



**Rolls-Royce**

PO Box 31, Derby DE24 8BJ, England  
Telephone: +44 (0) 1332 242424  
Fax: +44 (0) 1332 249936  
www.rolls-royce.com

Dear Professor O'Neill,

**EPSRC Call for 'Capital for Great Technologies – Advanced Materials'**

Thank you for your recent correspondence regarding your intention to bid for new capital equipment for advanced materials research, under the recent 'Great Technologies' Call. As part of the larger proposal we understand that you will be bidding for a range of new equipment including an Laue x-ray diffractometer, an advanced Transmission Electron Microscope and a scanning Probe Microscope with variable temperature capability to be housed in the Maxwell Centre. This new development in West Cambridge is to foster collaboration between industry and academia, with shared equipment that will be available for use by both. It will be located close to the new Materials Science Building due to open in October 2013.

As part of the on-going collaboration between Rolls-Royce and Cambridge University, and specifically through the Rolls-Royce/EPSRC Strategic Partnership, we see great potential for this equipment to enhance the quality and novelty of the research carried out by the Partnership in the Materials Science Department. The Laue x-ray equipment can be used to determine the orientation of single crystals such as those used as blade materials in the high-pressure gas turbine and to rotate that orientation to allow cutting on specific deformation planes. It can also be used to determine the residual stress in deformed materials. There are several projects currently in progress or planned which will benefit greatly from this equipment. Furthermore this investment will allow the development of further projects into the fundamental nature and behaviour of these materials; this is key to the delivery of successful novel materials.

Rolls-Royce recognises the importance of, and need for, advanced x-ray and imaging techniques to tackle complex materials problems and therefore the addition of this equipment would be of great interest to Rolls-Royce for on-going and future projects.

We would like to express our strong support and wish you and your colleagues in Cambridge success with the EPSRC proposal.

Yours sincerely,

For Rolls-Royce plc

A handwritten signature in black ink, appearing to read 'J M Burrows'.

Dr J M Burrows  
Project Manager – Universities