

ISSUE	RECOMMENDATION BY PANEL	RESPONSIBILITY	ACTION
<p>Research Quality, Impact and Opportunities</p>	<p>The area of structural materials and thermostructural systems in the UK needs to be re-evaluated in a systematic manner.</p>	<p>EPSRC</p>	<p>A Discussion will be held with the Materials Strategic Advisory Team (SAT), examining the structural materials portfolio in more detail and options for taking this recommendation forward. (Action: to start)</p>
	<p>EPSRC should give further support for funding multidisciplinary/multi-institutional research on thermostructural systems (say in aerospace or MEMS) that encourage the formation of bottom-up academic teams that span materials and the key engineering disciplines.</p>	<p>EPSRC</p>	<p>A multidisciplinary Processing of Functional Materials initiative will be launched following on from the earlier activity in this area. This expanded initiative will require involvement of engineers and device developers and will have a focus in a number of application sectors including MEMS. (Action: in progress)</p> <p>Substantial investment has been made in multi-disciplinary, multi-institutional aerospace projects through the Defence & Aerospace Partnerships initiative (DARPs). (Action: £1.3M allocated to DARPs)</p>
	<p>Nanotechnology is now a very “hot” area in materials research worldwide. A substantial UK investment is appropriate. A user facility mode is recommended for nanofabrication.</p>	<p>DTI/EPSRC</p>	<p>The recent report Nanotechnology: A UK strategy published by the ministerial advisory group in June 2002 recommended the establishment of two user facilities for Nanotechnology. The DTI is currently examining ways to take these recommendations forward. (Action: in progress)</p>
	<p>UK retains historical strength in materials modelling, but it is not maintaining pace with</p>	<p>EPSRC</p>	<p>A task force has been assembled in the area of predictive materials modelling to advise in more</p>

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<p>The Funding Landscape</p>	<p>the rapid expansion occurring elsewhere. Strength exists in first principles, atomistic simulation and several topics in meso-scale modelling. The UK is being left behind in several important areas.</p>		<p>detail on strategy. A new managed initiative is currently being scoped and will be launched in December 2002. (Action: in progress, £2M earmarked in first call)</p>
	<p>The biotechnology field is still in its infancy and provides opportunities for the UK to garner and maintain a leadership position.</p>	<p>EPSRC & other Research Councils</p>	<p>EPSRC will build on investments already made in this area largely through the responsive mode. Two areas highlighted for further strategic consideration, drug delivery and biophotonics. (Action: drug delivery in progress, biophotonics to start)</p>
	<p>The UK will continue to be a leader in the area of organic electronics and influence the activities of other countries.</p>	<p>EPSRC</p>	<p>EPSRC will encourage high quality research proposals in this area and work with key researchers in the community to maintain the UK's leading position. Longer term support will be provided through platform grants and portfolio awards. (Action: Discussions to commence)</p>
	<p>Create a more diverse funding landscape for materials research in the UK with a range of predominantly "bottom-up" support</p>	<p>EPSRC/Research community</p>	<p>Additional funds are available to the materials research community as a result of SR2002 in the areas of Basic Technology and Energy.</p>

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	<p>mechanisms drawn upon best international practice and guided by technology road maps.</p> <p>The panel specifies an ideal mix of funding in order to achieve proper balance between competing demands on available funds. The panel urges an increase in the overall level of support for materials research commensurate with the relative levels established in the US.</p> <p>The UK has a special opportunity to identify a research portfolio in materials research that benefits the country most, through continued use of the Foresight exercise and its professional entity, The Institute of Materials (now IoM³) together with associate UK organisations.</p> <p>The UK has been successful in putting in place a culture for multidisciplinary research in materials. This portends well for the future, once some structural problems described in the report have been redressed.</p>	<p>EPSRC/Foresight/Professional Societies</p> <p>EPSRC</p>	<p>The Programme will introduce a mixed economy approach whilst taking advantage of new more structured support mechanisms. A balance of responsive 60%; managed 20% and portfolio partnerships 20% in new programme commitments will be developed.</p> <p>Further diversity within the funding landscape will be actively encouraged through expansion of the number of platform grants and an encouragement to the community to use the full flexibility offered by responsive mode (1 month – 6 years, £1k – £6M) (Action: ongoing)</p> <p>The Programme Manager (PM) will continue to work closely with all of the Professional Societies and Foresight to identify a portfolio of materials research appropriate to the UK. (Action: on going)</p> <p>The Materials SAT will provide specific guidance to the PM on future research opportunities and challenges in materials and strategic advice in the placement of portfolio partnerships. (Action: to start)</p> <p>EPSRC draws its peer review referee reports from a single college based on expertise. College members participate as generous generalists in broad responsive mode panels.</p>

