

Adrian S Sabau

List of Publications by Year in descending order

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Version: 2024-02-01

93
papers

1,179
citations

471509

17
h-index

454955

30
g-index

122
all docs

122
docs citations

122
times ranked

1274
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Transfer-matrix formalism for the calculation of optical response in multilayer systems: from coherent to incoherent interference. <i>Optics Express</i> , 2010, 18, 24715. | 3.4 | 145 |
| 2 | Microporosity prediction in aluminum alloy castings. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2002, 33, 243-255. | 2.1 | 83 |
| 3 | Design of composite polymer electrolytes for Li ion batteries based on mechanical stability criteria. <i>Journal of Power Sources</i> , 2012, 201, 280-287. | 7.8 | 64 |
| 4 | Numerical simulation of high-density plasma-arc processing of FePt nanoparticle films. <i>Jom</i> , 2006, 58, 35-38. | 1.9 | 53 |
| 5 | Material properties for predicting wax pattern dimensions in investment casting. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003, 362, 125-134. | 5.6 | 52 |
| 6 | Mixtures of SF ₆ -CO ₂ as working fluids for geothermal power plants. <i>Applied Energy</i> , 2013, 106, 243-253. | 10.1 | 49 |
| 7 | Cold compaction study of Armstrong Process® Ti-6Al-4V powders. <i>Powder Technology</i> , 2011, 214, 194-199. | 4.2 | 46 |
| 8 | Alloy shrinkage factors for the investment casting process. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2006, 37, 131-140. | 2.1 | 41 |
| 9 | Analysis of composite electrolytes with sintered reinforcement structure for energy storage applications. <i>Journal of Power Sources</i> , 2013, 241, 178-185. | 7.8 | 37 |
| 10 | Organic Fluids in a Supercritical Rankine Cycle for Low Temperature Power Generation. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2013, 135, . | 2.3 | 33 |
| 11 | Consolidation Process in Near Net Shape Manufacturing of Armstrong CP-Ti/Ti-6Al-4V Powders. <i>Key Engineering Materials</i> , 0, 436, 103-111. | 0.4 | 29 |
| 12 | Design, additive manufacturing, and performance of heat exchanger with a novel flow-path architecture. <i>Applied Thermal Engineering</i> , 2020, 180, 115775. | 6.0 | 29 |
| 13 | Entrance-length dendritic plate heat exchangers. <i>International Journal of Heat and Mass Transfer</i> , 2017, 114, 1350-1356. | 4.8 | 26 |
| 14 | Influence of Oxide Growth and Metal Creep on Strain Development in the Steam-Side Oxide in Boiler Tubes. <i>Oxidation of Metals</i> , 2010, 73, 467-492. | 2.1 | 25 |
| 15 | Development of Strain in Oxides Grown in Steam Tubes. <i>Materials Science Forum</i> , 0, 595-598, 387-395. | 0.3 | 24 |
| 16 | On the estimation of thermal strains developed during oxide growth. <i>Journal of Applied Physics</i> , 2009, 106, 023503. | 2.5 | 20 |
| 17 | Heat transfer coefficients of additively manufactured tubes with internal pin fins for supercritical carbon dioxide cycle recuperators. <i>Applied Thermal Engineering</i> , 2020, 181, 116030. | 6.0 | 20 |
| 18 | Alloy Shrinkage Factors for the Investment Casting of 17-4PH Stainless Steel Parts. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2008, 39, 317-330. | 2.1 | 19 |

