

Abstract Submitted  
for the DFD12 Meeting of  
The American Physical Society

**Flow in and geometry of microstructured optical fibres** YVONNE STOKES, The University of Adelaide, DARREN CROWDY, Imperial College London, HAYDEN TRONNOLONE, HEIKE EBENDORFF-HEIDEPRIEM, The University of Adelaide — Microstructured optical fibres (MOFs) have revolutionised optical fibre technology, promising a virtually limitless range of fibre designs for a wide range of applications. Extrusion of a preform and drawing to form a fibre is a promising fabrication process for mass production. However, understanding of the flow during fabrication and its effect on the complex air-solid structure in the MOF cross section is lacking, and this impedes MOF development. We propose a modelling methodology suitable for complex structure, and focus on flow in the cross section during preform extrusion. Excellent qualitative agreement of model results and experiment is shown and areas for model improvement are identified.

Yvonne Stokes  
The University of Adelaide

Date submitted: 31 Jul 2012

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