# Johannes van Dommelen

List of Publications by Year
in descending order



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|---|---|---|---|
| 46 papers | 1,362 citations | 430843<br>18 h-index | 345203<br>36 g-index |
| 46 all docs | 46 docs citations | 46 times ranked | 1433 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Mechanical properties of brain tissue by indentation: Interregional variation. Journal of the Mechanical Behavior of Biomedical Materials, 2010, 3, 158-166. | 3.1 | 253 |
| 2 | Micromechanical modeling of the elasto-viscoplastic behavior of semi-crystalline polymers. Journal of the Mechanics and Physics of Solids, 2003, 51, 519-541. | 4.8 | 220 |
| 3 | Multi-scale mechanics of traumatic brain injury: predicting axonal strains from head loads. Biomechanics and Modeling in Mechanobiology, 2013, 12, 137-150. | 2.8 | 115 |
| 4 | Micromechanics of diffuse axonal injury: influence of axonal orientation and anisotropy. Biomechanics and Modeling in Mechanobiology, 2011, 10, 413-422. | 2.8 | 89 |
| 5 | Micromechanical modeling of intraspherulitic deformation of semicrystalline polymers. Polymer, 2003, 44, 6089-6101. | 3.8 | 66 |
| 6 | Micromechanical modeling of the elastic properties of semicrystalline polymers: A threeâ€phase approach. Journal of Polymer Science, Part B: Polymer Physics, 2010, 48, 2173-2184. | 2.1 | 46 |
| 7 | Micromechanical modeling of the deformation kinetics of semicrystalline polymers. Journal of Polymer Science, Part B: Polymer Physics, 2011, 49, 1297-1310. | 2.1 | 38 |
| 8 | Micromechanical modeling of particle-toughening of polymers by locally induced anisotropy. Mechanics of Materials, 2003, 35, 845-863. | 3.2 | 33 |
| 9 | An enriched cohesive zone model for delamination in brittle interfaces. International Journal for Numerical Methods in Engineering, 2009, 80, 609-630. | 2.8 | 33 |
| 10 | A tissue-level anisotropic criterion for brain injury based on microstructural axonal deformation. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 5, 41-52. | 3.1 | 32 |
| 11 | Multiphysical modeling of the photopolymerization process for additive manufacturing of ceramics. European Journal of Mechanics, A/Solids, 2018, 71, 210-223. | 3.7 | 31 |
| 12 | Micromechanical modeling of the tensile behavior of oriented polyethylene. Journal of Polymer Science, Part B: Polymer Physics, 2004, 42, 2983-2994. | 2.1 | 29 |
| 13 | Xâ€ray computed tomographyâ€based modeling of polymeric foams: The effect of finite element model size on the large strain response. Journal of Polymer Science, Part B: Polymer Physics, 2010, 48, 1526-1534. | 2.1 | 29 |
| 14 | Anisotropic yielding of injection molded polyethylene: Experiments and modeling. Polymer, 2013, 54, 5899-5908. | 3.8 | 26 |
| 15 | Experimental characterization and modeling of the mechanical behavior of brittle 3D printed food. Journal of Food Engineering, 2020, 278, 109941. | 5.2 | 24 |
| 16 | Using 3D-printed tungsten to optimize liquid metal divertor targets for flow and thermal stresses. Nuclear Fusion, 2019, 59, 054001. | 3.5 | 22 |
| 17 | Nonlinear Viscoelastic Behavior of Human Knee Ligaments Subjected to Complex Loading Histories. Annals of Biomedical Engineering, 2006, 34, 1008-1018. | 2.5 | 21 |
| 18 | A three-dimensional self-adaptive cohesive zone model for interfacial delamination. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 3540-3553. | 6.6 | 20 |

