Professor Paul Bowen

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Qualifications

PhD, Cambridge, 1984
MA, Cambridge, 1980

Research

Research Interests:

- Characterisation, development, fracture and fatigue of alloys and composite materials (MMCs and CMCs)
- Measurement, use, modelling and control of crack growth resistance through fracture mechanics concepts
- Prediction of properties through correlating microstructural parameters with micromechanisms of failure
- Behaviour of cracks in non-uniform stress fields is a subject of generic interest
- Elevated temperature performance
- Design codes, and prediction of the behaviour of components
- Fracture and fatigue studies of conventional materials

Publications

Selected publications:

J Liu, P Bowen. 2002. Fatigue crack growth in a Ti beta 21s/SCS-6 composite, Acta Materialia, 50, 17, 4205-4218. Publication code: 10269.

ZW Huang, P Bowen, IP Jo nes. 2001. Transmission electron microscopy investigation of fatigue crack tip plastic zones in a polycrystalline gamma-TiAl-based alloy, Philosophical Magazine. A. Physics of Condensed Matter. Defects and Mechanical Properties, 81, 9, 2183-2197. Publication code: 2877.

J Luo, P Bowen. 2003. A Probabilistic Methodology for Fatigue Life Prediction, Acta Materialia, 51, 12, 3537-3550. Publication code: 16222.

MD Halliday, C Cooper, P Bowen. 2007. On small fatigue crack growth and crack closure under mixed-mode and through zero loading in the aluminium alloys 2024-T351 and 8090-T8771, International Jo urnal of Fatigue, 29, 7, 1195-1207. Publication code: 48960.

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