Impact of the keto—enol tautomeric equilibrium on the BODIPY chromophore.

Autorzy

Volker Leen

Marina Laine

Joseph Molisho Ngongo

Paweł Lipkowski

Bram Verbelen

Andrzej Kochel

Wim Dehaen

Mark Van der Auweraer

Viktor Nadtochenko

Aleksander Filarowski

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Streszczenie

An intramolecular tautomeric fluorescent BODIPY sensor has been designed and synthesized. The obtained BODIPY dye is a combination of the 4-bora-*3a*,*4a*-diaza-*s*-indacene core and a diketone fragment. The study of conformational equilibria in the ground and excited states has been completed for a broad range of solvent polarity by steady state and NMR methods as well as by DFT and TD-DFT calculations. The interpretation of the unique emission observed in hydrogen bond accepting solvents upon the excitation of the fluorescent dye in the S_0–S_2 transition has been accomplished. The Jablonski diagram has been analyzed for the observed processes in the BODIPY dye studied on the basis of DFT and TD-DFT calculations.

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