### Karsten Durst

## List of Publications by Citations

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| #   | Paper  | IF   | Citations |
|-----|--|------|-----------|
| 134 | Indentation size effect in metallic materials: Correcting for the size of the plastic zone. <i>Scripta Materialia</i> , <b>2005</b> , 52, 1093-1097  | 5.6  | 283       |
| 133 | Indentation size effect in metallic materials: Modeling strength from pop-in to macroscopic hardness using geometrically necessary dislocations. <i>Acta Materialia</i> , <b>2006</b> , 54, 2547-2555  | 8.4  | 235       |
| 132 | Nanoindentation strain-rate jump tests for determining the local strain-rate sensitivity in nanocrystalline Ni and ultrafine-grained Al. <i>Journal of Materials Research</i> , <b>2011</b> , 26, 1421-1430  | 2.5  | 227       |
| 131 | An improved long-term nanoindentation creep testing approach for studying the local deformation processes in nanocrystalline metals at room and elevated temperatures. <i>Journal of Materials Research</i> , <b>2013</b> , 28, 1177-1188  | 2.5  | 114       |
| 130 | In situ micro-cantilever tests to study fracture properties of NiAl single crystals. <i>Acta Materialia</i> , <b>2012</b> , 60, 1193-1200  | 8.4  | 109       |
| 129 | A review of experimental approaches to fracture toughness evaluation at the micro-scale. <i>Materials and Design</i> , <b>2019</b> , 173, 107762   | 8.1  | 99        |
| 128 | Mechanical properties of hyaline and repair cartilage studied by nanoindentation. <i>Acta Biomaterialia</i> , <b>2007</b> , 3, 873-81  | 10.8 | 90        |
| 127 | Influence of dislocation density on the pop-in behavior and indentation size effect in CaF2 single crystals: Experiments and molecular dynamics simulations. <i>Acta Materialia</i> , <b>2011</b> , 59, 4264-4273  | 8.4  | 85        |
| 126 | Finite element study for nanoindentation measurements on two-phase materials. <i>Journal of Materials Research</i> , <b>2004</b> , 19, 85-93   | 2.5  | 78        |
| 125 | Activation parameters for deformation of ultrafine-grained aluminium as determined by indentation strain rate jumps at elevated temperature. <i>Materials Science &amp; Dingineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2013</b> , 585, 108-113 | 5.3  | 75        |
| 124 | Indentation size effect in Nile solid solutions. <i>Acta Materialia</i> , <b>2007</b> , 55, 6825-6833  | 8.4  | 74        |
| 123 | Dynamic nanoindentation testing for studying thermally activated processes from single to nanocrystalline metals. <i>Current Opinion in Solid State and Materials Science</i> , <b>2015</b> , 19, 340-353  | 12   | 72        |
| 122 | Indentation size effect in spherical and pyramidal indentations. <i>Journal Physics D: Applied Physics</i> , <b>2008</b> , 41, 074005  | 3    | 65        |
| 121 | A simple method for residual stress measurements in thin films by means of focused ion beam milling and digital image correlation. <i>Surface and Coatings Technology</i> , <b>2013</b> , 215, 247-252   | 4.4  | 61        |
| 120 | Stress evolution and cracking of crystalline diamond thin films on ductile titanium substrate: Analysis by micro-Raman spectroscopy and analytical modelling. <i>Acta Materialia</i> , <b>2011</b> , 59, 5422-5433   | 8.4  | 60        |
| 119 | Cell-based resurfacing of large cartilage defects: long-term evaluation of grafts from autologous transgene-activated periosteal cells in a porcine model of osteoarthritis. <i>Arthritis and Rheumatism</i> , <b>2008</b> , 58, 475-88  |      | 55        |
| 118 | Micromechanical characterisation of the influence of rhenium on the mechanical properties in nickel-base superalloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing,</i> <b>2004</b> , 387-389, 312-316                      | 5.3  | 55        |

