# Nathalie Bozzolo

List of Publications by Year
in descending order

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| 100 | 3,436 | 147801 | 155660 |
|---|---|---|---|
| papers | citations | 31 h-index | 55 g-index |

| 105 | 105 | 105 | 2346 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Analysis of the tensile behavior of a TWIP steel based on the texture and microstructure evolutions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 500, 196-206. | 5.6 | 404 |
| 2 | Annealing twin development during recrystallization and grain growth in pure nickel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 597, 295-303. | 5.6 | 175 |
| 3 | Evolution of recrystallisation texture and microstructure in low alloyed titanium sheets. Acta Materialia, 2002, 50, 1245-1259. | 7.9 | 160 |
| 4 | About quantitative EBSD analysis of deformation and recovery substructures in pure Tantalum. IOP Conference Series: Materials Science and Engineering, 2015, 89, 012038. | 0.6 | 110 |
| 5 | Selective Growth of Low Stored Energy Grains During Î´ Sub-solvus Annealing in the Inconel 718 Nickel-Based Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4405-4421. | 2.2 | 99 |
| 6 | Texture evolution during grain growth in recrystallized commercially pure titanium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 397, 346-355. | 5.6 | 97 |
| 7 | Evolution of microstructure and twin density during thermomechanical processing in a Î³-Î³â€™ nickel-based superalloy. Acta Materialia, 2012, 60, 5056-5066. | 7.9 | 97 |
| 8 | Statistical analysis of dislocations and dislocation boundaries from EBSD data. Ultramicroscopy, 2017, 179, 63-72. | 1.9 | 95 |
| 9 | Influence of strain rate on subsolvus dynamic and post-dynamic recrystallization kinetics of Inconel 718. Acta Materialia, 2019, 174, 406-417. | 7.9 | 94 |
| 10 | The mechanisms of microstructure formation in a nanostructured oxide dispersion strengthened FeAl alloy obtained by spark plasma sintering. Intermetallics, 2007, 15, 108-118. | 3.9 | 87 |
| 11 | Misorientations induced by deformation twinning in titanium. Journal of Applied Crystallography, 2010, 43, 596-602. | 4.5 | 84 |
| 12 | Mean field modelling of dynamic and post-dynamic recrystallization during hot deformation of Inconel 718 in the absence of Î´ phase particles. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 655, 408-424. | 5.6 | 79 |
| 13 | Observation of annealing twin nucleation at triple lines in nickel during grain growth. Acta Materialia, 2015, 99, 63-68. | 7.9 | 73 |
| 14 | Microstructure and microtexture of highly cold-rolled commercially pure titanium. Journal of Materials Science, 2007, 42, 2405-2416. | 3.7 | 72 |
| 15 | Heteroepitaxial recrystallization: A new mechanism discovered in a polycrystalline Î³-Î³â€² nickel based superalloy. Journal of Alloys and Compounds, 2016, 688, 685-694. | 5.5 | 62 |
| 16 | About the possibility of grain boundary engineering via hot-working in a nickel-base superalloy. Scripta Materialia, 2010, 62, 851-854. | 5.2 | 61 |
| 17 | Viewpoint on the Formation and Evolution of Annealing Twins During Thermomechanical Processing of FCC Metals and Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 2665-2684. | 2.2 | 61 |
| 18 | Formation of Annealing Twins during Recrystallization and Grain Growth in 304L Austenitic Stainless Steel. Materials Science Forum, 0, 753, 113-116. | 0.3 | 54 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | EBSD for analysing the twinning microstructure in fineâ€grained TWIP steels and its influence on work hardening. Journal of Microscopy, 2009, 235, 67-78. | 1.8 | 53 |
