# John W C Dunlop

List of Publications by Year
in descending order

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|---|---|---|---|
| 79<br>papers | 5,465<br>citations | 81900<br>39<br>h-index | 82547<br>72<br>g-index |
| 81<br>all docs | 81<br>docs citations | 81<br>times ranked | 6924<br>citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Challenges in computational fluid dynamics applications for bone tissue engineering. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, 20210607. | 2.1 | 6 |
| 2 | Effects of moisture and cellulose fibril angle on the tensile properties of native single Norway spruce wood fibres. Wood Science and Technology, 2021, 55, 1305-1318. | 3.2 | 8 |
| 3 | Advanced materials design based on waste wood and bark. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200345. | 3.4 | 9 |
| 4 | Rubbing Powders: Direct Spectroscopic Observation of Triboinduced Oxygen Radical Formation in MgO Nanocube Ensembles. Journal of Physical Chemistry C, 2021, 125, 22239-22248. | 3.1 | 2 |
| 5 | Surface tension determines tissue shape and growth kinetics. Science Advances, 2019, 5, eaav9394. | 10.3 | 80 |
| 6 | Organic Moleculeâ€Driven Polymeric Actuators. Macromolecular Rapid Communications, 2019, 40, e1800896. | 3.9 | 17 |
| 7 | Protecting Offspring Against Fire: Lessons From Banksia Seed Pods. Frontiers in Plant Science, 2019, 10, 283. | 3.6 | 16 |
| 8 | Tensile forces drive a reversible fibroblast-to-myofibroblast transition during tissue growth in engineered clefts. Science Advances, 2018, 4, eaao4881. | 10.3 | 102 |
| 9 | Comparative in situ analysis reveals the dynamic nature of sclerenchyma cell walls of the fern Asplenium rutifolium. Annals of Botany, 2018, 121, 345-358. | 2.9 | 6 |
| 10 | Hierarchically Arranged Helical Fiber Actuators Derived from Commercial Cloth. Advanced Materials, 2017, 29, 1605103. | 21.0 | 51 |
| 11 | Mechanical behavior of idealized, stingray-skeleton-inspired tiled composites as a function of geometry and material properties. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 73, 86-101. | 3.1 | 15 |
| 12 | Materials Nanoarchitecturing via Cationâ€Mediated Protein Assembly: Making Limpet Teeth without Mineral. Advanced Materials, 2017, 29, 1701171. | 21.0 | 27 |
| 13 | Flexible and Actuating Nanoporous Poly(Ionic Liquid)â€"Paper-Based Hybrid Membranes. ACS Applied Materials & Interfaces, 2017, 9, 15148-15155. | 8.0 | 44 |
| 14 | The Role of Titanium Surface Nanostructuring on Preosteoblast Morphology, Adhesion, and Migration. Advanced Healthcare Materials, 2017, 6, 1601244. | 7.6 | 34 |
| 15 | Surface Curvature Differentially Regulates Stem Cell Migration and Differentiation via Altered Attachment Morphology and Nuclear Deformation. Advanced Science, 2017, 4, 1600347. | 11.2 | 212 |
| 16 | Scaffold curvature-mediated novel biomineralization process originates a continuous soft tissue-to-bone interface. Acta Biomaterialia, 2017, 60, 64-80. | 8.3 | 62 |
| 17 | Curvature-controlled defect dynamics in active systems. Physical Review E, 2017, 95, 062609. | 2.1 | 12 |
| 18 | Ultrasound-driven titanium modification with formation of titania based nanofoam surfaces. Ultrasonics Sonochemistry, 2017, 36, 146-154. | 8.2 | 17 |

