

Title of symposium: Advanced Materials for Space Exploration		
Organizer	Institution	Contact email
Dr George Vekinis	Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Greece	g.vekinis@inn.demokritos.gr
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Summary		
A.6	<p>The exploration of space and other worlds is one of humankind’s most challenging and rewarding ventures. It represents a critical step in humankind’s preparation for the colonisation of our Solar System that will surely happen in the future.</p> <p>In the most recent NASA Global Exploration Strategy document it is stated: <i>“Space exploration enriches and strengthens humanity’s future. Searching for answers to fundamental questions such as: ‘Where did we come from?’ ‘What is our place in the universe?’ and ‘What is our destiny?’ can bring nations together in a common cause, reveal new knowledge, inspire young people and stimulate technical and commercial innovation on Earth.”</i></p> <p>There is little doubt that the development of new and enhanced materials is perhaps the most critical endeavour <i>enabling</i> space exploration. While many new and advanced materials are continuously being developed worldwide for a plethora of new applications, space exploration presents many special challenges that usually demand extreme and often unusual combination of properties from all types of materials.</p> <p>Scope of the Symposium: The symposium aims to bring together materials scientists and engineers and their students from around Europe and beyond and to present the most up-to-date research results in all materials fields crucial to space exploration.</p> <p>The targeted topics of the symposium are:</p> <ul style="list-style-type: none"> <li>- Materials for thermomechanical protection of space probes and spacecraft</li> <li>- Electronic materials for space exploration</li> <li>- Advanced structural materials for the space environment</li> <li>- Ultra-light materials for space exploration</li> <li>- Advanced materials for human protection</li> <li>- Materials modelling for space exploration</li> <li>- Specialist coatings for space exploration</li> </ul>	