

# Experimental and theoretical studies of NLO properties of organic–inorganic materials base on *p*-nitroaniline

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## Description

Third order nonlinear optical properties of a serie of chromophores were investigated using nonlinear transmission (NLT), degenerate four waves mixing (DFWM) and third harmonic generation (THG) experiments. The investigations are completed by theoretical studies performed using quantum chemical semi empirical calculations. Theoretical calculation of UV–VIS spectra and second order molecular hyperpolarisability for organic–inorganic hybrid materials base on *p*-nitroalinine was presented. Third order nonlinear optical susceptibility of the studied compounds was evaluated using third harmonic generation (THG) set up at 1064 nm. The measurements were performed on thin films, deposited on a thick glass substrate.