# (2014-2015)

| 117 | Nanoindentation studies of the mechanical properties of the lphase in a creep deformed Re containing nickel-based superalloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2015</b> , 634, 202-208   | 5.3  | 52 |  |
|-----|--|------|----|--|
| 116 | Enhancement of strain-rate sensitivity and shear yield strength of a magnesium alloy processed by high-pressure torsion. <i>Scripta Materialia</i> , <b>2015</b> , 94, 44-47   | 5.6  | 52 |  |
| 115 | Microcantilever bending experiments in NiAl Evaluation, size effects, and crack tip plasticity.<br>Journal of Materials Research, <b>2014</b> , 29, 2129-2140  | 2.5  | 52 |  |
| 114 | Microstructure-dependent deformation behaviour of bcc-metals Indentation size effect and strain rate sensitivity. <i>Philosophical Magazine</i> , <b>2015</b> , 95, 1766-1779  | 1.6  | 50 |  |
| 113 | Stability of ultrafine-grained Cu to subgrain coarsening and recrystallization in annealing and deformation at elevated temperatures. <i>Acta Materialia</i> , <b>2009</b> , 57, 5207-5217   | 8.4  | 48 |  |
| 112 | Dynamic nanoindentation of articular porcine cartilage. <i>Materials Science and Engineering C</i> , <b>2011</b> , 31, 789-795   | 8.3  | 48 |  |
| 111 | Study on the indentation size effect in CaF2: Dislocation structure and hardness. <i>Acta Materialia</i> , <b>2009</b> , 57, 1281-1289   | 8.4  | 47 |  |
| 110 | Local Deformation of Glasses is Mediated by Rigidity Fluctuation on Nanometer Scale. <i>Advanced Science</i> , <b>2018</b> , 5, 1800916  | 13.6 | 44 |  |
| 109 | Designing bulk metallic glass and glass matrix composites in martensitic alloys. <i>Journal of Alloys and Compounds</i> , <b>2009</b> , 483, 97-101  | 5.7  | 43 |  |
| 108 | Dynamic recovery in nanocrystalline Ni. Acta Materialia, <b>2015</b> , 91, 91-100  | 8.4  | 42 |  |
| 107 | Investigation of the sliding contact properties of WC-Co hard metals using nanoscratch testing. <i>Wear</i> , <b>2007</b> , 263, 1602-1609   | 3.5  | 42 |  |
| 106 | Advanced Nanoindentation Testing for Studying Strain-Rate Sensitivity and Activation Volume. <i>Jom</i> , <b>2017</b> , 69, 2246-2255  | 2.1  | 41 |  |
| 105 | Determination of the interfacial strength and fracture toughness of a-C:H coatings by in-situ microcantilever bending. <i>Thin Solid Films</i> , <b>2012</b> , 522, 480-484  | 2.2  | 41 |  |
| 104 | Size-dependent fracture toughness of tungsten. <i>Acta Materialia</i> , <b>2017</b> , 138, 198-211   | 0 .  | 39 |  |
|     | Size-dependent fracture toughness of tungsten. Acta Materialia, 2011, 136, 196-211   | 8.4  |    |  |
| 103 | Study on the deformation mechanics of hard brittle coatings on ductile substrates using in-situ tensile testing and cohesive zone FEM modeling. <i>Surface and Coatings Technology</i> , <b>2012</b> , 207, 163-169  | 4.4  | 38 |  |
| 103 | Study on the deformation mechanics of hard brittle coatings on ductile substrates using in-situ  |      |    |  |
|     | Study on the deformation mechanics of hard brittle coatings on ductile substrates using in-situ tensile testing and cohesive zone FEM modeling. <i>Surface and Coatings Technology</i> , <b>2012</b> , 207, 163-169  Development of new 11%Cr heat resistant ferritic steels with enhanced creep resistance for steam power plants with operating steam temperatures up to 650 °C. <i>Materials Science &amp; amp; Engineering</i> | 4.4  | 38 |  |