| 20 | New finite element developments for the full field modeling of microstructural evolutions using the level-set method. Computational Materials Science, 2015, 109, 388-398. | 3.0 | 52 |
| 21 | Modeling of dynamic and post-dynamic recrystallization by coupling a full field approach to phenomenological laws. Materials and Design, 2017, 133, 498-519. | 7.0 | 50 |
| 22 | Observations on the effect of a magnetic field on the annealing texture and microstructure evolution in zirconium. Acta Materialia, 2010, 58, 3568-3581. | 7.9 | 49 |
| 23 | Development of a level set methodology to simulate grain growth in the presence of real secondary phase particles and stored energy â€“ Application to a nickel-base superalloy. Computational Materials Science, 2014, 89, 233-241. | 3.0 | 49 |
| 24 | 3D level set modeling of static recrystallization considering stored energy fields. Computational Materials Science, 2016, 122, 57-71. | 3.0 | 48 |
| 25 | Low Temperature Tempering of a Medium Carbon Steel in High Magnetic Field. ISIJ International, 2005, 45, 913-917. | 1.4 | 45 |
| 26 | Overgrown grains appearing during sub-solvus heat treatment in a polycrystalline Î³-Î³â€™ Nickel-based superalloy. Materials and Design, 2018, 144, 353-360. | 7.0 | 44 |
| 27 | Thermo-mechanical factors influencing annealing twin development in nickel during recrystallization. Journal of Materials Science, 2015, 50, 5191-5203. | 3.7 | 43 |
| 28 | Fast in-situ annealing stage coupled with EBSD: A suitable tool to observe quick recrystallization mechanisms. Materials Characterization, 2012, 70, 28-32. | 4.4 | 41 |
| 29 | About texture stability during primary recrystallization of cold-rolled low alloyed zirconium. Scripta Materialia, 2009, 60, 203-206. | 5.2 | 40 |
| 30 | A New Approach to Modeling the Flow Curve of Hot Deformed Austenite. ISIJ International, 2011, 51, 945-950. | 1.4 | 38 |
| 31 | Evidence of multimicrometric coherent Î³â€² precipitates in a hotâ€forged Î³â€“Î³â€² nickelâ€based superalloy. Journal of Microscopy, 2016, 263, 106-112. | 1.8 | 34 |
| 32 | Discrimination of dynamically and postâ€dynamically recrystallized grains based on EBSD data: application to Inconel 718. Journal of Microscopy, 2019, 273, 135-147. | 1.8 | 33 |
| 33 | In Situ Characterization of Inconel 718 Post-Dynamic Recrystallization within a Scanning Electron Microscope. Metals, 2017, 7, 476. | 2.3 | 32 |
| 34 | A novel level-set finite element formulation for grain growth with heterogeneous grain boundary energies. Materials and Design, 2018, 160, 578-590. | 7.0 | 32 |
| 35 | Strain Induced Abnormal Grain Growth in Nickel Base Superalloys. Materials Science Forum, 2013, 753, 321-324. | 0.3 | 31 |
| 36 | On the Coupling between Recrystallization and Precipitation Following Hot Deformation in a Î³-Î³â€² Nickel-Based Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 4199-4213. | 2.2 | 31 |

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| 37 | Estimation of geometrically necessary dislocation density from filtered EBSD data by a local linear adaptation of smoothing splines. Journal of Applied Crystallography, 2019, 52, 548-563. | 4.5 | 30 |
| 38 | Carbothermal Transformation of TiO<sub>2</sub> into TiO<sub>x</sub>C<sub>y</sub> in UHV: Tracking Intrinsic Chemical Stabilities. Journal of Physical Chemistry C, 2014, 118, 22601-22610. | 3.1 | 29 |
| 39 | 2D finite element modeling of misorientation dependent anisotropic grain growth in polycrystalline materials: Level set versus multi-phase-field method. Computational Materials Science, 2015, 104, 108-123. | 3.0 | 29 |