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|---|---|---|---|
| 19 | Programmable Actuation of Porous Poly(Ionic Liquid) Membranes by Aligned Carbon Nanotubes. Advanced Materials Interfaces, 2017, 4, 1600768. | 3.7 | 35 |
| 20 | Relation between the Macroscopic Pattern of Elephant Ivory and Its Three-Dimensional Micro-Tubular Network. PLoS ONE, 2017, 12, e0166671. | 2.5 | 20 |
| 21 | Ultrasonically Produced Porous Sponge Layer on Titanium to Guide Cell Behavior. Advanced Engineering Materials, 2016, 18, 476-483. | 3.5 | 18 |
| 22 | Gradual conversion of cellular stress patterns into pre-stressed matrix architecture during <i>in vitro</i> tissue growth. Journal of the Royal Society Interface, 2016, 13, 20160136. | 3.4 | 37 |
| 23 | Holeâ€Programmed Superfast Multistep Folding of Hydrogel Bilayers. Advanced Functional Materials, 2016, 26, 7733-7739. | 14.9 | 77 |
| 24 | Honeycomb Actuators Inspired by the Unfolding of Ice Plant Seed Capsules. PLoS ONE, 2016, 11, e0163506. | 2.5 | 25 |
| 25 | The Geometric Design and Fabrication of Actuating Cellular Structures. Advanced Materials Interfaces, 2015, 2, 1500011. | 3.7 | 22 |
| 26 | Tissue growth controlled by geometric boundary conditions: a simple model recapitulating aspects of callus formation and bone healing. Journal of the Royal Society Interface, 2015, 12, 20150108. | 3.4 | 3 |
| 27 | Feeding in billfishes: inferring the role of the rostrum from a biomechanical standpoint. Journal of Experimental Biology, 2015, 218, 824-836. | 1.7 | 29 |
| 28 | Availability of extracellular matrix biopolymers and differentiation state of human mesenchymal stem cells determine tissue-like growth inÂvitro. Biomaterials, 2015, 60, 121-129. | 11.4 | 14 |
| 29 | Sensing Solvents with Ultrasensitive Porous Poly(ionic liquid) Actuators. Advanced Materials, 2015, 27, 2913-2917. | 21.0 | 141 |
| 30 | Making a tooth mimic. Nature Materials, 2015, 14, 1082-1083. | 27.5 | 11 |
| 31 | Pressurized honeycombs as soft-actuators: a theoretical study. Journal of the Royal Society Interface, 2014, 11, 20140458. | 3.4 | 30 |
| 32 | An instant multi-responsive porous polymer actuator driven by solvent molecule sorption. Nature Communications, 2014, 5, 4293. | 12.8 | 446 |
| 33 | Hydro-actuation of ice plant seed capsules powered by water uptake. Bioinspired, Biomimetic and Nanobiomaterials, 2014, 3, 169-182. | 0.9 | 12 |
| 34 | Influence of Magnetic Fields on Magneto-Aerotaxis. PLoS ONE, 2014, 9, e101150. | 2.5 | 49 |
| 35 | Tissue growth into threeâ€dimensional composite scaffolds with controlled microâ€features and nanotopographical surfaces. Journal of Biomedical Materials Research - Part A, 2013, 101, 2796-2807. | 4.0 | 44 |
| 36 | A three-dimensional model for tissue deposition on complex surfaces. Computer Methods in Biomechanics and Biomedical Engineering, 2013, 16, 1056-1070. | 1.6 | 62 |

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|---|---|---|---|
| 37 | All but diamonds â€" Biological materials are not forever. Acta Materialia, 2013, 61, 880-889. | 7.9 | 20 |
| 38 | Geometry as a Factor for Tissue Growth: Towards Shape Optimization of Tissue Engineering Scaffolds. Advanced Healthcare Materials, 2013, 2, 186-194. | 7.6 | 264 |
| 39 | Modelling the role of surface stress on the kinetics of tissue growth in confined geometries. Acta Biomaterialia, 2013, 9, 5531-5543. | 8.3 | 59 |
| 40 | Experimental micromechanical characterisation of wood cell walls. Wood Science and Technology, 2013, 47, 163-182. | 3.2 | 113 |
| 41 | Hierarchical Multiâ€Step Folding of Polymer Bilayers. Advanced Functional Materials, 2013, 23, 2295-2300. | 14.9 | 144 |
| 42 | Intrafibrillar plasticity through mineral/collagen sliding is the dominant mechanism for the extreme toughness of antler bone. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 28, 366-382. | 3.1 | 83 |
| 43 | Multilevel architectures in natural materials. Scripta Materialia, 2013, 68, 8-12. | 5.2 | 63 |
| 44 | Polarized Raman Anisotropic Response of Collagen in Tendon: Towards 3D Orientation Mapping of Collagen in Tissues. PLoS ONE, 2013, 8, e63518. | 2.5 | 61 |
| 45 | Tilted cellulose arrangement as a novel mechanism for hygroscopic coiling in the stork's bill awn. Journal of the Royal Society Interface, 2012, 9, 640-647. | 3.4 | 92 |
| 46 | Quantitative approach to the stochastics of bone remodeling. Europhysics Letters, 2012, 97, 28009. | 2.0 | 4 |
| 47 | Finite Element Modeling of the Cyclic Wetting Mechanism in the Active Part of Wheat Awns. Biointerphases, 2012, 7, 42. | 1.6 | 5 |
| 48 | Shape-Programmed Folding of Stimuli-Responsive Polymer Bilayers. ACS Nano, 2012, 6, 3925-3934. | 14.6 | 236 |
| 49 | How Linear Tension Converts to Curvature: Geometric Control of Bone Tissue Growth. PLoS ONE, 2012, 7, e36336. | 2.5 | 169 |
| 50 | Accelerated Growth Plate Mineralization and Foreshortened Proximal Limb Bones in Fetuin-A Knockout Mice. PLoS ONE, 2012, 7, e47338. | 2.5 | 50 |
| 51 | In Vitro â€œWoundâ€• Healing: Experimentally Based Phenomenological Modeling. Advanced Engineering Materials, 2012, 14, B76. | 3.5 | 7 |
| 52 | The physics of tissue patterning and extracellular matrix organisation: how cells join forces. Soft Matter, 2011, 7, 9549. | 2.7 | 65 |
| 53 | Observations of Multiscale, Stress-Induced Changes of Collagen Orientation in Tendon by Polarized Raman Spectroscopy. Biomacromolecules, 2011, 12, 3989-3996. | 5.4 | 83 |
| 54 | Origami-like unfolding of hydro-actuated ice plant seed capsules. Nature Communications, 2011, 2, 337. | 12.8 | 231 |

