape memory alloy under tension and compression. <i>Acta Materialia</i> , <b>2015</b> , 89, 374-383  | 8.4  | 64 |
| 320 | The effect of training on two-way shape memory effect of binary NiTi and NiTi based ternary high temperature shape memory alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2013</b> , 560, 653-666 | 5.3  | 63 |
| 319 | Processing and characterization of porous Ti2AlC with controlled porosity and pore size. <i>Acta Materialia</i> , <b>2012</b> , 60, 6266-6277  | 8.4  | 63 |
| 318 | Improvement in the Shape Memory Response of Ti50.5Ni24.5Pd25 High-Temperature Shape Memory Alloy with Scandium Microalloying. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2010</b> , 41, 2485-2497                     | 2.3  | 63 |
| 317 | Pseudoelasticity at elevated temperatures in [001] oriented Co49Ni21Ga30 single crystals under compression. <i>Scripta Materialia</i> , <b>2006</b> , 55, 663-666  | 5.6  | 63 |
| 316 | Shape memory characteristics of Ti49.5Ni25Pd25Sc0.5 high-temperature shape memory alloy after severe plastic deformation. <i>Acta Materialia</i> , <b>2011</b> , 59, 4747-4760   | 8.4  | 62 |
| 315 | The deformation of low-stacking-fault-energy austenitic steels. <i>Jom</i> , <b>2002</b> , 54, 31-37   | 2.1  | 62 |
| 314 | Relationship between crystallographic compatibility and thermal hysteresis in Ni-rich NiTiHf and NiTiZr high temperature shape memory alloys. <i>Acta Materialia</i> , <b>2016</b> , 121, 374-383  | 8.4  | 61 |
| 313 | Tension-compression asymmetry in severely deformed pure copper. <i>Acta Materialia</i> , <b>2007</b> , 55, 4603-4613   | 8.4  | 61 |
| 312 | Direct measurement of large reversible magnetic-field-induced strain in NiCoMnIn metamagnetic shape memory alloys. <i>Acta Materialia</i> , <b>2012</b> , 60, 6883-6891  | 8.4  | 60 |
| 311 | Materials science. Expanding the repertoire of shape memory alloys. <i>Science</i> , <b>2010</b> , 327, 1468-9   | 33.3 | 60 |
| 310 | Effect of commercial purity levels on the mechanical properties of ultrafine-grained titanium. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2011</b> , 528, 2303-2308                                  | 5.3  | 60 |
| 309 | Effect of disperse Ti3N4 particles on the martensitic transformations in titanium nickelide single crystals. <i>Physics of Metals and Metallography</i> , <b>2008</b> , 106, 577-589   | 1.2  | 60 |
| 308 | Deformation twinning in difficult-to-work alloys during severe plastic deformation. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2005</b> , 410-411, 243-247   | 5.3  | 60 |
| 307 | EFFECT OF AGING ON THE MARTENSITIC TRANSFORMATION CHARACTERISTICS OF A Ni-RICH NiTiHf HIGH TEMPERATURE SHAPE MEMORY ALLOY. <i>Functional Materials Letters</i> , <b>2012</b> , 05, 1250038   | 1.2  | 57 |

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| 306 | Effect of severe ausforming via equal channel angular extrusion on the shape memory response of a NiTi alloy. <i>Journal of Nuclear Materials</i> , <b>2007</b> , 361, 298-305  | 3.3 | 57 |
| 305 | Multi-phase microstructure design of a low-alloy TRIP-assisted steel through a combined computational and experimental methodology. <i>Acta Materialia</i> , <b>2012</b> , 60, 3022-3033  | 8.4 | 56 |
| 304 | Microstructure and martensitic transformation characteristics of CoNiGa high temperature shape memory alloys. <i>Acta Materialia</i> , <b>2011</b> , 59, 1168-1183  | 8.4 | 54 |
| 303 | Dynamic precipitation in Mg-3Al-1Zn alloy during different plastic deformation modes. <i>Acta Materialia</i> , <b>2016</b> , 116, 1-13  | 8.4 | 53 |
| 302 | Microstructure and mechanical properties of severely deformed powder processed Ti <sub>6</sub> Al <sub>4</sub> V using equal channel angular extrusion. <i>Scripta Materialia</i> , <b>2003</b> , 49, 1021-1027   | 5.6 | 52 |
| 301 | Tensile actuation response of additively manufactured nickel-titanium shape memory alloys. <i>Scripta Materialia</i> , <b>2018</b> , 146, 164-168   | 5.6 | 52 |
| 300 | Influence of crystallographic compatibility on residual strain of TiNi based shape memory alloys during thermo-mechanical cycling. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2013</b> , 574, 9-16        | 5.3 | 51 |
