22nd International Symposium on Biophysics

PROGRAMME

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BOOK OF ABSTRACTS

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SPECTROFLUORIMETRIC ANALYSIS OF SYNTHETIC AND ISOLATED LIGNINS FROM OMORIKA (*Picea omorika* (PANČ) *purkinye*)

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Lignin is one of the main constitutive polymers of the plant cell wall that protects plant cell from different kinds of stress (chemical, biological, physical). Lignin precursors, the phenolic alcohols, belong to the group of phenylpropanoid compounds. Fluorescence spectroscopy is a sensitive tool for structural and kinetic studies of macromolecules. On the other side, fluorescence is an intrinsic property of lignin. We studied fluorescence spectra of lignin isolated from the needles of coniferous tree omorika (*Picea omorika* Panč *Purkinye*). We compared these data with the spectra obtained with a synthetic lignin-like polymer. Matematical analysis as well as comparison of the excitation and emission spectra of isolated lignin and lignin model-compound is utilized to understand of the real nature of the fluorophores. The obtained results show that fluorescence emission spectra of lignin and lignin model-compounds originate from the distinct fluorophores.