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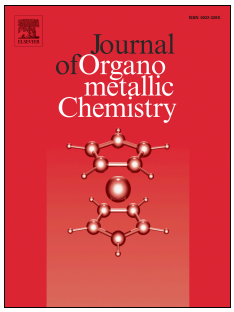

Two-photon absorption properties of four new pentacoordinated diorganotin complexes derived from Schiff bases with fluorene

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Two-photon absorption properties of four new pentacoordinated diorganotin complexes derived from Schiff bases with fluorene.

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ABSTRACT

In this paper we report the synthesis and characterization of four novel pentacoordinated diorganotin complexes, obtained through a methodology that involves a multicomponent reaction of 4-([9H-fluorene-2-yl]ethynyl)-2-hydroxybenzaldehyde, 2-amino-5-nitrophenol and diphenyl or dibutyl-tin oxides. Diorganotin complexes **8-11** were obtained in high yields (70-80%) and were fully characterized by solution NMR (^{1}H, ^{13}C and ^{119}Sn), high resolution mass spectrometry (ESI-TOF) and ATR-FTIR. The optical properties were investigated by UV/Vis spectroscopy and Two-Photon Excitation Fluorescence (TPEF). The One-Photon Absorption (OPA) spectra shows two bands located around 400 and 500 nm, additionally, in the Two-Photon Absorption (TPA) spectra there is one main band located around 750 nm characterized by maximum values of TPA cross section (σ_{TPA}) in