| 299 | High Strength and High Ductility of Ultrafine-Grained, Interstitial-Free Steel Produced by ECAE and Annealing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2012</b> , 43, 1884-1894   | 2.3 | 50 |
| 298 | Work output of the two-way shape memory effect in Ti <sub>50.5</sub> Ni <sub>24.5</sub> Pd <sub>25</sub> high-temperature shape memory alloy. <i>Scripta Materialia</i> , <b>2011</b> , 65, 903-906   | 5.6 | 50 |
| 297 | On the fatigue crack growth-microstructure relationship in ultrafine-grained interstitial-free steel. <i>Journal of Materials Science</i> , <b>2010</b> , 45, 4813-4821   | 4.3 | 50 |
| 296 | Pseudoelasticity and Cyclic Stability in Co <sub>49</sub> Ni <sub>21</sub> Ga <sub>30</sub> Shape-Memory Alloy Single Crystals at Ambient Temperature. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2008</b> , 39, 2026-2039 | 2.3 | 50 |
| 295 | On the printability and transformation behavior of nickel-titanium shape memory alloys fabricated using laser powder-bed fusion additive manufacturing. <i>Journal of Manufacturing Processes</i> , <b>2018</b> , 35, 672-680   | 5   | 50 |
| 294 | Multi-objective Bayesian materials discovery: Application on the discovery of precipitation strengthened NiTi shape memory alloys through micromechanical modeling. <i>Materials and Design</i> , <b>2018</b> , 160, 810-827  | 8.1 | 50 |
| 293 | Corrosion fatigue behavior of a biocompatible ultrafine-grained niobium alloy in simulated body fluid. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2012</b> , 5, 181-92  | 4.1 | 49 |
| 292 | Tension/compression asymmetry of functional properties in [001]-oriented ferromagnetic NiFeGaCo single crystals. <i>Intermetallics</i> , <b>2010</b> , 18, 2458-2463  | 3.5 | 49 |
| 291 | Equal-channel angular sheet extrusion of interstitial-free (IF) steel: Microstructural evolution and mechanical properties. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2011</b> , 528, 6573-6583          | 5.3 | 49 |
| 290 | On the fatigue behavior of ultrafine-grained interstitial-free steel. <i>International Journal of Materials Research</i> , <b>2006</b> , 97, 1328-1336  | 0.5 | 49 |
| 289 | On the mechanical response and microstructure evolution of NiCoCr single crystalline medium entropy alloys. <i>Materials Research Letters</i> , <b>2018</b> , 6, 442-449  | 7.4 | 48 |



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|-----|---|-----|----|
| 288 | Ultra-high temperature multi-component shape memory alloys. <i>Scripta Materialia</i> , <b>2019</b> , 158, 83-87  | 5.6 | 48 |
| 287 | Hydroxyapatite production on ultrafine-grained pure titanium by micro-arc oxidation and hydrothermal treatment. <i>Surface and Coatings Technology</i> , <b>2011</b> , 205, S537-S542   | 4.4 | 47 |
| 286 | Microstructure-mechanical property relationships in ultrafine-grained NbZr. <i>Acta Materialia</i> , <b>2007</b> , 55, 6596-6605  | 8.4 | 47 |
| 285 | Strain-temperature behavior of NiTiCu shape memory single crystals. <i>Acta Materialia</i> , <b>2001</b> , 49, 3621-3634  | 8.4 | 47 |
| 284 | Effects of crystallographic orientation on the superelastic response of FeMnAlNi single crystals. <i>Scripta Materialia</i> , <b>2016</b> , 116, 147-151  | 5.6 | 47 |
| 283 | On the microstructural origins of martensitic transformation arrest in a NiCoMnIn magnetic shape memory alloy. <i>Acta Materialia</i> , <b>2018</b> , 142, 95-106   | 8.4 | 46 |
| 282 | Cyclic degradation in bamboo-like FeMnAlNi shape memory alloys – The role of grain orientation. <i>Scripta Materialia</i> , <b>2016</b> , 114, 156-160  | 5.6 | 46 |
| 281 | Effect of vanadium micro-alloying on the microstructural evolution and creep behavior of Al-Er-Sc-Zr-Si alloys. <i>Acta Materialia</i> , <b>2017</b> , 124, 501-512   | 8.4 | 46 |
| 280 | Cyclic degradation mechanisms in aged FeNiCoAlTa shape memory single crystals. <i>Acta Materialia</i> , <b>2014</b> , 79, 126-137   | 8.4 | 45 |
| 279 | Microstructural characterization and superelastic response of a Ni50.3Ti29.7Zr20 high-temperature shape memory alloy. <i>Scripta Materialia</i> , <b>2014</b> , 81, 12-15   | 5.6 | 45 |
| 278 | Comparative analysis of the effects of severe plastic deformation and thermomechanical training on the functional stability of Ti50.5Ni24.5Pd25 high-temperature shape memory alloy. <i>Scripta Materialia</i> , <b>2011</b> , 64, 315-318            | 5.6 | 45 |