| 40 | Evolution of the Annealing Twin Density during Î´-Supersolvus Grain Growth in the Nickel-Based Superalloy Inconelâ„¢ 718. Metals, 2016, 6, 5. | 2.3 | 29 |
| 41 | Accuracy of orientation distribution function determination based on EBSD data-A case study of a recrystallized low alloyed Zr sheet. Journal of Microscopy, 2007, 227, 275-283. | 1.8 | 27 |
| 42 | Hardness, thermal stability and yttrium distribution in nanostructured deposits obtained by thermal spraying from milledâ€"Y2O3 reinforcedâ€"or atomized FeAl powders. Intermetallics, 2006, 14, 715-721. | 3.9 | 25 |
| 43 | Nucleation mechanism of hetero-epitaxial recrystallization in wrought nickel-based superalloys. Scripta Materialia, 2021, 191, 7-11. | 5.2 | 23 |
| 44 | Magnetically affected texture and grain structure development in titanium. Materials Letters, 2005, 59, 3209-3213. | 2.6 | 21 |
| 45 | A new topological approach for the mean field modeling of dynamic recrystallization. Materials and Design, 2018, 146, 194-207. | 7.0 | 21 |
| 46 | EBSD coupled to SEM in situ annealing for assessing recrystallization and grain growth mechanisms in pure tantalum. Journal of Microscopy, 2013, 250, 189-199. | 1.8 | 20 |
| 47 | Consequences of a Room-Temperature Plastic Deformation During Processing on Creep Durability of a Ni-Based SX Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 4246-4261. | 2.2 | 20 |
| 48 | A 2D level set finite element grain coarsening study with heterogeneous grain boundary energies. Applied Mathematical Modelling, 2020, 78, 505-518. | 4.2 | 19 |
| 49 | Influence of the strain path changes on the formability of a zinc sheet. Journal of Materials Processing Technology, 2019, 271, 101-110. | 6.3 | 17 |
| 50 | On the evaluation of dislocation densities in pure tantalum from EBSD orientation data. Materiaux Et Techniques, 2018, 106, 604. | 0.9 | 17 |
| 51 | Grain Growth Texture Evolution in Zirconium (Zr702) and Commercially Pure Titanium (T40). Materials Science Forum, 2004, 467-470, 441-446. | 0.3 | 16 |
| 52 | Experimental Investigations of Recrystallization Texture Development in Zirconium (Zr702). Materials Science Forum, 2004, 467-470, 453-458. | 0.3 | 16 |
| 53 | Full field modeling of recrystallization: Effect of intragranular strain gradients on grain boundary shape and kinetics. Computational Materials Science, 2018, 150, 149-161. | 3.0 | 16 |
| 54 | Crystalline quality of highly oriented diamond films grown on ã€˜100ã€‰ silicon studied by conventional TEM. Diamond and Related Materials, 1997, 6, 41-47. | 3.9 | 14 |

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| 55 | Recrystallization Textures in some Hexagonal Alloys. Materials Science Forum, 2002, 408-412, 901-906. | 0.3 | 14 |
| 56 | Improvement of 3D mean field models for capillarity-driven grain growth based on full field simulations. Journal of Materials Science, 2016, 51, 10970-10981. | 3.7 | 14 |
| 57 | Dissolution of the Primary Î³â€² Precipitates and Grain Growth during Solution Treatment of Three Nickel Base Superalloys. Metals, 2021, 11, 1921. | 2.3 | 14 |
| 58 | Î³â€² precipitates with a twin orientation relationship to their hosting grain in a Î³-Î³â€² nickel-based superalloy. Scripta Materialia, 2018, 153, 10-13. | 5.2 | 13 |
| 59 | Statistical behaviour of interfaces subjected to curvature flow and torque effects applied to microstructural evolutions. Acta Materialia, 2022, 222, 117459. | 7.9 | 13 |
| 60 | Microstructure evolution and thermal stability of equiatomic CoCrFeNi films on (0001) Î±-Al2O3. Acta Materialia, 2020, 200, 908-921. | 7.9 | 12 |
| 61 | Nanocrystalline equiatomic CoCrFeNi alloy thin films: Are they single phase fcc?. Surface and Coatings Technology, 2021, 410, 126945. | 4.8 | 12 |
