Design of New Fluorescent Sensors based on Poly(oximinoalkyl)amines

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Fluorescent sensors are important tool in modern chemistry, especially as express-method for monitoring of environmental pollution and distribution of microelements in living cells and organs using fluorescent microscopy. As sensors for zinc cations the most promising are PET (Phtoinduced Electron Transfer) sensors that have dipicolylamine fragment as receptor and fluorophore which are connected by spacer. This research is devoted to the design of PET sensors based on poly(oximinoalkyl)amine fragment 3 as a receptor. There were synthesized and characterized 7 bis- and tris(oximinoalkyl)amines, containing anthracenyl, naphthyl, pyrenyl or 1,2,3-triazolyl fluorophore. For bis(oximinoalkyl)amine with pyrenyl fluorophore it has been checked the change of fluorescence with transition metal cations in solutions with different concentrations.