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KATIA DEL CARMEN: Synthesis and optoelectronic properties of nanocomposites of Sb₂S₃ with Si from laser ablated nanocolloids.

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Pulsed laser ablation in liquid technique is used frequently due to the advantage of obtention of stable, surfactant free nanomaterials in colloidal form. In this work, we synthesized semiconductor nanocolloids with laser ablation in liquid. The ablation process was carried out with pure Sb₂S₃ target and with additions of polycrystalline-Si and monocrystalline-Si in ethyl alcohol solution and thin films were deposited by spin coating. Different morphology has been observed in synthesis by means of laser ablation and deposition by spin coating compared to the conventional one obtained by other synthesis technique like chemical bath deposition. Characterization on their structure, morphology, elemental composition, chemical states, optical and electrical properties are done. Results on these hybrid nanostructured thin films at optimized synthesis parameters and their optoelectronic properties will be presented.

Session Classification: SHORT TALKS

Track Classification: SYMPOSIUM ON LASER ABLATION