

Tentative Outline

Special Thematic Issue for the journal : Current Indian Science

Title of the Thematic Issue: Phosphors for Radiation Dosimetry

Sectional Editor: *Dr. Vikas Dubey*

- **Scope of the Thematic Issue:**

Thermoluminescence is a form of luminescence that is exhibited by certain crystalline materials, such as some minerals, when previously absorbed energy from electromagnetic radiation or other ionizing radiation is re-emitted as light upon heating of the material. The phenomenon is distinct from that of black-body radiation. Thermoluminescence is a form of luminescence that is exhibited by certain crystalline materials, such as some minerals, when previously absorbed energy from electromagnetic radiation or other ionizing radiation is re-emitted as light upon heating of the material. The phenomenon is distinct from that of black-body radiation. Thermoluminescence (TL) is light emission caused by moderate heating of a solid, previously exposed to ionizing radiation. It is displayed at temperatures at which the blackbody light emission is negligible. The exposure to the ionizing radiation (X- or γ -rays, high-energy particles) takes place at rather low temperatures, creates traps, and fills them (or those already present) with electrons and/or holes. The subsequent heating makes the electrons and/or holes free to migrate in the lattice, until they fall into other traps (or recombine) with a consequent photon emission

Keywords: Thermoluminescence, Glow Curve, Phosphors, Dosimetry, Rare Earth, Minerals

Sub-topics:

- Luminescence Studies in Rare Earth Activated Phosphors
- Phosphors and its kinetic parameters evaluation by TL
- TL dosimeter in some geological mineral
- .TL studies on geological samples for dating

Tentative titles of the articles

1. TL glow curve and kinetics
2. Radiation Measurement in Phosphors
3. TL and OSL detection in phosphors
4. OLED fabrication and applications 5. TL studies in geological samples
5. MEMS and NEMS devices fabrication

Schedule:

- ❖ Thematic issue submission deadline: 1st January 2023.

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