

References

- [1] Cai, B. Wang, J. Kao, A. Pericleous, K. Phillion, A. B. And **Atwood, R. C.** And Lee, P. D. **2016**. “4D synchrotron X-ray tomographic quantification of the transition from cellular to dendrite growth during directional solidification”. In: *ACTA MATERIALIA* 117, 160–169. ISSN: 1359-6454. DOI: {10.1016/j.actamat.2016.07.002}.
- [2] Coudrillier, Baptiste, Geraldes, Diogo M. Vo, Nghia T. **Atwood, Robert**, Reinhard, Christina, Campbell, Ian C. Raji, Yazdan, Albon, Julie and Abel, Richard L. And Ethier, C. Ross **2016**. “Phase-Contrast Micro-Computed Tomography Measurements of the Intraocular Pressure-Induced Deformation of the Porcine Lamina Cribrosa”. In: *IEEE TRANSACTIONS ON MEDICAL IMAGING* 35.4, 988–999. ISSN: 0278-0062. DOI: {10.1109/TMI.2015.2504440}.
- [3] Dobson, Katherine J. Coban, Sophia B. McDonald, Samuel A. Walsh, Joanna N. And **Atwood, Robert C.** And Withers, Philip J. **2016**. “4-D imaging of sub-second dynamics in pore-scale processes using real-time synchrotron X-ray tomography”. In: *SOLID EARTH* 7.4, 1059–1073. ISSN: 1869-9510. DOI: {10.5194/se-7-1059-2016}.
- [4] Garwood, Russell J. Dunlop, Jason A. Selden, Paul A. Spencer, Alan R. T. **Atwood, Robert C.** And Vo, Nghia T. And Drakopoulos, Michael **2016**. “Almost a spider: a 305-million-year-old fossil arachnid and spider origins”. In: *PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES* 283.1827. ISSN: 0962-8452. DOI: {10.1098/rspb.2016.0125}.
- [5] Jin, A. Cobb, J. P. Hansen, U. Reinhard, C. Vo, N. **Atwood, R.** Bhattacharya, R. And Li, J. And Abel, R. **2016**. “Are the Cracks Starting to Appear in Bisphosphonate Treatment for Osteoporosis?” In: *OSTEOPOROSIS INTERNATIONAL* 27.1. WCO-IOF-ESCEO World Congress on Osteoporosis, Osteoarthritis and Musculoskeletal Diseases, Malaga, SPAIN, APR 14-17, 2016, S490. ISSN: 0937-941X.
- [6] Mapp, J. J. I. Fisher, M. H. **Atwood, R. C.** Bell, G. D. Greco, M. K. And Songer, S. And Hunter, E. **2016**. “Three-dimensional rendering of otolith growth using phase contrast synchrotron tomography”. In: *JOURNAL OF FISH BIOLOGY* 88.5, 2075–2080. ISSN: 0022-1112. DOI: {10.1111/jfb.12949}.
- [7] Philippe, J. Le Godec, Y. Mezouar, M. Berg, M. Bromiley, G. Bergame, F. Perrillat, J. P. Alvarez-Murga, M. Morand, M. **Atwood, Robert** and King, A. And Regnier, S. **2016**. “Rotating tomography Paris-Edinburgh cell: a novel portable press for micro-tomographic 4-D imaging at extreme pressure/temperature/stress conditions”. In: *HIGH PRESSURE RESEARCH* 36.4, 512–532. ISSN: 0895-7959. DOI: {10.1080/08957959.2016.1221951}.
- [8] Saucedo-Mora, Luis, Mostafavi, Mahmoud, Khoshkhou, Danial, Reinhard, Christina, **Atwood, Robert**, Zhao, Shuang and Connolly, Brian and Marrow, Thomas James **2016**. “Observation and simulation of indentation damage in a SiC-SiCfibre ceramic matrix composite”. In: *FINITE*

ELEMENTS IN ANALYSIS AND DESIGN 110, 11–19. ISSN: 0168-874X.
DOI: {10.1016/j.finel.2015.11.003}.