| 99 | Determination of plastic properties of polycrystalline metallic materials by nanoindentation: experiments and finite element simulations. <i>Philosophical Magazine</i> , <b>2006</b> , 86, 5541-5551   | 1.6                  | 33  |
|----|---|----------------------|-----|
| 98 | Effect of Zr, Cr and Sc on the AlMgBiMn high-pressure die casting alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2019</b> , 759, 603-612  | 5.3                  | 32  |
| 97 | Indentation size effect and dislocation structure evolution in (001) oriented SrTiO 3 Berkovich indentations: HR-EBSD and etch-pit analysis. <i>Acta Materialia</i> , <b>2017</b> , 139, 1-10   | 8.4                  | 32  |
| 96 | Fracture toughness evaluation of NiAl single crystals by microcantilevers new continuous J-integral method. <i>Journal of Materials Research</i> , <b>2016</b> , 31, 3786-3794  | 2.5                  | 31  |
| 95 | Composition and cooling-rate dependence of plastic deformation, densification, and cracking in sodium borosilicate glasses during pyramidal indentation. <i>Journal of Non-Crystalline Solids</i> , <b>2015</b> , 419, 97-109   | 3.9                  | 29  |
| 94 | Macro- and Nanomechanical Properties and Strain Rate Sensitivity of Accumulative Roll Bonded and Equal Channel Angular Pressed Ultrafine-Grained Materials. <i>Advanced Engineering Materials</i> , <b>2011</b> , 13, 251-255   | 3.5                  | 29  |
| 93 | Microstructure and local mechanical properties of Pt-modified nickel aluminides on nickel-base superalloys after thermo-mechanical fatigue. <i>Materials Science &amp; amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2007</b> , 467, 15-23 | 5.3                  | 29  |
| 92 | SiC ceramic micropatterns from polycarbosilanes. <i>Journal of the European Ceramic Society</i> , <b>2010</b> , 30, 27  | 7 <b>6</b> -277      | 927 |
| 91 | Micromechanics and ultrastructure of pyrolysed softwood cell walls. Acta Biomaterialia, 2010, 6, 4345-5   | 5 <b>1</b> 10.8      | 25  |
| 90 | Microstructure formation and mechanical properties of ODS steels built by laser additive manufacturing of nanoparticle coated iron-chromium powders. <i>Acta Materialia</i> , <b>2021</b> , 206, 116566   | 8.4                  | 25  |
| 89 | Temperature-Dependent Deformation and Dislocation Density in SrTiO3 (001) Single Crystals.<br>Journal of the American Ceramic Society, <b>2016</b> , 99, 3411-3420  | 3.8                  | 25  |
| 88 | Control of polarization in bulk ferroelectrics by mechanical dislocation imprint. <i>Science</i> , <b>2021</b> , 372, 961-  | <b>9<u>64</u>.</b> 3 | 24  |
| 87 | Constitutive modeling of indentation cracking in fused silica. <i>Journal of the American Ceramic Society</i> , <b>2017</b> , 100, 1928-1940  | 3.8                  | 23  |
| 86 | 3D Dislocation structure evolution in strontium titanate: Spherical indentation experiments and MD simulations. <i>Journal of the American Ceramic Society</i> , <b>2017</b> , 100, 1134-1145   | 3.8                  | 23  |
| 85 | The correlation between the internal material length scale and the microstructure in nanoindentation experiments and simulations using the conventional mechanism-based strain gradient plasticity theory. <i>Journal of Materials Research</i> , <b>2009</b> , 24, 1197-1207             | 2.5                  | 23  |
| 84 | Synthesis and high-temperature evolution of polysilylcarbodiimide-derived SiCN ceramic coatings.<br>Journal of the European Ceramic Society, <b>2015</b> , 35, 3771-3780  | 6                    | 22  |
| 83 | Nanoindentation investigations to study solid solution hardening in Ni-based diffusion couples.<br>Journal of Materials Research, <b>2009</b> , 24, 1127-1134   | 2.5                  | 22  |
| 82 | In-situ tensile testing of crystalline diamond coatings using Raman spectroscopy. <i>Surface and Coatings Technology</i> , <b>2009</b> , 204, 1022-1025   | 4.4                  | 22  |

