# Taekyung Lee

## List of Publications by Year in descending order

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|---|---|---|---|
| 70 papers | 1,626 citations | 304368 22 h-index | 315357 38 g-index |
| 71 all docs | 71 docs citations | 71 times ranked | 1494 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Work hardening associated with É›-martensitic transformation, deformation twinning and dynamic strain aging in Feâ€“17Mnâ€“0.6C and Feâ€“17Mnâ€“0.8C TWIP steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7310-7316. | 2.6 | 185 |
| 2 | Anisotropic properties of directed energy deposition (DED)-processed Tiâ€“6Alâ€“4V. Journal of Manufacturing Processes, 2016, 24, 397-405. | 2.8 | 104 |
| 3 | Surface Modification of Multipass Caliber-Rolled Ti Alloy with Dexamethasone-Loaded Graphene for Dental Applications. ACS Applied Materials & Interfaces, 2015, 7, 9598-9607. | 4.0 | 82 |
| 4 | Effects of vanadium carbides on hydrogen embrittlement of tempered martensitic steel. Metals and Materials International, 2016, 22, 364-372. | 1.8 | 71 |
| 5 | Tensile deformation behavior of Feâ€“Mnâ€“C TWIP steel with ultrafine elongated grain structure. Materials Letters, 2012, 75, 169-171. | 1.3 | 69 |
| 6 | Space-holder effect on designing pore structure and determining mechanical properties in porous titanium. Materials & Design, 2014, 57, 712-718. | 5.1 | 64 |
| 7 | Grain refinement effect on cryogenic tensile ductility in a Feâ€“Mnâ€“C twinning-induced plasticity steel. Materials & Design, 2013, 49, 234-241. | 5.1 | 61 |
| 8 | Enhancing tensile properties of ultrafine-grained medium-carbon steel utilizing fine carbides. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 6558-6564. | 2.6 | 59 |
| 9 | Constitutive analysis of electrically-assisted tensile deformation of CP-Ti based on non-uniform thermal expansion, plastic softening and dynamic strain aging. International Journal of Plasticity, 2017, 94, 44-56. | 4.1 | 50 |
| 10 | Microstructure tailoring to enhance strength and ductility in Tiâ€“13Nbâ€“13Zr for biomedical applications. Scripta Materialia, 2013, 69, 785-788. | 2.6 | 45 |
| 11 | Role of Cu on hydrogen embrittlement behavior inÂFeâ€“Mnâ€“Câ€“Cu TWIP steel. International Journal of Hydrogen Energy, 2015, 40, 7409-7419. | 3.8 | 45 |
| 12 | Tailoring strength-ductility balance of caliber-rolled AZ31 Mg alloy through subsequent annealing. Journal of Magnesium and Alloys, 2020, 8, 163-171. | 5.5 | 41 |
| 13 | Increased resistance to hydrogen embrittlement in high-strength steels composed of granular bainite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 700, 473-480. | 2.6 | 38 |
| 14 | Improved tensile properties of AZ31 Mg alloy subjected to various caliber-rolling strains. Journal of Magnesium and Alloys, 2019, 7, 381-387. | 5.5 | 38 |
| 15 | Breaking the limit of Youngâ€™s modulus in low-cost Tiâ€“Nbâ€“Zr alloy for biomedical implant applications. Journal of Alloys and Compounds, 2020, 828, 154401. | 2.8 | 38 |
| 16 | Role of Mo/V carbides in hydrogen embrittlement of tempered martensitic steel. Corrosion Reviews, 2015, 33, 433-441. | 1.0 | 34 |
| 17 | Microstructural evolution and strain-hardening behavior of multi-pass caliber-rolled Tiâ€“13Nbâ€“13Zr. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 648, 359-366. | 2.6 | 31 |
| 18 | Manufacturing Ultrafine-Grained Ti-6Al-4V Bulk Rod Using Multi-Pass Caliber-Rolling. Metals, 2015, 5, 777-789. | 1.0 | 24 |