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|---|---|---|---|
| 55 | Cooperation of length scales and orientations in the deformation of bovine bone. Acta Biomaterialia, 2011, 7, 2943-2951. | 8.3 | 26 |
| 56 | Artful interfaces within biological materials. Materials Today, 2011, 14, 70-78. | 14.2 | 204 |
| 57 | Characterization of the Spatial Arrangement of Secondary Osteons in the Diaphysis of Equine and Canine Long Bones. Anatomical Record, 2011, 294, 1093-1102. | 1.4 | 9 |
| 58 | Trabecular bone remodelling simulated by a stochastic exchange of discrete bone packets from the surface. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 879-887. | 3.1 | 14 |
| 59 | An excursion into the design space of biomimetic architectured biphasic actuators. International Journal of Materials Research, 2011, 102, 607-612. | 0.3 | 30 |
| 60 | Micromechanics of Cell Walls. Signaling and Communication in Plants, 2011, , 27-52. | 0.7 | 22 |
| 61 | Systematic Structural Coordination Chemistry of<i>p</i>â€<i>tert</i>â€Butyltetrathiacalix[4]arene: Main Group Metal Complexes Other Than Those of Group 1. European Journal of Inorganic Chemistry, 2010, 2010, 2089-2105. | 2.0 | 24 |
| 62 | Systematic Structural Coordination Chemistry of p-tert-Butyltetrathiacalix[4]arene: Further Complexes of Transition-Metal Ions. European Journal of Inorganic Chemistry, 2010, 2010, 2106-02126. | 2.0 | 82 |
| 63 | A theoretical model for tissue growth in confined geometries. Journal of the Mechanics and Physics of Solids, 2010, 58, 1073-1087. | 4.8 | 42 |
| 64 | Biological Composites. Annual Review of Materials Research, 2010, 40, 1-24. | 9.3 | 381 |
| 65 | Two stages in three-dimensional <i>in vitro</i> growth of tissue generated by osteoblastlike cells. Biointerphases, 2010, 5, 45-52. | 1.6 | 52 |
| 66 | Effect of minimal defects in periodic cellular solids. Philosophical Magazine, 2010, 90, 1807-1818. | 1.6 | 16 |
| 67 | Cortical bone composition and orientation as a function of animal and tissue age in mice by Raman spectroscopy. Bone, 2010, 47, 392-399. | 2.9 | 131 |
| 68 | Pectin May Hinder the Unfolding of Xyloglucan Chains during Cell Deformation: Implications of the Mechanical Performance of Arabidopsis Hypocotyls with Pectin Alterations. Molecular Plant, 2009, 2, 990-999. | 8.3 | 48 |
| 69 | New Suggestions for the Mechanical Control of Bone Remodeling. Calcified Tissue International, 2009, 85, 45-54. | 3.1 | 50 |
| 70 | Pore Structure and Fluid Sorption in Ordered Mesoporous Silica. II. Modeling. Journal of Physical Chemistry C, 2009, 113, 15211-15217. | 3.1 | 28 |
| 71 | Architectured Structural Materials: A Parallel Between Nature and Engineering. Materials Research Society Symposia Proceedings, 2009, 1188, 209. | 0.1 | 7 |
| 72 | Stress generation in the tension wood of poplar is based on the lateral swelling power of the Gâ€layer. Plant Journal, 2008, 56, 531-538. | 5.7 | 103 |

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|---|---|---|---|
| 73 | The effect of geometry on three-dimensional tissue growth. Journal of the Royal Society Interface, 2008, 5, 1173-1180. | 3.4 | 413 |
| 74 | Dislocation density-based modelling of plastic deformation of Zircaloy-4. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 443, 77-86. | 5.6 | 48 |
| 75 | Modelling isothermal and non-isothermal recrystallisation kinetics: Application to Zircaloy-4. Journal of Nuclear Materials, 2007, 366, 178-186. | 2.7 | 29 |
| 76 | Quantitative criterion for recrystallization nucleation in single-phase alloys: Prediction of critical strains and incubation times. Acta Materialia, 2006, 54, 3983-3990. | 7.9 | 98 |
| 77 | A Coupled Recovery/Recrystallisation Model for Zirconium Alloys. Influence of Hydrogen. Materials Science Forum, 2004, 467-470, 629-634. | 0.3 | 2 |
| 78 | Subtleties with Sulfur: Calixarenes as Uranophiles. Angewandte Chemie - International Edition, 2001, 40, 721-723. | 13.8 | 44 |
| 79 | Effect of Low-Temperature Recovery Treatments on Subsequent Recrystallization in Al-2.5%Mg. Materials Science Forum, 0, 550, 381-386. | 0.3 | 12 |