# (2020-2012)

| 81             | Experimental determination of the effective indenter shape and Factor for nanoindentation by continuously measuring the unloading stiffness. <i>Journal of Materials Research</i> , <b>2012</b> , 27, 214-221                     | 2.5 | 21 |  |
|----------------|---|-----|----|--|
| 80             | Preparation of dense SiHf(B)CN-based ceramic nanocomposites via rapid spark plasma sintering.  Journal of the European Ceramic Society, <b>2017</b> , 37, 5157-5165   | 6   | 20 |  |
| 79             | Investigation of residual stress in lead-free BNT-based ceramic/ceramic composites. <i>Acta Materialia</i> , <b>2018</b> , 148, 432-441   | 8.4 | 19 |  |
| 78             | In-situ investigation on the deformation and damage behaviour of diamond-like carbon coated thin films under uniaxial loading. <i>Thin Solid Films</i> , <b>2009</b> , 517, 1681-1685   | 2.2 | 19 |  |
| 77             | Revealing deformation mechanisms with nanoindentation. <i>Jom</i> , <b>2009</b> , 61, 14-23   | 2.1 | 18 |  |
| 76             | Study on the embrittlement of flash annealed Fe85.2B9.5P4Cu0.8Si0.5 metallic glass ribbons. <i>Materials and Design</i> , <b>2018</b> , 156, 252-261  | 8.1 | 17 |  |
| 75             | Local Investigations of the Mechanical Properties of Ultrafine Grained Metals by Nanoindentations. <i>Materials Science Forum</i> , <b>2006</b> , 503-504, 31-36  | 0.4 | 17 |  |
| 74             | Effect of thermal annealing on the mechanical properties of low-emissivity physical vapor deposited multilayer-coatings for architectural applications. <i>Thin Solid Films</i> , <b>2012</b> , 520, 7130-7135                    | 2.2 | 16 |  |
| 73             | On the temperature dependent strengthening of nickel by transition metal solutes. <i>Acta Materialia</i> , <b>2017</b> , 137, 54-63   | 8.4 | 15 |  |
| 7 <sup>2</sup> | Temperature dependence of indentation size effect, dislocation pile-ups, and lattice friction in (001) strontium titanate. <i>Journal of the American Ceramic Society</i> , <b>2018</b> , 101, 356-364                            | 3.8 | 15 |  |
| 71             | New ultra-high temperature nanoindentation system for operating at up to 1100 IC. <i>Materials and Design</i> , <b>2020</b> , 192, 108727   | 8.1 | 15 |  |
| 70             | Influence of solute effects on the saturation grain size and rate sensitivity in Cu-X alloys. <i>Scripta Materialia</i> , <b>2018</b> , 144, 5-8  | 5.6 | 14 |  |
| 69             | Fracture toughness determination of fused silica by cube corner indentation cracking and pillar splitting. <i>Materials and Design</i> , <b>2020</b> , 186, 108311  | 8.1 | 14 |  |
| 68             | Nanoscale to microscale reversal in room-temperature plasticity in SrTiO3 by tuning defect concentration. <i>Scripta Materialia</i> , <b>2020</b> , 188, 228-232  | 5.6 | 14 |  |
| 67             | Particle Hardening in Creep-Resistant Mg-Alloy MRI 230D Probed by Nanoindenting Atomic Force Microscopy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2009</b> , 40, 257-261 | 2.3 | 13 |  |
| 66             | Microimprinting of nanocrystalline metals Influence of microstructure and work hardening. <i>Journal of Materials Processing Technology</i> , <b>2010</b> , 210, 1787-1793  | 5.3 | 13 |  |
| 65             | Finite element simulation of spherical indentation in the elastic-plastic transition. <i>International Journal of Materials Research</i> , <b>2002</b> , 93, 857-861  |     | 13 |  |
| 64             | Indentation densification of fused silica assessed by raman spectroscopy and constitutive finite element analysis. <i>Journal of the American Ceramic Society</i> , <b>2020</b> , 103, 3076-3088                                  | 3.8 | 12 |  |