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|---|---|---|---|
| 19 | Brittle-ductile transition temperature of recrystallized tungsten following exposure to fusion relevant cyclic high heat load. Journal of Nuclear Materials, 2020, 541, 152416. | 2.7 | 19 |
| 20 | Pedestrian Injuries: Viscoelastic Properties of Human Knee Ligaments at High Loading Rates. Traffic Injury Prevention, 2005, 6, 278-287. | 1.4 | 17 |
| 21 | Anisotropic mechanical properties of Selective Laser Sintered starch-based food. Journal of Food Engineering, 2022, 318, 110890. | 5.2 | 15 |
| 22 | A numerical investigation of the potential of rubber and mineral particles for toughening of semicrystalline polymers. Computational Materials Science, 2003, 27, 480-492. | 3.0 | 14 |
| 23 | Recrystallization behaviour of high-flux hydrogen plasma exposed tungsten. Journal of Nuclear Materials, 2021, 545, 152748. | 2.7 | 14 |
| 24 | Recrystallization-mediated crack initiation in tungsten under simultaneous high-flux hydrogen plasma loads and high-cycle transient heating. Nuclear Fusion, 2021, 61, 046018. | 3.5 | 14 |
| 25 | Experimental investigation of the microstructural changes of tungsten monoblocks exposed to pulsed high heat loads. Nuclear Materials and Energy, 2020, 22, 100716. | 1.3 | 13 |
| 26 | Fracture behavior of tungsten-based composites exposed to steady-state/transient hydrogen plasma. Nuclear Fusion, 2020, 60, 046029. | 3.5 | 13 |
| 27 | Three mechanisms of hydrogen-induced dislocation pinning in tungsten. Nuclear Fusion, 2020, 60, 086015. | 3.5 | 12 |
| 28 | Micromechanical modelling of reversible and irreversible thermo-mechanical deformation of oriented polyethylene terephthalate. Computational Materials Science, 2015, 98, 189-200. | 3.0 | 11 |
| 29 | Influence of particle shape in the additive manufacturing process for ceramics. Computers and Mathematics With Applications, 2019, 78, 2360-2376. | 2.7 | 11 |
| 30 | Computational homogenization of sound propagation in a deformable porous material including microscopic viscous-thermal effects. Journal of Sound and Vibration, 2016, 365, 119-133. | 3.9 | 10 |
| 31 | Spatially dependent kinetics of helium in tungsten under fusion conditions. Journal of Nuclear Materials, 2020, 535, 152104. | 2.7 | 10 |
| 32 | Intrinsic mechanical properties of food in relation to texture parameters. Mechanics of Time-Dependent Materials, 2022, 26, 323-346. | 4.4 | 8 |
| 33 | Controlled irradiation hardening of tungsten by cyclic recrystallization. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 065001. | 2.0 | 7 |
| 34 | Computational homogenisation of acoustic metafoams. European Journal of Mechanics, A/Solids, 2019, 77, 103805. | 3.7 | 7 |
| 35 | Simulation of interlaminar damage in mixed-mode bending tests using large deformation self-adaptive cohesive zones. Engineering Fracture Mechanics, 2013, 109, 387-402. | 4.3 | 6 |
| 36 | Long-term microstructural evolution of tungsten under heat and neutron loads. Computational Materials Science, 2019, 170, 109146. | 3.0 | 6 |

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|---|---|---|---|
| 37 | Gradient crystal plasticity modelling of anelastic effects in particle strengthened metallic thin films. Meccanica, 2014, 49, 2657-2685. | 2.0 | 5 |
| 38 | Computational analysis of the evolution of the brittle-to-ductile transition of tungsten under fusion conditions. Modelling and Simulation in Materials Science and Engineering, 2021, 29, 015005. | 2.0 | 5 |
| 39 | Multiscale modeling of particle-modified polyethylene. Journal of Materials Science, 2003, 38, 4393-4405. | 3.7 | 4 |
| 40 | Microstructural evolution and regeneration in neutron-irradiated tungsten monoblocks. International Journal of Engineering Science, 2019, 142, 36-52. | 5.0 | 4 |
| 41 | Modelling the brittle-to-ductile transition of high-purity tungsten under neutron irradiation. Journal of Nuclear Materials, 2021, 554, 153068. | 2.7 | 4 |
| 42 | Multi-scale fracture probability analysis of tungsten monoblocks under fusion conditions. Nuclear Materials and Energy, 2021, 28, 101032. | 1.3 | 2 |
| 43 | A numerical model for the recrystallization kinetics of tungsten monoblocks under cyclic heat loads. Fusion Engineering and Design, 2021, 173, 112827. | 1.9 | 2 |
| 44 | Improved associated flow rule for anisotropic viscoplasticity in thermoplastic polymer systems. Mechanics of Materials, 2021, 163, 104087. | 3.2 | 2 |
| 45 | Crystal plasticity based modeling of time and scale dependent behavior of thin films. GAMM Mitteilungen, 2013, 36, 161-185. | 5.5 | 0 |
| 46 | Mechanics of amorphous solidsâ€"identification and constitutive modelling. Mechanics of Time-Dependent Materials, 2018, 22, 143-144. | 4.4 | 0 |