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|----|--|-----|-----------|
| 19 | Oxide scale exfoliation and regrowth in TP347H superheater tubes. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2012, 63, 896-908. | 1.5 | 18 |
| 20 | Counterflow heat exchanger with core and plenums at both ends. <i>International Journal of Heat and Mass Transfer</i> , 2016, 99, 622-629. | 4.8 | 17 |
| 21 | Generation of nitrogen acceptors in ZnO using pulse thermal processing. <i>Applied Physics Letters</i> , 2008, 92, 151112. | 3.3 | 16 |
| 22 | Fluid Dynamics Effects on Microstructure Prediction in Single-Laser Tracks for Additive Manufacturing of IN625. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2020, 51, 1263-1281. | 2.1 | 14 |
| 23 | Hot-Tearing Assessment of Multicomponent Nongrain-Refined Al-Cu Alloys for Permanent Mold Castings Based on Load Measurements in a Constrained Mold. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018, 49, 1267-1287. | 2.1 | 13 |
| 24 | Current Status of Ti PM: Progress, Opportunities and Challenges. <i>Key Engineering Materials</i> , 2012, 520, 1-7. | 0.4 | 12 |
| 25 | Characterization of spray lubricants for the high pressure die casting processes. <i>Journal of Materials Processing Technology</i> , 2008, 195, 267-274. | 6.3 | 11 |
| 26 | Counter cross-flow evaporator geometries for supercritical organic Rankine cycles. <i>International Journal of Heat and Mass Transfer</i> , 2019, 135, 425-435. | 4.8 | 11 |
| 27 | Advanced Manufacturing Technologies Utilising High Density Infrared Radiant Heating. <i>Surface Engineering</i> , 2004, 20, 220-228. | 2.2 | 10 |
| 28 | Morphological evolution of oxide scales grown on ferritic steels in steam. <i>Materials at High Temperatures</i> , 2009, 26, 105-111. | 1.0 | 10 |
| 29 | Effective conductivity of particulate polymer composite electrolytes using random resistor network method. <i>Solid State Ionics</i> , 2011, 199-200, 44-53. | 2.7 | 10 |
| 30 | Arrays of flow channels with heat transfer embedded in conducting walls. <i>International Journal of Heat and Mass Transfer</i> , 2016, 99, 504-511. | 4.8 | 10 |
| 31 | Grain Refinement Effect on the Hot-Tearing Resistance of Higher-Temperature Al-Cu-Mn-Zr Alloys. <i>Metals</i> , 2020, 10, 430. | 2.3 | 10 |
| 32 | Analysis of volumetric changes through melting using a dilatometer. <i>Journal of Thermal Analysis and Calorimetry</i> , 2005, 82, 171-177. | 3.6 | 9 |
| 33 | High-Heat-Flux Testing of Irradiated Tungsten-Based Materials for Fusion Applications Using Infrared Plasma Arc Lamps. <i>Fusion Science and Technology</i> , 2014, 66, 394-404. | 1.1 | 9 |
| 34 | Surface chemistry and composition-induced variation of laser interference-based surface treatment of Al alloys. <i>Applied Surface Science</i> , 2019, 489, 893-904. | 6.1 | 9 |
| 35 | Comparisons of compact and classical finite difference solutions of stiff problems on nonuniform grids. <i>Computers and Fluids</i> , 1999, 28, 361-384. | 2.5 | 8 |
| 36 | Evaluation of a heat flux sensor for spray cooling for the die casting processes. <i>Journal of Materials Processing Technology</i> , 2007, 182, 312-318. | 6.3 | 8 |