| 63 | Dislocation-toughened ceramics. <i>Materials Horizons</i> , <b>2021</b> , 8, 1528-1537  | 14.4 | 12 |
|----|---|------|----|
| 62 | Nanoforming behaviour and microstructural evolution during nanoimprinting of ultrafine-grained and nanocrystalline metals. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2013</b> , 568, 68-75 | 5.3  | 11 |
| 61 | Influence of Cooling Rate on Cracking and Plastic Deformation during Impact and Indentation of Borosilicate Glasses. <i>Frontiers in Materials</i> , <b>2017</b> , 4,   | 4    | 11 |
| 60 | Empirical-Statistical Study on the Relationship between Deposition Parameters, Process Variables, Deposition Rate and Mechanical Properties of a-C:H:W Coatings. <i>Coatings</i> , <b>2014</b> , 4, 772-795   | 2.9  | 11 |
| 59 | Exploring the compositional parameter space of high-entropy alloys using a diffusion couple approach. <i>Materials and Design</i> , <b>2019</b> , 176, 107816   | 8.1  | 9  |
| 58 | Influence of application technology on the erosion resistance of DLC coatings. <i>Surface and Coatings Technology</i> , <b>2013</b> , 237, 284-291  | 4.4  | 9  |
| 57 | Assessment of stress relaxation experiments on diamond coatings analyzed by digital image correlation and micro-Raman spectroscopy. <i>Surface and Coatings Technology</i> , <b>2013</b> , 237, 255-260   | 4.4  | 9  |
| 56 | Failure mechanisms of a hydrogenated amorphous carbon coating in load-scanning tests. <i>Surface and Coatings Technology</i> , <b>2012</b> , 206, 4864-4871   | 4.4  | 9  |
| 55 | Microscopic study on the interfacial strength of hydrogenated amorphous carbon coating systems. <i>Surface and Coatings Technology</i> , <b>2011</b> , 205, 3429-3433   | 4.4  | 9  |
| 54 | Nanoindentation pop-in in oxides at room temperature: Dislocation activation or crack formation?. <i>Journal of the American Ceramic Society</i> , <b>2021</b> , 104, 4728-4741   | 3.8  | 9  |
| 53 | Effect of elastic anisotropy on strain relief and residual stress determination in cubic systems by FIB-DIC experiments. <i>Materials and Design</i> , <b>2016</b> , 112, 505-511   | 8.1  | 9  |
| 52 | Tailoring the Mechanical Properties of Metaluminous Aluminosilicate Glasses by Phosphate Incorporation. <i>Frontiers in Materials</i> , <b>2020</b> , 7,  | 4    | 8  |
| 51 | New flat-punch indentation creep testing approach for characterizing the local creep properties at high temperatures. <i>Materials and Design</i> , <b>2019</b> , 183, 108090   | 8.1  | 8  |
| 50 | A new nanoindentation creep technique using constant contact pressure. <i>Journal of Materials Research</i> , <b>2019</b> , 34, 2492-2500   | 2.5  | 8  |
| 49 | Influence of solid solution strengthening on the local mechanical properties of single crystal and ultrafine-grained binary CuAl X solid solutions. <i>Journal of Materials Research</i> , <b>2017</b> , 32, 4583-4591  | 2.5  | 8  |
| 48 | Experimental and theoretical confirmation of the scaling exponent 2 in pyramidal load displacement data for depth sensing indentation. <i>Scanning</i> , <b>2014</b> , 36, 526-9  | 1.6  | 8  |
| 47 | Dislocationgrain boundary interactions: recent advances on the underlying mechanisms studied via nanoindentation testing. <i>Journal of Materials Research</i> , <b>2021</b> , 36, 2545-2557  | 2.5  | 8  |
| 46 | Stress-driven grain boundary movement during nanoindentation in tungsten at room temperature. <i>Materialia</i> , <b>2018</b> , 1, 99-103   | 3.2  | 8  |