| 277 | On the Microstructural Stability of Ultrafine-Grained Interstitial-Free Steel under Cyclic Loading. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2007</b> , 38, 1946-1955                        | 5.3 | 45 |
| 276 | Effect of severe plastic deformation on tensile properties and impact toughness of two-phase Zn-0Al alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2008</b> , 490, 403-410 | 5.3 | 45 |
| 275 | Thermoelastic martensitic transformations in single crystals with disperse particles. <i>Russian Physics Journal</i> , <b>2012</b> , 54, 937-950  | 0.7 | 44 |
| 274 | High-temperature superelasticity in CoNiGa, CoNiAl, NiFeGa, and TiNi monocrystals. <i>Russian Physics Journal</i> , <b>2008</b> , 51, 1016-1036   | 0.7 | 44 |
| 273 | Orientation dependence of twinning in single crystalline CoCrFeMnNi high-entropy alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2017</b> , 705, 176-181                    | 5.3 | 43 |
| 272 | A Sensory Material Approach for Reducing Variability in Additively Manufactured Metal Parts. <i>Scientific Reports</i> , <b>2017</b> , 7, 3604  | 4.9 | 43 |
| 271 | Multiple ferroic glasses via ordering. <i>Acta Materialia</i> , <b>2015</b> , 101, 107-115  | 8.4 | 42 |

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| 270 | Direct measure of giant magnetocaloric entropy contributions in NiMnIn. <i>Acta Materialia</i> , <b>2016</b> , 105, 176-181   | 8.4 | 42 |
| 269 | On The Deformation Mechanisms in Single Crystal Hadfield Manganese Steels. <i>Scripta Materialia</i> , <b>1998</b> , 38, 1009-1015  | 5.6 | 42 |
| 268 | Shape memory and pseudoelasticity response of NiMnCoIn magnetic shape memory alloy single crystals. <i>Scripta Materialia</i> , <b>2008</b> , 58, 815-818   | 5.6 | 42 |
| 267 | The role of heat treatment on the cyclic stress-strain response of ultrafine-grained interstitial-free steel. <i>International Journal of Fatigue</i> , <b>2008</b> , 30, 426-436   | 5   | 42 |
| 266 | Effects of cyclic heat treatment and aging on superelasticity in oligocrystalline Fe-Mn-Al-Ni shape memory alloy wires. <i>Scripta Materialia</i> , <b>2017</b> , 134, 66-70  | 5.6 | 41 |
| 265 | Reduction in tension-compression asymmetry via grain refinement and texture design in Mg <sub>92</sub> Al <sub>8</sub> Zn sheets. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2014</b> , 610, 220-227  | 5.3 | 40 |
| 264 | Effect of niobium addition on the martensitic transformation and magnetocaloric effect in low hysteresis NiCoMnSn magnetic shape memory alloys. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 231910  | 3.4 | 40 |
| 263 | Determining recoverable and irrecoverable contributions to accumulated strain in a NiTiPd high-temperature shape memory alloy during thermomechanical cycling. <i>Scripta Materialia</i> , <b>2011</b> , 65, 123-126  | 5.6 | 40 |
| 262 | High-temperature in-situ microscopy during stress-induced phase transformations in Co <sub>49</sub> Ni <sub>21</sub> Ga <sub>30</sub> shape memory alloy single crystals. <i>International Journal of Materials Research</i> , <b>2010</b> , 101, 1-11  | 0.5 | 40 |
| 261 | Microstructural refinement and deformation twinning during severe plastic deformation of 316L stainless steel at high temperatures. <i>Journal of Materials Research</i> , <b>2004</b> , 19, 2268-2278  | 2.5 | 40 |
| 260 | Effect of grain size on the superelastic response of a FeMnAlNi polycrystalline shape memory alloy. <i>Scripta Materialia</i> , <b>2016</b> , 125, 68-72  | 5.6 | 39 |
| 259 | On the effect of titanium on quenching sensitivity and pseudoelastic response in Fe-Mn-Al-Ni-base shape memory alloy. <i>Scripta Materialia</i> , <b>2017</b> , 126, 20-23  | 5.6 | 39 |
| 258 | Work production using the two-way shape memory effect in NiTi and a Ni-rich NiTiHf high-temperature shape memory alloy. <i>Smart Materials and Structures</i> , <b>2015</b> , 24, 125023  | 3.4 | 39 |
| 257 | The role of coherent precipitates in martensitic transformations in single crystal and polycrystalline Ti-50.8at%Ni. <i>Scripta Materialia</i> , <b>1998</b> , 39, 699-705  | 5.6 | 39 |
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