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Human Capital	<p>EPSRC should guard against overly specialised peer reviews.</p> <p>Vastly enhance the career opportunities for young faculty through new funding vehicles (Special Young Investigator Awards). It is imperative to implement meaningful start-up support and internationally competitive salaries</p>	<p>EPSRC/HEFCs/Universities</p>	<p>EPSRC will continue to establish Interdisciplinary Research Collaborations (IRCs) in areas identified as national priorities.</p> <p>As part of the SR2002 spending settlement Research Assistant salary levels will be raised together with the creation of new postdoctoral fellowships enhancing career opportunities.</p> <p>EPSRC Advanced Fellowships will now attract earmarked research funding. Additional advanced fellowships will be supported in areas of materials research aligned to current strategic priorities. (Action: call due January 2003)</p>
	<p>The position of the UK in materials research will erode unless structural changes are implemented that once again render the field attractive to new students and faculty.</p>	<p>EPSRC/HEFCs/Universities UK/Professional Societies</p>	<p>Introduction of Doctoral Training Accounts allows Universities greater flexibility in setting stipend levels for PhDs. Increased stipend levels and durations will be possible as part of additional funding allocated through SR2002.</p> <p>EPSRC will, in partnership with other stakeholders, enhance in a focused manner its publicity promoting the field of materials research and training. A strategy outlining possible approaches will be discussed with the Materials SAT. (Action: to start)</p>
Engagement with Industry	<p>The current relationship between the materials research enterprise and UK</p>	<p>EPSRC/DTI</p>	<p>???</p>

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<p>Discipline Structure</p>	<p>industry is, at best, uneven. A fundamental rethinking of this relationship appears to be needed, predicated on best international practice, in order to overcome problems that have adversely affected the UK's standing.</p> <p>EPSRC should be pro-active in helping identify and publicise best practice for universities relating to the management of IP, technology transfer and commercialisation emanating from materials research.</p> <p>Materials science/engineering should not be allowed to disappear as a vital discipline. Materials departments should continue to exist in numbers and at support levels that enable them to participate with other relevant disciplines as an equal partner in the materials research enterprise. Structural changes related to admission policies, scope and funding must be explored.</p> <p>Funding agencies should consider a targeted and periodic competition for advanced instrumentation.</p>	<p>EPSRC</p> <p>HEFCs/Universities UK/IoM³)</p> <p>EPSRC/HEFCs</p>	<p>EPSRC policy regarding Intellectual Property, technology transfer and commercialisation was recently discussed by Council. They recommended that.....(Action: in progress)</p> <p>Issues associated with the structure of the discipline such as the number of academic departments are initially the responsibility of the Universities, Funding Councils and Professional Societies.</p> <p>EPSRC will continue to support the highest quality materials research irrespective of its origin. Department.</p> <p>EPSRC assisted by the SATs is undertaking a cross-programme review of equipment and facilities with a view to establishing a facilities roadmap for future requirements. These requirements will be initially met within responsive mode. (Action: in progress)</p> <p>Further funds available via SR2002 through the Science Research Infrastructure Fund (SRIF)</p>

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	<p>Dispense with the research assessment exercise (RAE). The exercise has served the purpose of inculcating an appreciation for excellence and is no longer needed.</p>	<p>HEFCs</p>	<p>RAE is the responsibility of the Higher Education Funding Councils. The reports recommendations have been fed into the RC-UK working group providing evidence for the review of RAE.</p>