# (2009-2020)

| 45 | Local analysis on dislocation structure and hardening during grain boundary pop-ins in tungsten. <i>Journal of Materials Science</i> , <b>2020</b> , 55, 9597-9607  | 4.3 | 7 |  |
|----|---|-----|---|--|
| 44 | Accelerated thermal degradation of DLC-coatings via growth defects. <i>Surface and Coatings Technology</i> , <b>2018</b> , 349, 272-278   | 4.4 | 7 |  |
| 43 | The influence of hydrogenated amorphous carbon coatings (a-C:H) on the fatigue life of coated steel specimens. <i>International Journal of Fatigue</i> , <b>2012</b> , 37, 1-7  | 5   | 7 |  |
| 42 | Quantitative Gefgechararakterisierung mittels Rasterkraftmikroskopie und<br>Elektronenmikroskopie Œine vergleichende Studie der Superlegierung Waspaloy / Quantitative<br>Microstructural Characterisation by Atomic Force Microscopy and Electron Microscopy -[A | 0.3 | 7 |  |
| 41 | Multi-alloying effect of Sc, Zr, Cr on the Al-Mg-Si-Mn high-pressure die casting alloys. <i>Materials Characterization</i> , <b>2020</b> , 168, 110537  | 3.9 | 7 |  |
| 40 | Indentation size effect in tungsten: Quantification of geometrically necessary dislocations underneath the indentations using HR-EBSD. <i>Materials Characterization</i> , <b>2018</b> , 142, 39-42   | 3.9 | 7 |  |
| 39 | Dislocation-based crack initiation and propagation in single-crystal SrTiO3. <i>Journal of Materials Science</i> , <b>2021</b> , 56, 5479-5492  | 4.3 | 7 |  |
| 38 | Failure mechanisms of a tungsten-modified hydrogenated amorphous carbon coating in load-scanning tests. <i>Surface and Coatings Technology</i> , <b>2012</b> , 212, 46-54   | 4.4 | 6 |  |
| 37 | Highly resolved analysis of the chemistry and mechanical properties of an a-C:H coating system by nanoindentation and auger electron spectroscopy. <i>Thin Solid Films</i> , <b>2013</b> , 528, 263-268   | 2.2 | 5 |  |
| 36 | Untersuchungen zur Ursache der Tropfenkondensation von Wasserdampf an ionenimplantierten Metalloberflähen. <i>Chemie-Ingenieur-Technik</i> , <b>2011</b> , 83, 545-551  | 0.8 | 5 |  |
| 35 | Effect of nanoparticle additivation on the microstructure and microhardness of oxide dispersion strengthened steels produced by laser powder bed fusion and directed energy deposition. <i>Procedia CIRP</i> , <b>2020</b> , 94, 41-45                            | 1.8 | 5 |  |
| 34 | Influence of Al2O3 Addition on Structure and Mechanical Properties of Borosilicate Glasses. <i>Frontiers in Materials</i> , <b>2020</b> , 7,  | 4   | 5 |  |
| 33 | Switching the fracture toughness of single-crystal ZnS using light irradiation. <i>Applied Physics Letters</i> , <b>2021</b> , 118, 154103  | 3.4 | 5 |  |
| 32 | Towards manufacturing of Nd-Fe-B magnets by continuous rotary swaging of cast alloy. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2019</b> , 490, 165405   | 2.8 | 4 |  |
| 31 | Indentation-Induced Structural Changes in Vitreous Silica Probed by in-situ Small-Angle X-Ray Scattering. <i>Frontiers in Materials</i> , <b>2020</b> , 7,  | 4   | 4 |  |
| 30 | A Multiple Length-Scales Nanoimprinting Approach on Nanocrystalline and Strongly Deformed CuZn30 Alloys. <i>Scientific Reports</i> , <b>2020</b> , 10, 2454   | 4.9 | 4 |  |
| 29 | Local Fracture Toughness and Residual Stress Measurements on NiAl Bond Coats by Micro Cantilever and FIB Based Bar Milling Tests <b>2012</b> , 93-102   |     | 4 |  |
| 28 | Quantification of dislocation structures at high resolution by atomic force microscopy of dislocation etch pits. <i>Philosophical Magazine Letters</i> , <b>2009</b> , 89, 391-398  | 1   | 4 |  |

