

## 9. Abstract

This diploma thesis deals with searching of structurally new non-fluorescent quenchers of fluorescence, which may be used for preparation of molecular probes.

These potential quenchers are derived from asymmetrically substituted alkylaminoderivatives of tetrapyrazinoporphyrazines – azaphthalocyanines. As the component of this work 5,6-disubstituted-2,3-pyrazinedicarbonitriles were prepared as the precursors of final intended compounds. They were subsequently used as a starting material for the preparation of the final substances, bearing different functional moieties. The syntheses were performed by known reaction methodologies. Products were characterized by melting point, IR, UV-vis, NMR and MS spectra.

In total nine intermediates (five of them already previously described) and three final tetrapyrazinoporphyrazines (two metal-free and one with central atom of copper) were prepared. Together six compounds previously not yet described in available scientific literature were prepared. Synthesis of one substance, concretely of one azaphthalocyanine, was not successful.