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|---|---|---|---|
| 19 | Effect of Al addition on low-cycle fatigue properties of hydrogen-charged high-Mn TWIP steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 677, 421-430. | 2.6 | 24 |
| 20 | Effect of the amount and temperature of prestrain on tensile and low-cycle fatigue properties of Fe-17Mn-0.5C TRIP/TWIP steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 696, 493-502. | 2.6 | 24 |
| 21 | Comparative study on the effects of Cr, V, and Mo carbides for hydrogen-embrittlement resistance of tempered martensitic steel. Scientific Reports, 2019, 9, 5219. | 1.6 | 24 |
| 22 | Enhanced yield symmetry and strength-ductility balance of caliber-rolled Mgâ€“6Zn-0.5Zr with ultrafine-grained structure andÂbulk dimension. Journal of Alloys and Compounds, 2019, 803, 434-441. | 2.8 | 22 |
| 23 | High-Strength AZ91 Alloy Fabricated by Rapidly Solidified Flaky Powder Metallurgy and Hot Extrusion. Metals and Materials International, 2019, 25, 372-380. | 1.8 | 22 |
| 24 | Enhancing yield strength by suppressing detwinning in a rolled Mgâ€“3Alâ€“1Zn alloy with {<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0002.gif" overflow="scroll"><mml:mn>10</mml:mn><mml:mover accent="true"><mml:mn>1</mml:mn><mml:mo>Â¯</mml:mo></mml:mover><mml:mn>2</mml:mn></mml:math>} twins. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 619, 328-333. | 2.6 | 20 |
| 25 | Phosphorescence-Based Flexible and Transparent Optical Temperature-Sensing Skin Capable of Operating in Extreme Environments. ACS Applied Polymer Materials, 2021, 3, 2461-2469. | 2.0 | 20 |
| 26 | Effects of Laser Power on the Microstructure Evolution and Mechanical Properties of Tiâ€“6Alâ€“4V Alloy Manufactured by Direct Energy Deposition. Metals and Materials International, 2022, 28, 197-204. | 1.8 | 20 |
| 27 | Internal-variable analysis of high-temperature deformation behavior of Tiâ€“6Alâ€“4V: A comparative study of the strain-rate-jump and load-relaxation tests. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 562, 180-189. | 2.6 | 19 |
| 28 | Prediction of hole expansion ratio for various steel sheets based on uniaxial tensile properties. Metals and Materials International, 2018, 24, 187-194. | 1.8 | 19 |
| 29 | Plastic anisotropy of multi-pass caliber-rolled Mg alloy with split texture distribution. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 788, 139496. | 2.6 | 19 |
| 30 | Accelerating globularization in additively manufactured Ti-6Al-4V by exploiting martensitic laths. Journal of Materials Research and Technology, 2021, 12, 304-315. | 2.6 | 16 |
| 31 | Mechanisms of tensile improvement in caliber-rolled high-carbon steel. Metals and Materials International, 2012, 18, 391-396. | 1.8 | 15 |
| 32 | Phase transformation and its effect on mechanical characteristics in warm-deformed Ti-29Nb-13Ta-4.6Zr alloy. Metals and Materials International, 2015, 21, 202-207. | 1.8 | 15 |
| 33 | Role of deformation twins in static recrystallization kinetics of high-purity alpha titanium. Metals and Materials International, 2016, 22, 1041-1048. | 1.8 | 15 |
| 34 | Effects of carbon content on the tensile and fatigue properties in hydrogen-charged Fe-17Mn-xC steels: The opposing trends. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 724, 469-476. | 2.6 | 14 |
| 35 | High strain-rate superplasticity of AZ91 alloy achieved by rapidly solidified flaky powder metallurgy. Materials Letters, 2019, 234, 245-248. | 1.3 | 14 |
| 36 | Orientation Dependence on Plastic Flow Behavior of Hydrogen-Precharged Micropillars of High-Mn Steel. Metals and Materials International, 2020, 26, 1741-1748. | 1.8 | 13 |

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|---|---|---|---|
| 37 | Microstructural evolution and mechanical properties of nanocrystalline Feâ€“Mnâ€“Alâ€“C steel processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 827, 142073. | 2.6 | 13 |
| 38 | Accelerated recrystallization behavior of commercially pure titanium subjected to an alternating-current electropulse. Journal of Materials Research and Technology, 2021, 15, 5706-5711. | 2.6 | 13 |
| 39 | Effects of Tungsten Addition on the Microstructure and Mechanical Properties of Microalloyed Forging Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 3511-3523. | 1.1 | 12 |
| 40 | Brazing method to join a novel Cu<sub>54</sub>Ni<sub>6</sub>Zr<sub>22</sub>Ti<sub>18</sub> bulk metallic glass to carbon steel. Science and Technology of Welding and Joining, 2017, 22, 714-718. | 1.5 | 12 |
| 41 | Effect of type-C liquid metal embrittlement on mechanical properties of spot-welded TRIP steel. Journal of Materials Research and Technology, 2021, 13, 2482-2490. | 2.6 | 11 |
| 42 | Tempcore Process Simulator to Analyze Microstructural Evolution of Quenched and Tempered Rebar. Applied Sciences (Switzerland), 2019, 9, 2938. | 1.3 | 10 |
| 43 | Prediction of Electropulse-Induced Nonlinear Temperature Variation of Mg Alloy Based on Machine Learning. Journal of Korean Institute of Metals and Materials, 2020, 58, 413-422. | 0.4 | 10 |
| 44 | Origin of superior low-cycle fatigue resistance of an interstitial metastable high-entropy alloy. Journal of Materials Science and Technology, 2022, 115, 115-128. | 5.6 | 10 |
| 45 | Tuning the texture characteristics and superelastic behaviors of Tiâ€“Zrâ€“Nbâ€“Sn shape memory alloys by varying Nb content. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 845, 143243. | 2.6 | 10 |
| 46 | Effect on Zn on Microstructures and Mechanical Properties of Mgâ€“Gdâ€“Yâ€“Zn LPSO Alloys. Metals and Materials International, 2022, 28, 2613-2620. | 1.8 | 9 |
| 47 | Microstructural Influence on Stretch Flangeability of Ferriteâ€“Martensite Dual-Phase Steels. Crystals, 2020, 10, 1022. | 1.0 | 8 |
| 48 | Effect of undissolved Nb carbides on mechanical properties of hydrogen-precharged tempered martensitic steel. Scientific Reports, 2020, 10, 11704. | 1.6 | 8 |
| 49 | Variation in Mechanical Properties of Ti-13Nb-13Zr Depending on Annealing Temperature. Applied Sciences (Switzerland), 2020, 10, 7896. | 1.3 | 8 |
| 50 | Enhancing Superplasticity of Ultrafineâ€Grained Tiâ€“6Alâ€“4V without Imposing Severe Plastic Deformation. Advanced Engineering Materials, 2019, 21, 1800115. | 1.6 | 7 |
| 51 | Improved cold-rollability of duplex lightweight steels utilizing deformation-induced ferritic transformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 742, 835-841. | 2.6 | 7 |
| 52 | Kinetics of Capability Aging in Ti-13Nb-13Zr Alloy. Crystals, 2020, 10, 693. | 1.0 | 7 |
| 53 | Integrated constitutive model for flow behavior of pure Titanium considering interstitial solute concentration. Metals and Materials International, 2014, 20, 1017-1025. | 1.8 | 6 |
| 54 | Tribological and corrosion behaviors of warm- and hot-rolled Ti-13Nb-13Zr alloys in simulated body fluid conditions. International Journal of Nanomedicine, 2015, 10 Suppl 1, 207. | 3.3 | 6 |

