

## Author's Accepted Manuscript

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PII: S0022-2313(15)00239-2  
DOI: <http://dx.doi.org/10.1016/j.jlumin.2015.04.041>  
Reference: LUMIN13323

To appear in: *Journal of Luminescence*

Received date: 9 December 2014  
Revised date: 23 April 2015  
Accepted date: 27 April 2015

Cite this article as: Natalya Sh. Lebedeva, Yury A. Gubarev, Anatoly I. Vyugin and Oscar I. Koifman, INVESTIGATION OF INTERACTION BETWEEN ALKOXY SUBSTITUTED PHTHALOCYANINES WITH DIFFERENT LENGTH OF ALKYL RESIDUE AND BOVINE SERUM ALBUMIN, *Journal of Luminescence*, <http://dx.doi.org/10.1016/j.jlumin.2015.04.041>

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# INVESTIGATION OF INTERACTION BETWEEN ALKOXY SUBSTITUTED PHTHALOCYANINES WITH DIFFERENT LENGTH OF ALKYL RESIDUE AND BOVINE SERUM ALBUMIN

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## Abstract

Interaction between bovine serum albumin and four alkoxy substituted phthalocyanines of different chains lengths was studied by means of electron absorption spectroscopy, fluorescence spectroscopy and viscosimetry. The binding constants and binding distance were calculated. It was found that  $\text{ZnPc}(4\text{-NH-CO-C}_6\text{H}_4\text{-O-Dec})_4$  prevents twisting of BSA molecule and localize between subdomains IB and IIA in protein globule.  $\text{ZnPc}(4\text{-NH-CO-C}_6\text{H}_4\text{-O-Hex})_4$  and  $\text{ZnPc}(4\text{-NH-CO-C}_6\text{H}_4\text{-O-Oct})_4$  are located on the outer surface of the protein globule. In the case of  $\text{ZnPc}(4\text{-NH-CO-C}_6\text{H}_4\text{-O-Prop})_4$  it can be assumed that the phthalocyanine molecule is in the immediate vicinity of the subdomains IB and IIA.

## Keywords

fluorescence spectroscopy, quenching constant, substituted phthalocyanines, bovine serum albumin, viscosimetry

## Introduction

Investigation of protein complexes with macroheterocyclic compounds is of great interest from both the scientific and practical point of view. Macroheterocyclic compounds have a number of

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