

Photoinduced effects in l-alanine crystals

Abstract

An influence of the cw laser treatment at 660. nm (red), 532. nm (green) and 405. nm (blue) wavelengths on the absorption in l-alanine crystals was studied. We have established that increasing time of illumination for red laser wavelength leads to slight changes of absorption backgrounds without changes in the spectral features. The drastic changes are observed after illumination by green laser leading to occurrence of two clear and several less clear bands correlating well with increasing illumination time. Their intensities are only slightly dependent on time of optical treatment. The remaining part of the spectra demonstrates substantially less changes. Increasing optical SHG show clear correlation with the behavior of the red laser induced absorption. The effect demonstrates slow time decay.