| 62 | Phase discrimination between Î´ and Î· phases in the new nickel-based superalloy VDM Alloy 780 using EBSD. Materials Characterization, 2021, 176, 111105. | 4.4 | 12 |
| 63 | A metallurgical approach to individually assess the rheology of alpha and beta phases of Tiâ€“6Alâ€“4V in the two-phase domain. Materials Characterization, 2014, 89, 88-92. | 4.4 | 11 |
| 64 | A Mechanism Leading to Î³â€² Precipitates with {111} Facets and Unusual Orientation Relationships to the Matrix in Î³â€“Î³â€² Nickel-Based Superalloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 4308-4323. | 2.2 | 11 |
| 65 | Full field modeling of dynamic recrystallization in a CPFEM context â€“ Application to 304L steel. Computational Materials Science, 2020, 184, 109892. | 3.0 | 11 |
| 66 | Chemical redistribution and change in crystal lattice parameters during stress relaxation annealing of the AD730TM superalloy. Acta Materialia, 2022, 237, 118141. | 7.9 | 11 |
| 67 | Grain Boundary Character Evolution during Grain Growth in a Zr Alloy. Materials Science Forum, 2007, 558-559, 863-868. | 0.3 | 10 |
| 68 | iCHORD-SI combination as an alternative to EDS-EBSD coupling for the characterization of Î³-Î³â€² nickel-based superalloy microstructures. Materials Characterization, 2018, 142, 492-503. | 4.4 | 10 |
| 69 | A level set approach to simulate grain growth with an evolving population of second phase particles. Modelling and Simulation in Materials Science and Engineering, 2021, 29, 035009. | 2.0 | 10 |
| 70 | Substrate Grain-Dependent Chemistry of Carburized Planar Anodic TiO<sub>2</sub> on Polycrystalline Ti. ACS Omega, 2017, 2, 631-640. | 3.5 | 9 |
| 71 | Comparative Study and Limits of Different Level-Set Formulations for the Modeling of Anisotropic Grain Growth. Materials, 2021, 14, 3883. | 2.9 | 9 |
| 72 | Physical and chemical analyses on single source precursor growth CdSe semiconductor nanomaterials. Materials Chemistry and Physics, 2010, 124, 129-133. | 4.0 | 7 |

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| 73 | Advances in Level-Set Modeling of Recrystallization at the Polycrystal Scale - Development of the Digi-<i>Î¼</i> Software. Key Engineering Materials, 0, 651-653, 617-623. | 0.4 | 7 |
| 74 | Electron backscatter diffraction study of orientation gradients at the grain boundaries of a polycrystalline steel sheet deformed along different loading paths. Journal of Applied Crystallography, 2017, 50, 1179-1191. | 4.5 | 7 |
| 75 | A new analytical test case for anisotropic grain growth problems. Applied Mathematical Modelling, 2021, 93, 28-52. | 4.2 | 7 |
| 76 | Dynamic and Post-dynamic Recrystallization During Supersolvus Forging of the New Nickel-Based Superalloyâ€”VDM Alloy 780. Minerals, Metals and Materials Series, 2020, , 450-460. | 0.4 | 7 |
| 77 | Effect of Recrystallization on Tensile Behavior, Texture, and Anisotropy of Ti-3Al-2.5â€‰V Cold Pilgered Tubes. Advanced Engineering Materials, 2011, 13, 383-387. | 3.5 | 6 |
| 78 | Fabrication of Ti substrate grain dependent C/TiO<sub>2</sub> composites through carbothermal treatment of anodic TiO<sub>2</sub>. Physical Chemistry Chemical Physics, 2016, 18, 9220-9231. | 2.8 | 6 |
| 79 | Spatial distribution of stacking faults and microtwins in isolated crystals and textured diamond films. Diamond and Related Materials, 1996, 5, 1532-1535. | 3.9 | 5 |
| 80 | Some Remarks about the Processing of Automatic EBSD Orientation Measurements in View of Texture Determination. Materials Science Forum, 2002, 408-412, 143-148. | 0.3 | 5 |
