

For Scientific  
Exchange and  
Friendship....

# **ISAJ TSUKUBA CHAPTER**

Organizes an informal  
and interactive series  
of lectures

***Please join us for  
Interactive Lecture  
10***

*For details contact:*  
Sunil Kaul  
(kaul4kaul@gmail.com)

## **Crystallographic Texture: Evolution and Implication**

Venue - **Ninomiya House**  
Lecture Hall  
1st Floor

February 2, 2013 (Saturday), 5:00 pm ~

Speaker – **Dr. K. S. Suresh**

High Temperature Materials Unit  
National Institute of Materials Science (NIMS)  
Tsukuba, Ibaraki 305-8505, Japan

Crystallographic texture is the preferred orientation of grains in material. Since many of the properties are orientation dependent, control of texture leads to tailor specific material properties. Texture can be engineered by employing different processing like, solidification, deformation, annealing, and phase transformation. Basic understanding of the evolution of texture has led to solve problems in many engineering applications, like deep drawing of metals and alloys, controlling electrical loss in transformers. Contemporary research activities include application of texture to control electro migration in interconnects, to increase the bio-compatibility of implants, and synthesis of textured substrates for high performance superconductors. In this seminar, I will discuss about the evolution of texture during different processing, its representation, measurement and significance to specific structural and functional properties of crystalline materials.