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## **Session Title - Technological Applications of Materials: Synthesis, Characterization, Optimization, Modeling and Simulation (TAMSCOMS)**

### **Theme and aim of the special section:**

Material Science is an interdisciplinary field which also encompasses various areas of science, engineering and technology. Recently, development of various novel materials, such as nano-structured materials with highly remarkable properties, result a huge advancement in this field. This advancement has also motivated the fabrication, processing, modelling and design of new devices with wide range of applications. This special session of the conference will present the various experimental and theoretical studies of various properties of technologically important materials. It will focus firstly on synthesis of materials and study of properties using various techniques experimentally. Secondly, in addition to the experimental studies, the modeling of properties and devices like electronic, optoelectronics, photovoltaic and spintronic devices will also be focused on. Main techniques which are planned to be presented in the special session are experimentation, optimization, modelling and simulation. The main motivation is the development of new materials which is facing a huge spectrum of challenges in the area of natural resources, energy, new functionality, environmental impact, and so forth. The session will also cover optimization and applications of different novel materials in the future generation devices. The aim and objective is to recognize the importance and insights for problem solving and applications in the area of material science, nano-technology, optimization and simulation.

### **Topics (But not limited to):**

1. Synthesis, growth and applications of nanomaterials
2. Materials for energy applications
3. Experimental studies for material science
4. Chemical routes for the synthesis of materials
5. Physical routes for the synthesis of materials
6. Characterization techniques for different properties of materials
7. Ion-implantation and irradiation studies for material modification
8. Theoretical aspects of material science
9. Theoretical aspects of Optimization and applications in materials
10. Application of Simulation to material science
11. Theoretical and experimental material science
12. Mathematical Modelling
13. Density functional theory for materials
14. Application of Non-linear Programming
15. Mathematical programming and optimization techniques
16. Optimization techniques and soft computing
17. Application of linear and stochastic programming technique
18. Simulation and modelling

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19. Electronic, optical, magnetic and biomaterials
20. Metal oxide thin films
21. Dilute magnetic semiconductors
22. Carbon and Graphene materials

## Special Session Coordinator Details

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### **Special Session Title: Technological Applications of Materials: Synthesis, Characterization, Optimization, Modeling and Simulation (TAMSCOMS)**

We are organizing a special session on “**Technological Applications of Materials: Synthesis, Characterization, Optimization, Modeling and Simulation**” in International Conference on Processing of Materials, Minerals and Energy: PMME-2016. During 29<sup>th</sup> and 30<sup>th</sup> July, 2016 in the city of Ongole, Andhra Pradesh, India.

**Special Session Submissions can only be submitted to the Session Coordinator Mail Id -**  
[bjoshi.physics@gmail.com](mailto:bjoshi.physics@gmail.com), [mathematics.pratiksha@gmail.com](mailto:mathematics.pratiksha@gmail.com)

### **Publication of Conference Papers (Special Sessions)**

**All the registered papers will be submitted to Elsevier Materials Today: Proceedings for publication. As well as indexed by SCOPUS.**