- [9] **Atwood, Robert C.** Bodey, Andrew J. Price, Stephen W. T. And Basham, Mark and Drakopoulos, Michael **2015**. “A high-throughput system for high-quality tomographic reconstruction of large datasets at Diamond Light Source”. In: *PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A-MATHEMATICAL PHYSICAL AND ENGINEERING SCIENCES* 373.2043. ISSN: 1364-503X. doi: {10.1098/rsta.2014.0398}.
- [10] Brown, L. D. Abdulaziz, R. Jervis, R. Bharath, V. J. **Atwood, R. C.** Reinhard, C. Connor, L. D. Simons, S. J. R. Inman, D. And Brett, D. J. L. And Shearing, P. R. **2015**. “Following the electroreduction of uranium dioxide to uranium in LiCl-KCl eutectic in situ using synchrotron radiation”. In: *JOURNAL OF NUCLEAR MATERIALS* 464, 256–262. ISSN: 0022-3115. doi: {10.1016/j.jnucmat.2015.04.037}.
- [11] Drakopoulos, Michael, Connolley, Thomas, Reinhard, Christina, **Atwood, Robert**, Magdysyuk, Oxana, Vo, Nghia, Hart, Michael, Connor, Leigh, Humphreys, Bob, Howell, George, Davies, Steve, Hill, Tim, Wilkin, Guy, Pedersen, Ulrik, Foster, Andrew, De Maio, Nicoletta, Basham, Mark and Yuan, Fajin and Wanelik, Kaz **2015**. “I12: the Joint Engineering, Environment and Processing (JEEP) beamline at Diamond Light Source”. In: *JOURNAL OF SYNCHROTRON RADIATION* 22.3, SI, 828–838. ISSN: 1600-5775. doi: {10.1107/S1600577515003513}.
- [12] Giles, Sam, Coates, Michael I. Garwood, Russell J. Brazeau, Martin D. **Atwood, Robert** and Johanson, Zerina and Friedman, Matt **2015**. “Endoskeletal structure in Cheirolepis (Osteichthyes, Actinopterygii), An early ray-finned fish”. In: *PALAEONTOLOGY* 58.5, 849–870. ISSN: 0031-0239. doi: {10.1111/pala.12182}.
- [13] Karagadde, S. Lee, P. D. Cai, B. Fife, J. L. Azeem, M. A. Kereh, K. M. Puncreobutr, C. Tsivoulas, D. And Connolley, T. And **Atwood, R. C. 2015**. “Transgranular liquation cracking of grains in the semi-solid state”. In: *NATURE COMMUNICATIONS* 6. ISSN: 2041-1723. doi: {10.1038/ncomms9300}.
- [14] Kazantsev, D. Van Eyndhoven, G. Lionheart, W. R. B. Withers, P. J. Dobson, K. J. McDonald, S. A. And **Atwood, R.** And Lee, P. D. **2015**. “Employing temporal self-similarity across the entire time domain in computed tomography reconstruction”. In: *PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A-MATHEMATICAL PHYSICAL AND ENGINEERING SCIENCES* 373.2043. ISSN: 1364-503X. doi: {10.1098/rsta.2014.0389}.
- [15] Mostafavi, M. Collins, D. M. Cai, B. Bradley, R. **Atwood, R. C.** Reinhard, C. Jiang, X. Galano, M. And Lee, P. D. And Marrow, T. J. **2015**. “Yield behavior beneath hardness indentations in ductile metals, measured by three-dimensional computed X-ray tomography and digital volume correlation”. In: *ACTA MATERIALIA* 82, 468–482. ISSN: 1359-6454. doi: {10.1016/j.actamat.2014.08.046}.

