

CHAPTER 52
TECHNOLOGY
APPLIED CHEMISTRY

Doctoral Theses

552. SURI (Gunjan)
Development of Acrylic Nanocomposites for Optical Applications.
Supervisors : Prof. R. K. Khandal and Prof. G. L. Verma
Th 18797

Abstract

The work is on the very subject of incorporating the inorganic materials in an organic matrix to produce optical plastics materials of desired properties. An attempt has been made to transform a basic material like acrylic acid into a highly valuable optical plastic. Several metal salts (barium hydroxide, lanthanum oxide, titanium tetrachloride and organic titanates) have been incorporated in acrylic acid matrix to produce the optical plastics of desired properties. In order to achieve the mechanical as well as other related properties, certain monomers are also used along with the cross-linkers.

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1. Literature review. 2. Materials. 3. Techniques adopted. 4. Barium-containing nanocomposites based on acrylates and cinnamates. 5. Titania acrylate nanocomposites using inorganic titanium compounds. 6. Titanate acrylate nanocomposites using organic titanates. 7. Lanthanum acrylate nanocomposites. 8. Conclusions. 9. References. 9. Publications.