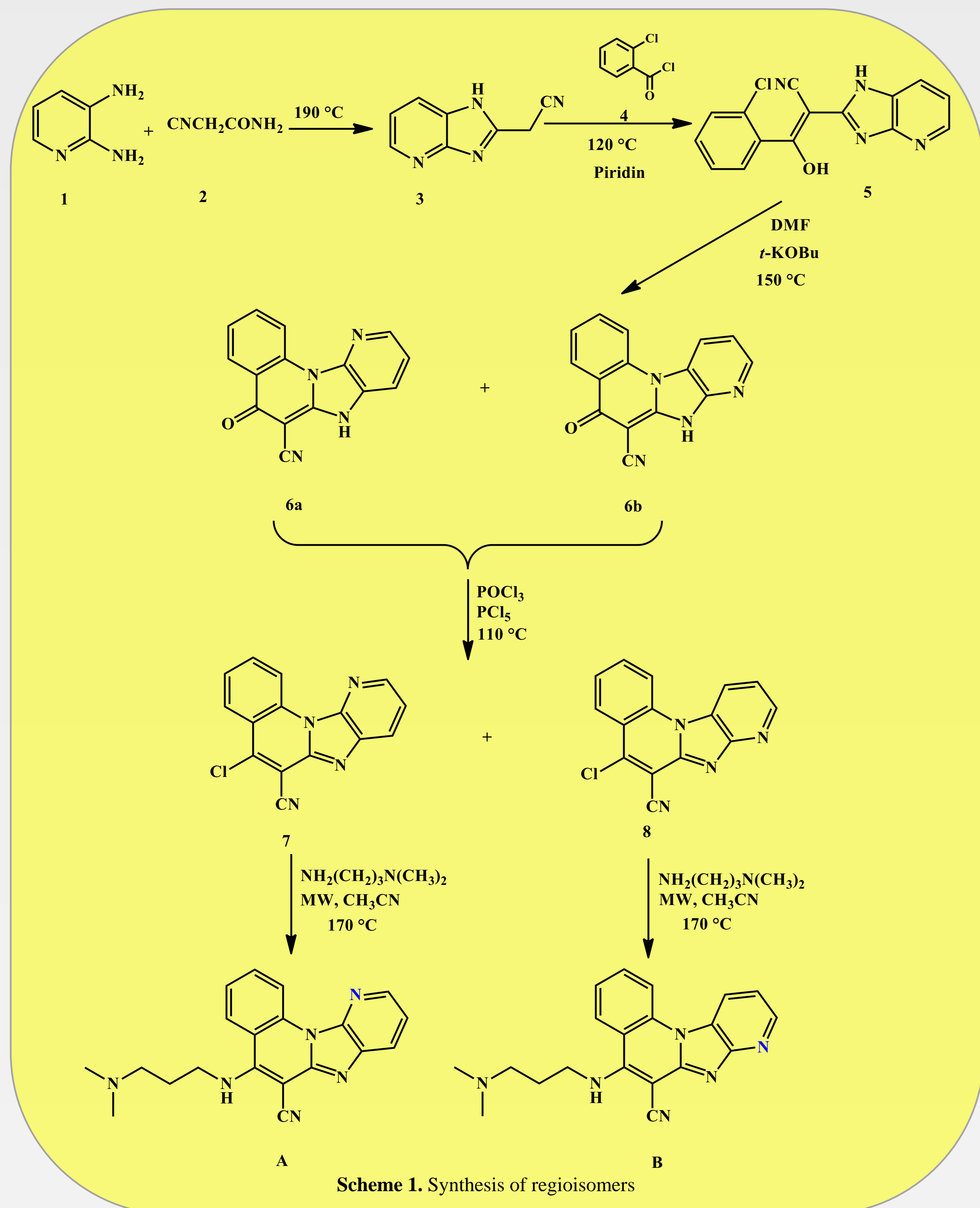


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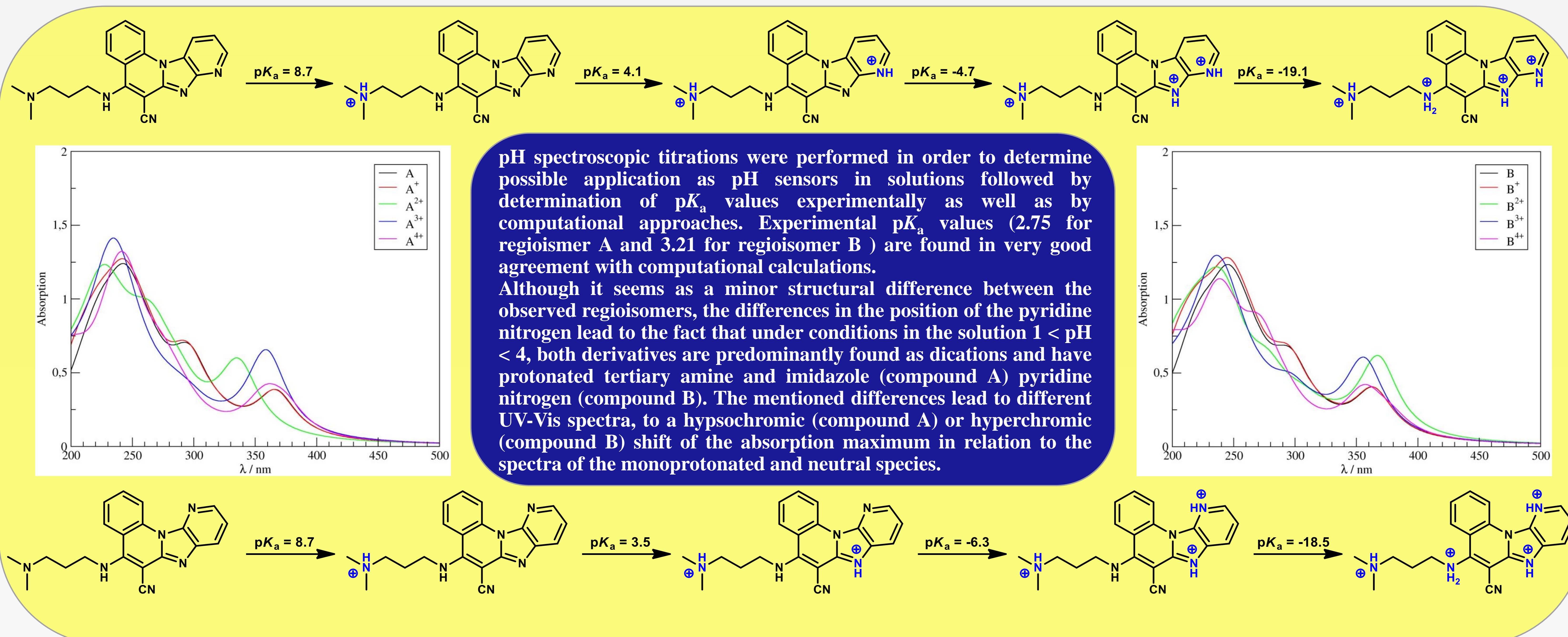
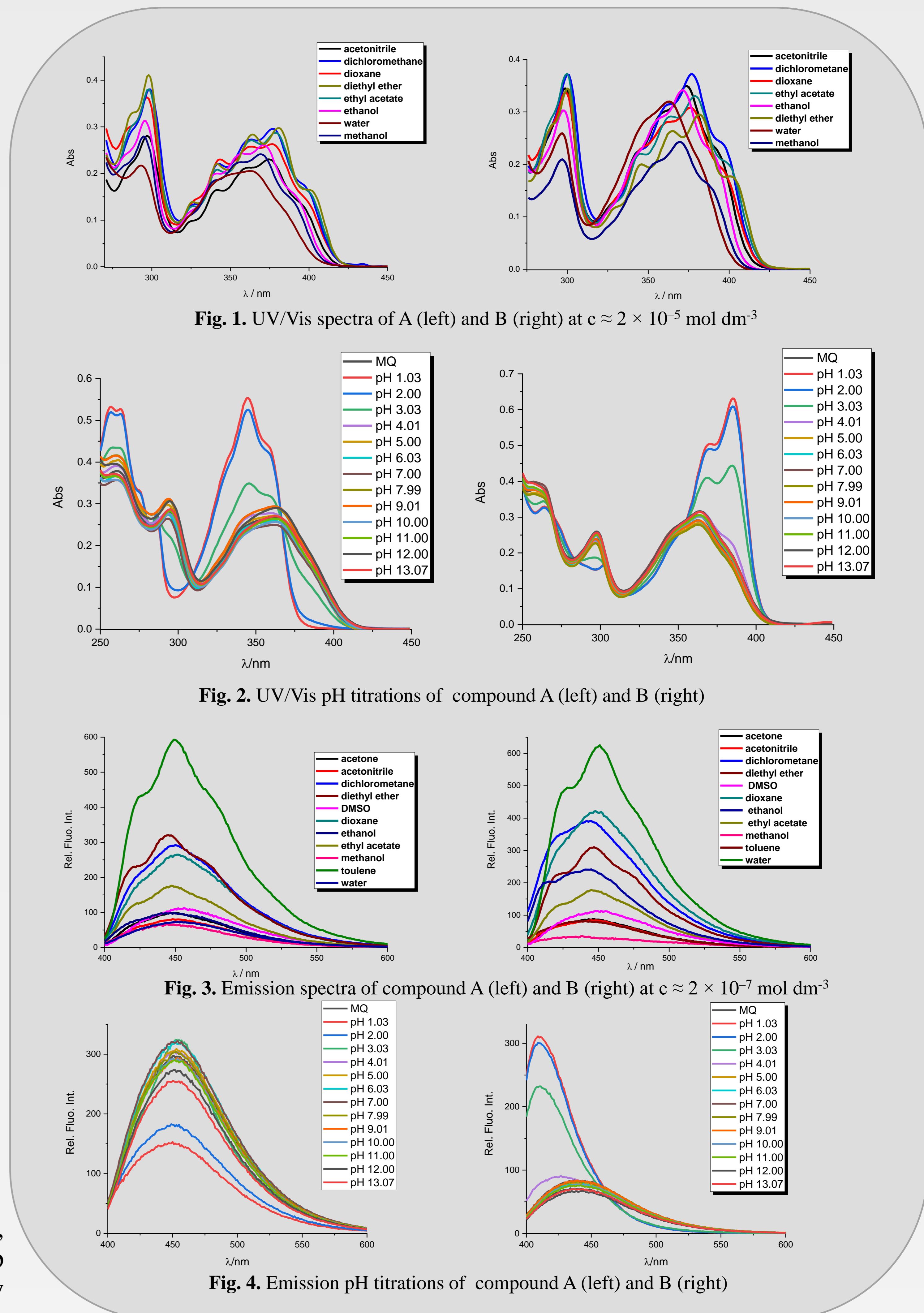
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Nitrogen-containing heterocycles are, besides their well-known biological features, recognized as an interesting class of organic fluorescent sensors present in a wide range of biological, environmental and chemical processes. Owing to their excellent spectroscopic properties, as well as pronounced and diverse spectral responses, such derivatives offer promising applications in