

भौतिकशास्त्र विभाग,
लोकमान्य टिळक भवन,
विद्यानगरी, सांताक्रुझ (पूर्व),
मुंबई - ४०० ०९८ (भारत).
दूरध्वनी : २६५२ ६२५०, २६५३ ३०५१,
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विस्तारीत क्र. ३५८
टेली फॅक्स : २६५२ २२२२, २६५३ ३०५१
मेल : head.udp@mu.ac.in

University of Mumbai



मुंबई विद्यापीठ

DEPARTMENT OF PHYSICS

Lokmanya Tilak Bhavan,
Vidyanagari, Santacruz (E),
Mumbai - 400 098 (India).
Tel. No. : 2652 6250, 2653 3051,
2654 3358 Ext. 358
Tel Fax : 2652 2222, 2653 3051
e-mail : head.udp@mu.ac.in
website : http://www.mu.ac.in

Department of Physics (Autonomous), University of Mumbai

Ph.D. Seminar
of

Kondkar Vidya Umesh

Department of Physics, University of Mumbai

Supervisor: Dr. Varsha Bhattacharyya

Department of Physics, University of Mumbai

Study of Nanocrystalline Thin Films of Oxide Semiconductor

Oxide semiconductors are the prominent choice for a variety of applications due to their properties like mechanical and thermal stability, high carrier mobility, electrical conductivity and optical transparency in the visible region. Nanocrystalline thin films of oxide semiconductors possess striking features like size-dependent electronic energy bandgap, phase transition temperature and surface morphology alterations that lead to improved performance and efficiency required for device fabrication.

The present thesis investigates nanocrystalline thin films of SnO_2 and ZnO . Ion beams with different beam parameters such as ion species, energy and fluence are used for synthesis of nanocrystalline thin films of SnO_2 and surface modification of nanocrystalline ZnO thin films. These films are characterised using different microscopic and spectroscopic techniques. In the present investigation ion beam induced modifications of the thin films are discussed in detail in terms of inherent properties of the deposited thin films and the interactions of the ion beams with the target thin films.

Date: Friday, 14th June, 2019

Time: 11.30 a.m.

Venue: Physics Department Seminar Room, Department of Physics,
3rd floor, Tilak Bhavan, Vidyanagari, Kalina, Mumbai-400098

Prof. Vaishali Bambole
Head, Department of Physics
Professor & Head
Department of Physics
University of Mumbai