- [16] Song, X. Xie, M. Hofmann, F. Illston, T. Connolley, T. Reinhard, C. **Atwood, R. C.** Connor, L. Drakopoulos, M. And Frampton, L. And Korsunsky, A. M. **2015**. “Residual stresses and microstructure in Powder Bed Direct Laser Deposition (PB DLD) samples”. In: *INTERNATIONAL JOURNAL OF MATERIAL FORMING* 8.2, 245–254. ISSN: 1960-6206. DOI: {10.1007/s12289-014-1163-1}.
- [17] Vo, Nghia T. And **Atwood, Robert C.** And Drakopoulos, Michael **2015**. “Radial lens distortion correction with sub-pixel accuracy for X-ray micro-tomography”. In: *OPTICS EXPRESS* 23.25, 32859–32868. ISSN: 1094-4087. DOI: {10.1364/OE.23.032859}.
- [18] Wang, Hongchang, Berujon, Sebastien, Herzen, Julia, **Atwood, Robert**, Laundy, David and Hipp, Alexander and Sawhney, Kawal **2015**. “X-ray phase contrast tomography by tracking near field speckle”. In: *SCIENTIFIC REPORTS* 5. ISSN: 2045-2322. DOI: {10.1038/srep08762}.
- [19] Kareh, K. M. Lee, P. D. **Atwood, R. C.** And Connolley, T. And Gourlay, C. M. **2014(a)**. “Pore behaviour during semi-solid alloy compression: Insights into defect creation under pressure”. In: *SCRIPTA MATERIALIA* 89, 73–76. ISSN: 1359-6462. DOI: {10.1016/j.scriptamat.2014.06.033}.
- [20] Kareh, K. M. Lee, P. D. **Atwood, R. C.** And Connolley, T. And Gourlay, C. M. **2014(b)**. “Revealing the micromechanisms behind semi-solid metal deformation with time-resolved X-ray tomography”. In: *NATURE COMMUNICATIONS* 5. ISSN: 2041-1723. DOI: {10.1038/ncomms5464}.
- [21] Vertyagina, Yelena, Mostafavi, Mahmoud, Reinhard, Christina and **Atwood, Robert** and Marrow, T. James **2014**. “In situ quantitative three-dimensional characterisation of sub-indentation cracking in polycrystalline alumina”. In: *JOURNAL OF THE EUROPEAN CERAMIC SOCIETY* 34.12, 3127–3132. ISSN: 0955-2219. DOI: {10.1016/j.jeurceramsoc.2014.04.002}.
- [22] Vo, Nghia T. Drakopoulos, Michael and **Atwood, Robert C.** And Reinhard, Christina **2014**. “Reliable method for calculating the center of rotation in parallel-beam tomography”. In: *OPTICS EXPRESS* 22.16. ISSN: 1094-4087. DOI: {10.1364/OE.22.019078}.
- [23] Baars, Christian and Pour, Mansoureh Ghobadi and **Atwood, Robert C.** **2013**. “The earliest rugose coral”. In: *GEOLOGICAL MAGAZINE* 150.2, 371–380. ISSN: 0016-7568. DOI: {10.1017/S0016756812000829}.
- [24] Mostafavi, M. Baimpas, N. Tarleton, E. **Atwood, R. C.** McDonald, S. A. And Korsunsky, A. M. And Marrow, T. J. **2013**. “Three-dimensional crack observation, quantification and simulation in a quasi-brittle material”. In: *ACTA MATERIALIA* 61.16, 6276–6289. ISSN: 1359-6454. DOI: {10.1016/j.actamat.2013.07.011}.
- [25] Song, X. Xie, M. Hofmann, F. Jun, T. S. Connolley, T. Reinhard, C. **Atwood, R. C.** Connor, L. Drakopoulos, M. And Harding, S. And Korsunsky, A. M. **2013**. “Residual stresses in Linear Friction Welding of aluminium alloys”. In: *MATERIALS & DESIGN* 50, 360–369. ISSN: 0261-3069. DOI: {10.1016/j.matdes.2013.03.051}.

