Physical Research Laboratory

Tuesday Seminar

Mineral phase transformation: Earlier classical ideas to modern concepts

Abstract

Most of our mineralogical concepts bear the legacy of material sciences where minerals are considered as materials and a "dry solid-state" mindset is applied in explaining mineralogical features. However, natural systems are not "dry" and "closed" rather it is commonly "wet" and "open". Following this, I will start the talk with little bit idea about the development of ideas on mineralogy, specially on mineral phase transformation to explain why are all the interpretations of processes in minerals and rocks dominated by "solid-state" mechanisms? Next, I will discuss the fundamentals of mineral stability diagram calculation using "equilibrium thermodynamics" in "dry" system, its pros and cons. Finally, I will focus on - (1) modern observations on mineral phase transformation from nano-scale perspective, (2) concept of "wet" system, non-equilibrium thermodynamics, and (3) the role of fluid on mineral phase transformation and deformation..

Speaker: **Dr. Alik Sundar Majumdar**
DST-INSPIRE Faculty
GSDN

Date	Time	Venue
13-November-2018	16:00 hrs	Ground Floor Lecture Hall

All are invited to attend and participate in discussion
Tea at 15:30 hrs

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