S9-7 Specific Reaction Field and Material Fabrication Design for Sustainable Future

SHORT DESCRIPTION:

Now, traditional material processing is becoming saturated and it is more and more difficult to fabricate innovative materials. For innovative material fabrication, innovative fabrication design is needed. One of the innovative material fabrication design realization means includes the use of specific reaction field. As specific reaction field, ultrasonic, microwave, laser, supercritical fluid, implosion, hydrothermal, solvothermal, etc. are included. These specific reaction fields are different from conventional reaction fields in the viewpoint of local reactor as non-equilibrium and non-linear, reaction temperature, pressure, time, and so on. These characteristics are specifically affected for nucleation, atom diffusion and growth in material fabrication. Thus specific reaction field are very important for innovative material design and innovative processing, new material fabrication. In this session, new material and material processing using not only specific reaction fields but also beneficial traditional synthesis fields will be discussed for sustainable material fabrication design. New material, strange structure, nanoparticle, film, bulk, 3D, morphology control, sintering, function, etc. are included.

SESSION TOPICS:

New Material, Strange structure, Nanoparticle, Film, Bulk, Synthesis, Sintering, Function
Ultrasonic Processing, Microwave Processing, Laser Processing, Supercritical Fluid Processing
Hydrothermal, Solvothermal Processing, Implosion Processing

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