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|---|---|---|---|
| 55 | Deep-learning approach to predict a severe plastic anisotropy of caliber-rolled Mg alloy. Materials Letters, 2020, 269, 127652. | 1.3 | 6 |
| 56 | Prediction of Tempcore Rebar Strength Using a Thermomechanical Simulator with a Designed Hollow Specimen. Steel Research International, 2020, 91, 1900520. | 1.0 | 5 |
| 57 | Ambivalent Role of Annealing in Tensile Properties of Step-Rolled Ti-6Al-4V with Ultrafine-Grained Structure. Metals, 2020, 10, 684. | 1.0 | 4 |
| 58 | Interface Characterization of Alâ€“Cu Microlaminates Fabricated By Electrically Assisted Roll Bonding. Journal of Micro and Nano-Manufacturing, 2017, 5, . | 0.8 | 3 |
| 59 | Sinter-joining of Cu54Zr22Ti18Ni6 BMG powder to Cu powder by spark plasma sintering. Materials Letters, 2019, 242, 55-57. | 1.3 | 3 |
| 60 | Microstructural Evolution of Multi-Pass Caliber-Rolled Mgâ€“Sn and Mgâ€“Snâ€“Mn Alloys. Metals, 2020, 10, 1203. | 1.0 | 3 |
| 61 | Manufacturing of a corrugated double-layered tube for the high-performance compact heat exchanger. International Journal of Advanced Manufacturing Technology, 2021, 112, 2065-2080. | 1.5 | 3 |
| 62 | Polyvinyl pyrrolidone (<scp>PVP</scp>) as an efficient and biocompatible binder for metal alloy processing: A case study with <scp>Tiâ€20Zrâ€11Nbâ€3Sn</scp>. Journal of Applied Polymer Science, 2022, 139, . | 1.3 | 3 |
| 63 | Superior bonding properties of dissimilar steel joint produced by electroslag remelting. Metals and Materials International, 2015, 21, 1054-1060. | 1.8 | 2 |
| 64 | Effects of drawing strain and post-annealing conditions on microstructural evolution and tensile properties of medium- and high-carbon steels. Metals and Materials International, 2017, 23, 1176-1187. | 1.8 | 2 |
| 65 | Microforming of fine metallic rods by the selective laser melting of powder. Additive Manufacturing, 2020, 36, 101612. | 1.7 | 2 |
| 66 | Graded Grain Structure to Improve Hydrogen-Embrittlement Resistance of TWIP Steel. Crystals, 2020, 10, 1045. | 1.0 | 2 |
| 67 | Effect of Type-B liquid metal embrittlement cracks on high-cycle fatigue properties of spot-welded 1180 TRIP steel. Science and Technology of Welding and Joining, 2021, 26, 173-179. | 1.5 | 2 |
| 68 | Phosphorescence-based temperature and tactile multi-functional flexible sensing skin. Sensors and Actuators A: Physical, 2021, 332, 113205. | 2.0 | 2 |
| 69 | Constitutive Analysis of the Anisotropic Flow Behavior of Commercially Pure Titanium. Applied Sciences (Switzerland), 2020, 10, 7962. | 1.3 | 1 |
| 70 | Effects of Substitution of Y with Yb and Ce on the Microstructures and Mechanical Properties of Mg88.5Zn5Y6.5. Metals, 2021, 11, 31. | 1.0 | 0 |