- [26] Giles, Sam, Brazeau, Martin D. And **Atwood, Robert C.** And Friedman, Matt **2012**. “ENDOSKELETAL ANATOMY OF THE STEM ACTINOPTERY-GIAN CHEIROLEPIS REVEALED BY HIGH-RESOLUTION COMPUTED TOMOGRAPHY”. In: *JOURNAL OF VERTEBRATE PALEONTOLOGY* 32.2, SI. 72nd Annual Meeting of the Society-of-Vertebrate-Paleontology, N Carolina Museum Nat Sci, Raleigh, NC, OCT 17-20, 2012, 101. ISSN: 0272-4634.
- [27] Vo, Nghia T. **Atwood, Robert C.** Moser, Herbert O. Lee, Peter D. And Breese, Mark B. H. And Drakopoulos, Michael **2012**. “A fast-converging iterative method for X-ray in-line phase contrast tomography”. In: *APPLIED PHYSICS LETTERS* 101.22. ISSN: 0003-6951. DOI: {10.1063/1.4769046}.
- [28] **Atwood, Robert C.** Lee, Peter D. Konerding, Moritz A. And Rockett, Peter and Mitchell, Christopher A. **2010**. “Quantitation of Micro-computed Tomography-Imaged Ocular Microvasculature”. In: *MICROCIRCULATION* 17.1, 59–68. ISSN: 1073-9688. DOI: {10.1111/j.1549-8719.2009.00009.x}.
- [29] Korsunsky, Alexander M. Song, Xu, Hofmann, Felix, Abbey, Brian, Xie, Mengyin, Connolley, Thomas, Reinhard, Christina, **Atwood, Robert C.** And Connor, Leigh and Drakopoulos, Michael **2010**. “Polycrystal deformation analysis by high energy synchrotron X-ray diffraction on the 112 JEEP beamline at Diamond Light Source”. In: *MATERIALS LETTERS* 64.15, 1724–1727. ISSN: 0167-577X. DOI: {10.1016/j.matlet.2010.04.023}.
- [30] Jones, Julian R. **Atwood, Robert C.** Poologasundarampillai, Gowsihan and Yue, Sheng and Lee, Peter D. **2009**. “Quantifying the 3D macrostructure of tissue scaffolds”. In: *JOURNAL OF MATERIALS SCIENCE-MATERIALS IN MEDICINE* 20.2, 463–471. ISSN: 0957-4530. DOI: {10.1007/s10856-008-3597-9}.
- [31] **Atwood, R. C.** Lee, P. D. And Curtis, R. V. And Majjer, D. M. **2007**. “Modeling the investment casting of a titanium crown”. In: *DENTAL MATERIALS* 23.1, 60–70. ISSN: 0109-5641. DOI: {10.1016/j.dental.2005.12.001}.
- [32] Jones, Julian R. Poologasundarampillai, Gowsihan, **Atwood, Robert C.** And Bernard, Dominique and Lee, Peter D. **2007**. “Non-destructive quantitative 3D analysis for the optimisation of tissue scaffolds”. In: *BIOMATERIALS* 28.7, 1404–1413. ISSN: 0142-9612. DOI: {10.1016/j.biomaterials.2006.11.014}.
- [33] **Atwood, RC** and Lee, PD and Curtis, RV **2005**. “Modeling the surface contamination of dental titanium investment castings”. In: *DENTAL MATERIALS* 21.2, 178–186. ISSN: 0109-5641. DOI: {10.1016/j.dental.2004.02.010}.
- [34] **Atwood, RC**, Lee, PD and Curtis, RV and Di Silvio, L **2005**. “Multiscale modeling of titanium investment cast dental prostheses”. In: *MATERIALS SCIENCE & ENGINEERING C-BIOMIMETIC AND SUPRAMOLECULAR SYSTEMS* 25.3. Materials and Science Technology Meeting 2004,

New Orleans, LA, SEP 26-29, 2004, 255–262. ISSN: 0928-4931. DOI: {10.1016/j.msec.2005.01.019}.

