

HETEROGENEOUS COMBUSTION AND NANOSTRUCTURED MATERIALS

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Combustion synthesis (CS) is a unique approach for synthesis of advanced materials, including metals, alloys, ceramics and composites. The extensive research performed in past decade emphasized the CS capabilities as an effective, energy saving and “green” method. Recently, a number of important breakthroughs in this field have been made, notably for development of novel nano-structured materials with properties better than those produced by conventional methods.

The fundamental basis for CS method is discussed in the first part of this presentation. The routes to tailor the microstructure and properties of synthesized materials are emphasized. In the second part, several examples for synthesis strategies, processing and the applications of variety of nanostructured materials, accomplished by Dr. K. Manukyan, are presented. Finally, future challenging opportunities of CS approach are outlined and discussed.

**Condensed
Matter
Seminar**

**All interested
persons are
cordially
invited to
attend.**