John H Perepezko

List of Publications by Year in descending order

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201 papers

6,138 citations

76326 40 h-index 72 g-index

204 all docs

204 docs citations

times ranked

204

3984 citing authors

| # | Article | IF | Citations |
|----|--|-----|-----------|
| 1 | Oxidation kinetics and microstructure evolution of high Mn stainless-steel alloy in CO2 at 700°C. Corrosion Science, 2022, 195, 110013. | 6.6 | 5 |
| 2 | Alloying reactions in nanostructured multilayers during intense deformation. International Journal of Materials Research, 2022, 94, 1111-1116. | 0.3 | 0 |
| 3 | Surface Diffusion Is Controlled by Bulk Fragility across All Glass Types. Physical Review Letters, 2022, 128, 075501. | 7.8 | 13 |
| 4 | Defect recovery processes in Cr-B binary and Cr-Al-B MAB phases: structure-dependent radiation tolerance. Acta Materialia, 2022, 235, 118099. | 7.9 | 10 |
| 5 | Liquid–liquid transition kinetics in D-mannitol. Journal of Chemical Physics, 2022, 157, . | 3.0 | 2 |
| 6 | Trimodal shear band nucleation distribution in a Gd-based metallic glass via nanoindentation. Materials Science & Digineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 801, 140402. | 5.6 | 12 |
| 7 | Varying kinetic stability, icosahedral ordering, and mechanical properties of a model Zr-Cu-Al metallic glass by sputtering. Physical Review Materials, 2021, 5, . | 2.4 | 3 |
| 8 | Mo-Silicide Alloys for High-Temperature Structural Applications. Materials Performance and Characterization, 2021, 10, 20200183. | 0.3 | 7 |
| 9 | Mechanisms of bulk and surface diffusion in metallic glasses determined from molecular dynamics simulations. Acta Materialia, 2021, 209, 116794. | 7.9 | 20 |
| 10 | Nanoglass and Nanocrystallization Reactions in Metallic Glasses. Frontiers in Materials, 2021, 8, . | 2.4 | 5 |
| 11 | Oxidation of Mo-Si-B Alloys and Coatings in a Water Vapor Environment. Oxidation of Metals, 2021, 96, 323-332. | 2.1 | 3 |
| 12 | Enhanced oxidation resistance of (Mo95W5)85Ta10(TiZr)5 refractory multi-principal element alloy up to 1300°C. Acta Materialia, 2021, 215, 117114. | 7.9 | 14 |
| 13 | Analysis of Nucleation and Glass Formation by Chip Calorimetry. Applied Sciences (Switzerland), 2021, 11, 7652. | 2.5 | 0 |
| 14 | A pulse oxidation facility for the study of oxide nucleation behavior. Review of Scientific Instruments, 2021, 92, 093902. | 1.3 | 0 |
| 15 | Molecular simulation-derived features for machine learning predictions of metal glass forming ability. Computational Materials Science, 2021, 199, 110728. | 3.0 | 5 |
| 16 | Microstructural Evaluation and Highly Efficient Photocatalytic Degradation Characteristic of Nanostructured Mg65Ni20Y15â^xLax (X = 1, 2, 3) Alloys. Journal of Inorganic and Organometallic Polymers and Materials, 2020, 30, 494-503. | 3.7 | 7 |
| 17 | Microstructure, microhardness and oxidation behavior of Mo-Si-B alloys in the Moss+Mo2B+Mo5SiB2 three phase region. Intermetallics, 2020, 116, 106618. | 3.9 | 18 |
| 18 | Coating Reactions on Vanadium and V-Si-B Alloys during Powder Pack-Cementation. Materials, 2020, 13, 4099. | 2.9 | 3 |

