

Highly porous metals and Ceramics		
Organiser	Institution	Contact
Paolo Colombo	Dept. of Mechanical Engineering University of Padova via Marzolo 9, 35131 Padova, Italy	paolo.colombo@unipd.it
Russell Goodall	Dept. of Materials Science and Engineering Sir Robert Hadfield Building University of Sheffield, Mappin Street, Sheffield, S1 3JD UK	r.goodall@sheffield.ac.uk
B4. II	Summary	
	<p>This symposium will focus on porous structures possessing a volume fraction of porosity approximately >50 vol% as well as cellular materials (which typically possess void fraction > 70 vol% and a specific architecture). Examples of these materials include membranes, foams, honeycombs, fibre networks, assembled rods or hollow bodies, bioinspired structures etc. In recent years, there has been a surge of interest in these materials, because of their wide range of functional and mechanical properties, which make them attractive for various applications. These include the areas of thermal and sound management, stiff lightweight components, impact energy absorption, filtration of fluids, catalyst support, gas adsorption, biomedical devices, pollutant control, etc. Advances in the field of processing has led to fabrication of components with novel characteristics, which has led to their use in novel applications. However, more research and developments are needed in all areas of investigation, including manufacturing of components with well controlled porosity, modelling of properties, characterization of morphology, etc. Contributions are invited on processing technology, morphological and microstructural characterization at different size scales, material properties, challenging applications, component design criteria, etc as well as on modelling and simulation of processing, of porous architectures and correlated property profiles.</p>	