- [35] Atwood, RC, Jones, JR and Lee, PD and Hench, LL **2004**. “Analysis of pore interconnectivity in bioactive glass foams using X-ray microtomography”. In: *SCRIPTA MATERIALIA* 51.11, 1029–1033. ISSN: 1359-6462. DOI: {10.1016/j.scriptamat.2004.08.014}.
- [36] Atwood, RC, Lee, PD and Minisandram, RS and Jones, RMF **2004**. “Multiscale modelling of microstructure formation during vacuum arc remelting of titanium 6-4”. In: *JOURNAL OF MATERIALS SCIENCE* 39.24. International Symposium on Liquid Metals, Nancy, FRANCE, SEP, 2003, 7193–7197. ISSN: 0022-2461. DOI: {10.1023/B:JMSC.0000048731.42495.1c}.
- [37] Fox, AB, Valdez, ME, Gisby, J, Atwood, RC and Lee, PD and Sridhar, S **2004**. “Dissolution of ZrO₂, Al₂O₃, MgO and MgAl₂O₄ particles in a B₂O₃ containing commercial fluoride-free mould slag”. In: *ISIJ INTERNATIONAL* 44.5, 836–845. ISSN: 0915-1559. DOI: {10.2355/isijinternational.44.836}.
- [38] Lee, PD, Chirazi, A and Atwood, RC and Wang, W **2004**. “Multiscale modelling of solidification microstructures, including microsegregation and microporosity, in an Al-Si-Cu alloy”. In: *MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING* 365.1-2. 1st International Conference on Multiscale Materials Modelling (MMM), QUEEN MARY UNIV LONDON, LONDON, ENGLAND, JUN 17-22, 2002, 57–65. ISSN: 0921-5093. DOI: {10.1016/j.msea.2003.09.007}.
- [39] Atwood, RC and Lee, PD **2003**. “Simulation of the three-dimensional morphology of solidification porosity in an aluminium-silicon alloy”. In: *ACTA MATERIALIA* 51.18, 5447–5466. ISSN: 1359-6454. DOI: {10.1016/S1359-6454(03)00411-7}.
- [40] Atwood, RC and Lee, PD **2002**. “A three-phase model of hydrogen pore formation during the equiaxed dendritic solidification of aluminum-silicon alloys”. In: *METALLURGICAL AND MATERIALS TRANSACTIONS B-PROCESS METALLURGY AND MATERIALS PROCESSING SCIENCE* 33.2, 209–221. ISSN: 1073-5615. DOI: {10.1007/s11663-002-0006-5}.
- [41] Lee, PD, Atwood, RC and Dashwood, RJ and Nagaumi, H **2002**. “Modeling of porosity formation in direct chill cast aluminum-magnesium alloys”. In: *MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING* 328.1-2, 213–222. ISSN: 0921-5093. DOI: {10.1016/S0921-5093(01)01687-2}.
- [42] Nishido, S, Atwood, RC and Youssef, YM and Lee, PD **2002**. “Microstructural modelling for the prediction of tensile strength and elongation in automotive aluminium alloy castings”. In: *INTERNATIONAL JOURNAL OF CAST METALS RESEARCH* 15.4. 5th Pacific Rim International Conference on Modelling of Casting and Solidification Processes,

NAGOYA UNIV, NAGOYA, JAPAN, JAN 20-23, 2002, 325–329. ISSN: 1364-0461.

- [43] See, D and **Atwood, RC** and Lee, PD **2001**. “A comparison of three modeling approaches for the prediction of microporosity in aluminium-silicon alloys”. In: *JOURNAL OF MATERIALS SCIENCE* 36.14, 3423–3435. ISSN: 0022-2461. doi: {10.1023/A:1017955927601}.
- [44] **Atwood, RC**, Sridhar, S and Zhang, W and Lee, PD **2000**. “Diffusion-controlled growth of hydrogen pores in aluminium-silicon castings: In situ observation and modelling”. In: *ACTA MATERIALIA* 48.2, 405–417. ISSN: 1359-6454. doi: {10.1016/S1359-6454(99)00363-8}.
- [45] **Atwood, RC** and Sridhar, S and Lee, PD **1999**. “Equations for nucleation of hydrogen gas pores during solidification of aluminium seven weight percent silicon alloy”. In: *SCRIPTA MATERIALIA* 41.12, 1255–1259. ISSN: 1359-6462. doi: {10.1016/S1359-6462(99)00297-3}.
- [46] Bardakjian, BL and **Atwood, R** and Diamant, NE **1984**. “Can Field Coupling Cause Entrainment of Relaxation-Oscillators Having Different Intrinsic Frequencies”. In: *GASTROENTEROLOGY* 86.5, 1020. ISSN: 0016-5085.