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| 19 | Crystallographic anisotropy of nonequilibrium solute capture. Acta Materialia, 2020, 198, 223-229. | 7.9 | 8 |
| 20 | Surface dynamics measurement on a gold based metallic glass. Applied Physics Letters, 2020, 116, . | 3.3 | 9 |
| 21 | Competition between thermodynamics, kinetics and growth mode in the early-stage oxidation of an equimolar CoCrFeNi alloy. Acta Materialia, 2020, 196, 651-659. | 7.9 | 35 |
| 22 | Creep of an oxidation resistant coated Mo-9Si-8B alloy. Intermetallics, 2020, 120, 106743. | 3.9 | 5 |
| 23 | Reactive modeling of Mo3Si oxidation and resulting silica morphology. Acta Materialia, 2020, 187, 93-102. | 7.9 | 6 |
| 24 | Resistance of a Mo–Si–B-Based Coating to Environmental Salt-Based Hot Corrosion. Oxidation of Metals, 2020, 93, 387-399. | 2.1 | 4 |
| 25 | Mapping the Viscoelastic Heterogeneity at the Nanoscale in Metallic Glasses by Static Force Spectroscopy. Nano Letters, 2020, 20, 7558-7565. | 9.1 | 29 |
| 26 | Separating <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>β</mml:mi></mml:math> relaxation from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>α</mml:mi></mml:math> relaxation in fragile metallic glasses based on ultrafast flash differential scanning calorimetry. | 2.4 | 22 |
| 27 | Physical Review Materials, 2020, 4, . Alâ∈Based Amorphous Metallic Plastics. Advanced Engineering Materials, 2019, 21, 1800930. | 3.5 | 10 |
| 28 | Flash DSC determination of the delay time for primary crystallization and minor alloying effect in marginal Al-based metallic glasses. Thermochimica Acta, 2019, 677, 91-98. | 2.7 | 12 |
| 29 | Oxidation resistance of a Mo-W-Si-B alloy at 1000–1300 °C: The effect of a multicomponent Mo-Si-B coating. Applied Surface Science, 2019, 470, 289-295. | 6.1 | 24 |
| 30 | Examination of B in the Mo solid solution (Moss) in Moss + Mo5SiB2 + Mo2B alloys. Scripta Materialia, 2019, 163, 62-65. | 5.2 | 12 |
| 31 | Solidification of Ni-Re Peritectic Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 772-788. | 2.2 | 3 |
| 32 | Solidification of Ni-Re Peritectic Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, . | 2.2 | 0 |
| 33 | Evolution of NiO Island Size Distributions during the Oxidation of a Ni–5Cr Alloy: Experiment and Modeling. ACS Applied Materials & Samp; Interfaces, 2018, 10, 9136-9146. | 8.0 | 13 |
| 34 | Vitrification, crystallization, and atomic structure of deformed and quenched Ni60Nb40 metallic glass. Journal of Non-Crystalline Solids, 2018, 491, 133-140. | 3.1 | 13 |
| 35 | WO2 triggered nucleation and growth of ultra-long W18O49 structures, from nanobundles to single-crystalline microrod. Acta Materialia, 2018, $148, 55-62$. | 7.9 | 9 |
| 36 | High temperature environmental resistant Mo-Si-B based coatings. International Journal of Refractory Metals and Hard Materials, 2018, 71, 246-254. | 3.8 | 36 |