| 27 | The Influence of Particle Size on the Mechanical Properties of Dental Glass Ionomer Cements.<br>Advanced Engineering Materials, <b>2010</b> , 12, B684-B689   | 3.5      | 4   |  |
|----|---|----------|-----|--|
| 26 | Solid solution hardening in CrMnFeCoNi-based high entropy alloy systems studied by a combinatorial approach. <i>Journal of Materials Research</i> , <b>2021</b> , 36, 2558-2570   | 2.5      | 3   |  |
| 25 | Thermally activated dislocation mechanism in Mo studied by indentation, compression and impact testing. <i>Journal of Materials Research</i> , <b>2021</b> , 36, 2397-2407  | 2.5      | 3   |  |
| 24 | Tailored Mechanical Properties and Residual Stresses of a-C:H:W Coatings. <i>Advanced Materials Research</i> , <b>2014</b> , 996, 14-21   | 0.5      | 2   |  |
| 23 | Microstructural and micromechanical characterisation of a PtAltrNiRe alloy by means of transmission electron microscopy and nanoindentation. <i>International Journal of Materials Research</i> , <b>2010</b> , 101, 585-588                      | 0.5      | 2   |  |
| 22 | Compression moduli of foamed films of fluorinated ethylene propylene copolymers determined by nanoindentation. <i>Polymer Testing</i> , <b>2011</b> , 30, 286-293   | 4.5      | 2   |  |
| 21 | Comment to paper Penetration depth and tip radius dependence on the correction factor in nanoindentation measurements (by J.M. Meza et al. [J. Mater. Res. 23(3), 725 (2008)]. <i>Journal of Materials Research</i> , <b>2012</b> , 27, 1205-1207 | 2.5      | 2   |  |
| 20 | Impact of n-Type versus p-Type Doping on Mechanical Properties and Dislocation Evolution during SiC Crystal Growth. <i>Materials Science Forum</i> , <b>2007</b> , 556-557, 259-262   | 0.4      | 2   |  |
| 19 | From diluted solid solutions to high entropy alloys: Saturation grain size and mechanical properties after high pressure torsion. <i>Scripta Materialia</i> , <b>2021</b> , 192, 43-48  | 5.6      | 2   |  |
| 18 | Influence of microstructure on the application of Ni-Mn-In Heusler compounds for multicaloric cooling using magnetic field and uniaxial stress. <i>Acta Materialia</i> , <b>2021</b> , 217, 117157  | 8.4      | 2   |  |
| 17 | Strain-Rate Sensitivity (SRS) of Nickel by Instrumented Indentation. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , <b>2013</b> , 47-52  | 0.3      | 2   |  |
| 16 | Nano-mechanical testing in materials research and development. <i>Philosophical Magazine</i> , <b>2011</b> , 91, 103  | 35116036 | 5 1 |  |
| 15 | Determination of Plastic Properties of Polycrystalline Metallic Materials by Nanoindentation - Experiments and Finite Element Simulations. <i>Materials Research Society Symposia Proceedings</i> , <b>2004</b> , 841, R11.4.1                    |          | 1   |  |
| 14 | Finite element study for nanoindentation measurements on two-phase materials <b>2004</b> , 19, 85   |          | 1   |  |
| 13 | Realization of Diamond/Metal Laminates through Brazing of Freestanding Diamond Foils. <i>Key Engineering Materials</i> , <b>2019</b> , 809, 309-313   | 0.4      | 1   |  |
| 12 | A simple way to make tough diamond/metal laminates. <i>Journal of the European Ceramic Society</i> , <b>2021</b> , 41, 5138-5146  | 6        | 1   |  |
| 11 | Room-temperature dislocation plasticity in SrTiO3 tuned by defect chemistry. <i>Journal of the American Ceramic Society</i> , <b>2022</b> , 105, 1318   | 3.8      | 1   |  |
| 10 | Mechanical tailoring of dislocation densities in SrTiO 3 at room temperature. <i>Journal of the American Ceramic Society</i> , <b>2022</b> , 105, 2399-2402   | 3.8      | 1   |  |

#### LIST OF PUBLICATIONS

| 9 | Nanoindentation creep testing: Advantages and limitations of the constant contact pressure method. <i>Journal of Materials Research</i> , <b>2022</b> , 37, 567-579   | 2.5 | О |
|---|---|-----|---|
| 8 | Bioinspired damage tolerant diamond-metal laminates by alternating CVD and PVD processes. <i>Materials and Design</i> , <b>2022</b> , 213, 110315   | 8.1 | O |
| 7 | Effects of solutes on thermal stability, microstructure and mechanical properties in CrMnFeCoNi based alloys after high pressure torsion. <i>Acta Materialia</i> , <b>2022</b> , 227, 117689                        | 8.4 | O |
| 6 | Nanoindentation study of the oxide scale on FeCr alloy by high-pressure torsion. <i>Corrosion Science</i> , <b>2022</b> , 194, 109951   | 6.8 | O |
| 5 | Heat treatment of the new high-strength high-ductility AlMgBiMn alloys with Sc, Zr and Cr additions. <i>Materialia</i> , <b>2021</b> , 15, 100981   | 3.2 | O |
| 4 | Coating delamination analysis of diamond/Ti and diamond/Ti-6Al-4V systems using cohesive damage and extended finite element modeling. <i>Surface Topography: Metrology and Properties</i> , <b>2021</b> , 9, 035034 | 1.5 | O |
| 3 | Untersuchung des tribologisch-mechanischen Verhaltens amorpher Kohlenstoffschichten mittels Load Scanner. <i>Materialwissenschaft Und Werkstofftechnik</i> , <b>2012</b> , 43, 226-233                              | 0.9 |   |
| 2 | Study on the local damage mechanisms in WC-Co hard metals during scratch testing. <i>Materials Research Society Symposia Proceedings</i> , <b>2007</b> , 1049, 1  |     |   |

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