

This work is devoted to the study of the ferromagnetic semiconductor GaMnAs by magneto-optical methods, namely we used the magnetic linear dichroism method (MLD). First, we found a suitable method for the measurement of the magneto-optical coefficient, which describes MLD. Then we used MLD method to study the hysteresis loops in the sample with almost cubic magnetic anisotropy and in the sample with both cubic and uniaxial anisotropy – we measured the polarisation, temperature and intensity dependence of the hysteresis loops and we derived a formula for the polarisation dependence of the amplitude of the hysteresis loops. Using timeresolved MLD method we investigated the ultrafast demagnetization process in the sample on various time-scales after the laser-pulse excitation. We observed that the demagnetisation dynamics depends on the pump fluence and the temperature.