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|----|--|-----|-----------|
| 37 | Dynamics of a Gas Permeable Contact Lens During Blinking. Journal of Applied Mechanics, Transactions ASME, 1996, 63, 411-418. | 2.2 | 7 |
| 38 | Oscillations in high-order finite difference solutions of stiff problems on non-uniform grids. International Journal for Numerical Methods in Fluids, 1999, 30, 939-956. | 1.6 | 7 |
| 39 | Surface Characterization of Carbon Fiber Polymer Composites and Aluminum Alloys After Laser Interference Structuring. Jom, 2016, 68, 1882-1889. | 1.9 | 7 |
| 40 | Novel evaporator architecture with entrance-length crossflow-paths for supercritical Organic Rankine Cycles. International Journal of Heat and Mass Transfer, 2018, 119, 208-222. | 4.8 | 7 |
| 41 | Coating adhesion of a chromate-containing epoxy primer on Al2024-T3 surface processed by laser-interference. International Journal of Adhesion and Adhesives, 2020, 102, 102641. | 2.9 | 7 |
| 42 | Blink-Induced Motion of a Gas Permeable Contact Lens. Optometry and Vision Science, 1995, 72, 378-386. | 1.2 | 6 |
| 43 | Predicting interdendritic cavity defects during casting solidification. Jom, 2004, 56, 54-56. | 1.9 | 6 |
| 44 | Measurement of heat flux at metal/mould interface during casting solidification. International Journal of Cast Metals Research, 2006, 19, 188-194. | 1.0 | 6 |
| 45 | Measurement of heat flux and heat transfer coefficient due to spray application for the die casting process. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2007, 221, 1307-1316. | 2.4 | 6 |
| 46 | Laser-interference pulse number dependence of surface chemistry and sub-surface microstructure of AA2024-T3 alloy. Optics and Laser Technology, 2020, 131, 106457. | 4.6 | 6 |
| 47 | Columnar-to-equiaxed transition in a laser scan for metal additive manufacturing. IOP Conference Series: Materials Science and Engineering, 2020, 861, 012007. | 0.6 | 6 |
| 48 | Design optimization of an additively manufactured prototype recuperator for supercritical CO2 power cycles. Energy, 2022, 251, 123961. | 8.8 | 6 |
| 49 | Process Parameters for Infrared Processing of FePt Nanoparticle Films. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 788-797. | 2.2 | 5 |
| 50 | The Effects of Changing Fuels on Hot Gas Path Conditions in Syngas Turbines. Journal of Engineering for Gas Turbines and Power, 2009, 131, . | 1.1 | 5 |
| 51 | Transient Regimes Analysis for a Diesel Engine. Advanced Materials Research, 2013, 837, 471-476. | 0.3 | 5 |
| 52 | Facility for high-heat flux testing of irradiated fusion materials and components using infrared plasma arc lamps. Physica Scripta, 2014, T159, 014007. | 2.5 | 5 |
| 53 | Original computer method for the experimental data processing in photoelasticity. Proceedings of SPIE, 2015, . . | 0.8 | 5 |
| 54 | A radiative transport model for heating paints using high density plasma arc lamps. Journal of Applied Physics, 2009, 105, 084901. | 2.5 | 4 |

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| 55 | Advanced method for increasing the efficiency of white light quantum dot LEDs. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1980-1982. | 1.8 | 4 |
| 56 | Pressure Waves Simulation in Diesel Engine Injection System. Advanced Materials Research, 2013, 837, 477-482. | 0.3 | 4 |
| 57 | A 6 MW/m ² High Heat Flux Testing Facility of Irradiated Materials Using Infrared Plasma-Arc Lamps. Fusion Science and Technology, 2019, 75, 690-701. | 1.1 | 4 |
| 58 | Evaporation due to infrared heating and natural convection. Heat and Mass Transfer, 2020, 56, 2585-2593. | 2.1 | 4 |
| 59 | Modeling and processing of liquid-phase-sintered $\hat{1}^3$ -TiAl during high-density infrared processing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 1289-1299. | 2.2 | 3 |
| 60 | Process Simulation Role in the Development of New Alloys Based on an Integrated Computational Materials Engineering Approach. , 2014, , . | | 3 |
| 61 | Surface morphology of Tungsten-F82H after high-heat flux testing using plasma-arc lamps. Nuclear Materials and Energy, 2018, 16, 128-132. | 1.3 | 3 |
| 62 | Hot-Tearing of Multicomponent Al-Cu Alloys Based on Casting Load Measurements in a Constrained Permanent Mold. Minerals, Metals and Materials Series, 2017, , 465-473. | 0.4 | 3 |
| 63 | Comments on americium volatilization during fuel fabrication for fast reactors. Journal of Nuclear Materials, 2008, 376, 251-253. | 2.7 | 2 |
| 64 | Mixtures of CO ₂ -SF ₆ as Working Fluids for Geothermal Plants. , 2011, , . | | 2 |
| 65 | Performance of Working Fluids for Power Generation in a Supercritical Organic Rankine Cycle. , 2012, , . | | 2 |
| 66 | Modeling of interdendritic porosity defects in an integrated computational materials engineering approach for metal casting. International Journal of Cast Metals Research, 2016, 29, 331-337. | 1.0 | 2 |
| 67 | Progress in the U.S./Japan PHENIX Project for the Technological Assessment of Plasma Facing Components for DEMO Reactors. Fusion Science and Technology, 0, , 1-11. | 1.1 | 2 |
| 68 | Modeling of Casting Defects in an Integrated Computational Materials Engineering Approach. , 2015, , 231-240. | | 2 |
| 69 | Morphological evolution of oxide scales grown on ferritic steels in steam. Materials at High Temperatures, 2009, 26, 105-111. | 1.0 | 2 |
| 70 | Functionalization of Nanomaterials utilizing Pulse Thermal Processing. Materials Research Society Symposia Proceedings, 2004, 853, 19. | 0.1 | 1 |
| 71 | Analysis of a Heat-Flux Differential Scanning Calorimetry Instrument. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 1546-1554. | 2.2 | 1 |
| 72 | Numerical Simulation of Macro-shrinkage and Micro-shrinkage in A356 Sand Mold Castings. , 2012, , 205-212. | | 1 |

