

Materials for Nuclear Applications			
	Organiser	Institution	Contact
	Nicolas Dacheux	Univ. Montpellier 2 France	<b>nicolas.dacheux@univmontp2.fr</b>
	Philippe Raison	Institute for Transuranium Elements (ITU) Karlsruhe Germany	<b>philippe.raison@ec.europa.eu</b>
	<b>Summary</b>		
<b>E3.IV</b>	<p>This symposium is focused on the preparation, optimization and study of the properties of nuclear materials (structural materials, nuclear fuels, molten salts, radwaste matrices...) for ITER and fusion power reactors, in the field of the improvement or development of advanced fission reactors (Gen III, III+ and IV) or for other nuclear devices like accelerators driven systems (ADS), neutron spallation sources and material test reactors. The topics will naturally cover the preparation (including exploration of new methods of preparation), manufacturing and all the steps leading to the final nuclear materials (such as sintering, melting, ...) but also their design in order to control their properties in use (behavior during high temperature cycles, thermal shocks, irradiation, corrosion, dissolution, ...). A particular interest will be devoted to thermodynamics and thermophysics of nuclear fuels and to associated modeling and simulation but also on radiation damage processes in ceramics, metals and composite materials. In this field, the target materials include metals (austenitic stainless, ferritic steels or ferritic/martensitic steels, intermetallic compounds, refractory metals, alloys ...), ceramic materials (carbides, oxides, nitrides, ...) and composite materials. The symposium will also cover waste management including the design and the elaboration of radwaste matrices, melting or sintering processes and study of their long term behavior (under self-irradiation, leaching tests, ...).</p>		