Abstract

This bachelor thesis is focused on the preparation of novel materials for nonlinear optics and includes studies of twenty-eight crystallization systems, which provide twelve crystalline compounds - salts of 2-aminopyrimidine and 2,4,6-triaminopyrimidine with inorganic oxo-acids (nitric, perchloric, sulfuric, phosphoric, phosphorous). Studied materials have been identified and defined by a vibrational spectroscopy and X-ray structure analysis. From the prepared materials only aminopyrimidinium (1+) hydrogen phospite fulfils the symmetry conditions for the second harmonic generation. Efficiency of the second harmonic generation was afterwards defined for the powdered sample relatively to the KDP and urea standards.