

EUROMAT 2017/ Symposia Structure/Area B

B.5	Title: Advanced Ceramics		
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Summary			
<p>Advanced ceramics concern an innovative area of materials science and engineering covering a plethora of applications in almost every industrial field, as these materials can combine unique properties (mechanical, thermal, biological, chemical, optical, electrical). Their major drawback is their brittle fracture. Thus, the research trends in this area concern the improvement of mechanical behavior and the further enhancement of ceramics' properties to broaden the spectrum of applications. This can be done by tailoring the microstructure, by developing nanosized structures and by the proper design.</p> <p>This symposium invites contributions on advanced ceramics for structural, biological, chemical, catalytic, electronic and optical applications. The contributions can include studies on the development of novel nanopowders, on powder synthesis and processing (dispersion and stabilization strategies, shaping methods), on novel sintering techniques, on process control for micro- or nano-structured composites fabrication, on the microstructure-property relationships as well as on new design and simulation aspects.</p> <p><u>Topics to be covered:</u></p> <ul style="list-style-type: none"> ○ Powder synthesis methods ○ Strategies for the stabilization of nanoparticle dispersions ○ New colloidal shaping technologies ○ Process development for nanostructured ceramics ○ Advanced sintering methods ○ Development of composite structures ○ Characterization of microstructures ○ Process modeling for advanced ceramics development ○ Microstructure-property relationships 			

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| | <ul style="list-style-type: none">○ Novel applications of advanced ceramics (catalytic, electronic, optical, anticorrosive, e.t.c.) |
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