

Processing of ceramics and their mechanical properties		
Organiser	Institution	Contact
Arturo Domínguez	University of Seville Seville Spain	adorod@us.es
Summary		
C3.III	<p>Ceramic materials have been an extensively active field of research in the last decades owing first to their excellent physical properties as high temperature stability, chemical inertness, strength, wear resistance which make them suitable for multiple applications like superplastic forming, high temperature superconductors, gas sensors, ferroelectric capacitors, thermal barriers, tissue engineering and cutting tools among others and second to the new techniques as spark plasma sintering, microwave furnace, hot pressing and the very new flash sintering among others, used to fabricated ceramics as well as fully-dense nanoceramics. On the other hand, the use of second phase as particles, long/short fibers single and multiwall nanotubes to reinforce them and improve toughness have enlarge the structural applications and it has been a continuous driving force to encourage researchers to use ceramics. We are particularly interested in articles describing advanced ceramic processing techniques with special emphasis on the correlation between processing, microstructural as well as mechanical characterization and properties modeling. Authors devote to explore all aspects of mechanical properties of ceramics as well as nanoceramics from a bottom-up approach are warmly invited to submit their latest achievements. Both experimental and theoretical works are welcome, particularly those which link both experiments and modeling with the aim of potential new applications. Potential topics include, but not limited to:</p>	
	<ul style="list-style-type: none"> ○ New ceramic systems obtained through advanced ceramic processing techniques. ○ New aspects or potentialities of advanced ceramic processing techniques. ○ Microstructural and/or mechanical characterization, with emphasis on the relationship microstructure-mechanical response. ○ Analytical/simulation modeling of mechanical properties of new advanced-processed ceramics. ○ Modeling of physical processes controlling final plasticity during processing and/or deformation. ○ Potential engineering applications of new nanostructured ceramics prepared by advanced ceramic processing. 	