| 81 | Crystal orientation distribution in highly oriented diamond films investigated by SEM and TEM. Diamond and Related Materials, 2006, 15, 531-535. | 3.9 | 5 |
| 82 | Magnetically Affected Texture and Microstructure Evolution during Grain Growth in Zirconium. Materials Science Forum, 2012, 715-716, 946-951. | 0.3 | 5 |
| 83 | Evolution of Microstructure in Pure Nickel during Processing for Grain Boundary Engineering. Materials Science Forum, 2013, 753, 97-100. | 0.3 | 4 |
| 84 | Multipass forging of Inconel 718 in the delta-Supersolvus domain: assessing and modeling microstructure evolution. MATEC Web of Conferences, 2014, 14, 12001. | 0.2 | 4 |
| 85 | A mean field model of agglomeration as an extension to existing precipitation models. Acta Materialia, 2020, 192, 40-51. | 7.9 | 4 |
| 86 | An Optimized Geometry of Double-Cone Compression Test Samples for a Better Control of Strain Rate. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 4125-4136. | 2.2 | 4 |
| 87 | Influence of Deformation Substructures on the Early Mechanisms of Recrystallization in Cold-Rolled Titanium and Zirconium. Materials Science Forum, 2005, 495-497, 711-718. | 0.3 | 3 |
| 88 | Growth and orientation relationships of Ni and Cu films annealed on slightly miscut <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si4.gif" overflow="scroll"><mml:mrow><mml:mo stretchy="false">(</mml:mo><mml:mn>1</mml:mn><mml:mspace width="5.0pt") Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 137 Td (/><mn | | |
| 89 | Introduction to the level-set full field modeling of laths spheroidization phenomenon in Î±/Î² titanium alloys. International Journal of Material Forming, 2019, 12, 173-183. | 2.0 | 3 |
| 90 | Heteroepitaxial Recrystallization, a New Recrystallization Mechanism in Sub-Solvus Forged Î³-Î³â€™ Nickel-Based Superalloys with Low Lattice Mismatch. , 2016, , 259-264. | | 2 |

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| 91 | Introduction to the level-set full field modeling of laths spheroidization phenomenon in Î±/Î² titanium alloys. MATEC Web of Conferences, 2016, 80, 02003. | 0.2 | 2 |
| 92 | Prediction of the grain size evolution during thermal treatments at the mesoscopic scale: a numerical framework and industrial examples. Materiaux Et Techniques, 2018, 106, 105. | 0.9 | 2 |
| 93 | Level-Set Modeling of Grain Growth in 316L Stainless Steel under Different Assumptions Regarding Grain Boundary Properties. Materials, 2022, 15, 2434. | 2.9 | 2 |
| 94 | Formation of Coarse Recrystallized Grains in 6016 Aluminum Alloy During Holding After Hot Deformation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 2402-2425. | 2.2 | 2 |
| 95 | Modeling the Evolution of Orientation Distribution Functions during Grain Growth of some Ti and Zr Alloys. Materials Science Forum, 2007, 558-559, 1163-1168. | 0.3 | 1 |
| 96 | Recrystallisation Behavior of Cold Rolled Zr702: Influence of Rolling Direction and Thickness Reduction. Materials Science Forum, 2007, 550, 459-464. | 0.3 | 1 |
| 97 | Effect of Thermomechanical Processes on Î£3 Grain Boundary Distribution in a Nickel Base Superalloy. Materials Science Forum, 2010, 638-642, 2333-2338. | 0.3 | 1 |
| 98 | Textures in HCP Titanium and Zirconium: Influence of Twinning. Ceramic Transactions, 0, , 461-472. | 0.1 | 1 |
| 99 | EBSD Coupled to SEM <i>In Situ</i> Annealing as a Tool to Identify Recrystallization Mechanisms - Application to Zr and Ta Alloys. Materials Science Forum, 0, 715-716, 486-491. | 0.3 | 0 |
| 100 | On the Stability of Recrystallization Textures in Low Alloyed Zirconium Sheets. Ceramic Transactions, 0, , 429-436. | 0.1 | 0 |