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| 73 | Algorithm Development in Computational Materials Science. Jom, 2014, 66, 397-398. | 1.9 | 1 |
| 74 | Evaluation of Cooling Conditions for a High Heat Flux Testing Facility Based on Plasma-Arc Lamps. Fusion Science and Technology, 2015, 68, 694-699. | 1.1 | 1 |
| 75 | Corrosion Behavior of Laser-Interference Structured AA2024 Coated with a Chromate-Containing Epoxy Primer. Corrosion, 2021, 77, 577-590. | 1.1 | 1 |
| 76 | Surface and subsurface characterization of laser-interference structured Ti6Al4V. Applied Surface Science, 2021, 555, 149576. | 6.1 | 1 |
| 77 | Surface Modification of Carbon Fiber Polymer Composites after Laser Structuring. , 2015, , 297-309. | | 1 |
| 78 | Numerical Simulations of the Effects of Changing Fuel for Turbines Fired by Natural Gas and Syngas. , 2007, , . | | 1 |
| 79 | Analytical Models for the Systematic Errors of Differential Scanning Calorimetry Instruments. , 2004, , . | | 1 |
| 80 | Original analytical model of the hydrodynamic loads applied on the half-bridge of a circular settling tank. , 2016, , . | | 1 |
| 81 | Modeling of High-Pressure Fuel Injection Systems. Annals of DAAAM & Proceedings, 2012, , 1019-1022. | 0.1 | 1 |
| 82 | Analytic Method to Compute the Isostatics using the Isoclinic Fringes. Annals of DAAAM & Proceedings, 2012, , 0493-0496. | 0.1 | 1 |
| 83 | Thermo-Mechanical Distortion of Tungsten-Coated Steel During High Heat Flux Testing Using Plasma Arc Lamps. Fusion Science and Technology, 2022, 78, 291-317. | 1.1 | 1 |
| 84 | Next Generation Casting Process Models - Predicting Porosity and Microstructure. , 1998, , . | | 0 |
| 85 | Author Index: CFD Modeling and Simulation in Materials Processing 2016. , 2016, , 271-273. | | 0 |
| 86 | Novel Evaporator Geometries Based on Entrance-Length Flow-Paths for Geothermal Binary Power Plants. , 2016, , . | | 0 |
| 87 | Conjugate Heat Transfer Analysis of the Supercritical CO2 Based Counter Flow Compact 3D Heat Exchangers. , 2020, , . | | 0 |
| 88 | Adhesive Bonding of Copper Prepared by Laser-Interference near the Interference Structuring Limits. Materials, 2021, 14, 3485. | 2.9 | 0 |
| 89 | Steady-State Mechanical Analysis for Target Assembly in the Material Plasma Exposure eXperiment Facility. Fusion Science and Technology, 2021, 77, 594-607. | 1.1 | 0 |
| 90 | Increasing Wear Resistance of the Superficial Microalloying Layers. Annals of DAAAM & Proceedings, 2012, , 1015-1018. | 0.1 | 0 |

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| 91 | Ideas Regarding the Modeling of the Behavior of the Sections Having a Distinct Shear Center. Annals of DAAAM & Proceedings, 2012, , 0489-0492. | 0.1 | 0 |
| 92 | Experimental and Computational Study of Bolt Load Retention Behavior of Magnesium Alloy AM60B. , 0, , 201-201. | | 0 |
| 93 | Aluminum Surface Texturing by Means of Laser Interference Metallurgy. , 2015, , 427-429. | | 0 |