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**Title:**

Synthesis of the 3rd generation of photosensitizers based on azaphthalocyanine core.

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**Abstract:**

Photodynamic therapy (PDT) is a new significant treatment modality for several diseases, most notably cancer. Light, oxygen and photosensitizing drug (PS) are combined to produce a selective therapeutic effect. An important breakthrough in PDT is searching for a new PS, modification of their photophysical and optical properties.

In this my diploma thesis I synthesized butyl 2,3-dicyanoquinoxaline-6-karboxylate acid by esterification of carboxyl group through its chloride. I used this butylester to synthesize the symmetric and asymmetric AzaPc. The synthesis of the asymmetric AzaPc with one carboxy group in the structure was not possible, because the separation of A<sub>3</sub>B congener was strongly adsorbed on silica. Esterification of the carboxy group did not lead to better results.

Further, I synthesized symmetric AzaPc with butyloxycarbonyl group on the periphery of makrocycle. I prepared zinc (II) dye from its metal-free derivative which was prepared from magnesium (II) analog.