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| 37 | Nonequilibrium Solute Capture in Passivating Oxide Films. Physical Review Letters, 2018, 121, 145701. | 7.8 | 67 |
| 38 | Investigation of the nucleation delay time in Al-based metallic glasses by high rate calorimetry. Journal of Non-Crystalline Solids, 2018, 502, 9-14. | 3.1 | 7 |
| 39 | In Situ Observations of Early Stage Oxidation of Ni-Cr and Ni-Cr-Mo Alloys. Corrosion, 2018, 74, 939-946. | 1.1 | 39 |
| 40 | Synthesis of Sm–Al metallic glasses designed by molecular dynamics simulations. Journal of Materials Science, 2018, 53, 11488-11499. | 3.7 | 3 |
| 41 | Metals and Alloys. Handbook of Thermal Analysis and Calorimetry, 2018, 6, 781-828. | 1.6 | 1 |
| 42 | Quantitative characterization of high temperature oxidation using electron tomography and energy-dispersive X-ray spectroscopy. Scientific Reports, 2018, 8, 10239. | 3.3 | 6 |
| 43 | Polyamorphism and liquid-liquid transformations in D-mannitol. Journal of Chemical Physics, 2018, 149, 074505. | 3.0 | 14 |
| 44 | Repassivation Behavior of Individual Grain Facets on Dilute Ni–Cr and Ni–Cr–Mo Alloys in Acidified Chloride Solution. Journal of Physical Chemistry C, 2018, 122, 19499-19513. | 3.1 | 31 |
| 45 | Environmental Resistant Coatings for High Temperature Mo and Nb Silicide Alloys. MRS Advances, 2017, 2, 1323-1334. | 0.9 | 5 |
| 46 | Hot Corrosion of Mo–Si–B Coatings. Oxidation of Metals, 2017, 87, 705-715. | 2.1 | 14 |
| 47 | Mechanical properties and dislocation character of YB4 and YB6. Intermetallics, 2017, 89, 86-91. | 3.9 | 8 |
| 48 | Enhanced Oxidation Resistance of Mo–Si–B–Ti Alloys by Pack Cementation. Oxidation of Metals, 2017, 88, 267-277. | 2.1 | 23 |
| 49 | Interdiffusion in the Ni-Re System: Evaluation of Uncertainties. Journal of Phase Equilibria and Diffusion, 2017, 38, 750-763. | 1.4 | 10 |
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| 52 | Kinetic Studies of Melting, Crystallization, and Glass Formation., 2016,, 633-660. | | 1 |
| 53 | Focus: Nucleation kinetics of shear bands in metallic glass. Journal of Chemical Physics, 2016, 145, 211803. | 3.0 | 10 |
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| 56 | Solidification of Bcc/T1/T2 three-phase microstructure in Mo–Nb–Si–B alloys. Intermetallics, 2016, 72, 1-8. | 3.9 | 17 |
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| 62 | Mixing behaviors in Cu/Ni and Ni/V multilayers induced by cold rolling. Journal of Alloys and Compounds, 2015, 643, S246-S249. | 5.5 | 4 |
| 63 | Analysis of Melt Undercooling and Crystallization Kinetics. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4898-4907. | 2.2 | 4 |
| 64 | An ultra-high temperature Mo–Si–B based coating for oxidation protection of NbSS/Nb5Si3 composites. Applied Surface Science, 2015, 337, 38-44. | 6.1 | 83 |
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| 70 | The ultrastable kinetic behavior of an Au-based nanoglass. Acta Materialia, 2014, 79, 30-36. | 7.9 | 97 |
| 71 | Nucleation of shear bands in amorphous alloys. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 3938-3942. | 7.1 | 93 |
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| 73 | Perspectives on point defect thermodynamics. Physica Status Solidi (B): Basic Research, 2014, 251, 97-129. | 1.5 | 58 |
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| 99 | Strong, Ductile Magnesium-Zinc Nanocomposites. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 3038-3045. | 2.2 | 93 |
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| 122 | Nucleation-controlled reactions and metastable structures. Progress in Materials Science, 2004, 49, 263-284. | 32.8 | 96 |
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| 125 | Nanometer-scale solute clustering in aluminum–nickel–ytterbium metallic glasses. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 353, 99-104. | 5.6 | 9 |
| 126 | Primary crystallization in amorphous Al-based alloys. Journal of Non-Crystalline Solids, 2003, 317, 52-61. | 3.1 | 69 |

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| 130 | Significance of the Heat of Mixing for the Amorphization of Multilayers by Deformation Processing. Materials Science Forum, 2002, 386-388, 21-26. | 0.3 | 10 |
| 131 | Deformation-induced crystallization and amorphization of Al-based metallic glasses. Materials Research Society Symposia Proceedings, 2002, 740, $1.$ | 0.1 | 2 |
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| 151 | Microstructural Development of Mo(ss) + T2 Two-Phase Alloys. Materials Research Society Symposia Proceedings, 1998, 552, 1. | 0.1 | 5 |
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