optoelectronics as optical lasers, fluorescence probes, organic luminophores or fluorescent dyes.[1]



Due to condensation of 2-cyanomethylimidazo[4,5-*b*]pyridine with 2-chlorobenzoyl chloride, acyclic precursor was prepared. Chloro-substituted tetracyclic precursors were prepared in 2 step procedure including termic cyclization. Amino substituted regioisomers were prepared by uncatalyzed microwave assisted amination.[2] Structures of newly prepared compounds were confirmed by means of <sup>1</sup>H i <sup>13</sup>C NMR, as well as MS spectrometry. Structure of regioisomers was determined by 2D NMR spectroscopy.



[1] Perin N., Babić D., Kassal P., Čikoš A., Hranjec M., Vianello R., *Spectroscopic and Computational Study of the Protonation Equilibria of Amino-Substituted benzo[*b*]thieno[2,3-*b*]pyrido[1,2-*a*]benzimidazoles as Novel pH-Sensing Materials*, *Chemosensors* **2022**, *10*, 21.

[2] Lončar B., Perin N., Mioč M., Boček I., Grgić L., Kralj M., Tomić S., Radić Stojković M. Hranjec M., *Novel amino substituted tetracyclic imidazo[4,5-*b*]pyridine derivatives: Design, synthesis, antiproliferative activity and DNA/RNA binding study*, *European Journal of Medicinal Chemistry* **2021**, *217*, 113342.