IFMBE Proceedings
Volume 77, 2020, Pages 79-82
4th International Conference on Nanotechnologies and Biomedical Engineering, ICNBME 2019; Chisinau; Moldova; 18 September 2019 through 21 September 2019; Code 232319

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DOI: 10.1007/978-3-030-31866-6_17

Optical activity in mn doped as2S3 Glasses

Abstract
Spectral dependences of transmittance (T) and wavelength modulated transmittance ($\Delta T/\Delta \lambda$) of As2S3 layers doped by manganese (Mn) of different concentrations (0–0.5%) were investigated at temperatures from 10 to 300 K. Photoluminescence bands at 1.762, 2.107 and 2.282 eV due to transition (Formula Presented) of Mn ions, respectively were observed at argon laser excitation. On the luminescence spectra the absorption bands of electron transitions (Formula Presented) were recognized. The magnitude of refractive index (n) of Mn (0.1 and 0.5%) ions doped As2S3 layers in low-energy range (1.6–1.9 eV) does not change at temperature decreasing from 300 to 10 K. The spectral dependences of refractive indices

of As2S3 samples doped with Mn ions of different concentrations (0.1 and 0.5%) did not have any features.