

## Photophysical Properties and TD-DFT Calculations studies of BODIPY dyes conjugated with 4-benzyloxybenzaldehyde

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Photosensitization is nowadays considered as one of the most important photoreactions used for multipurposes such as photodynamic therapy, antimicrobial photodynamic therapy, solar cells dye energy transfer, water and air cleaning, organic pollutants photodegradation [1-2], etc. This photoreaction consists of an energy transfer between a high triplet energy chromophore and a lower triplet energy molecule.

Photosensitizers such as porphyrins, phthalocyanins, naphthalocyanins, chlorins, bacteriochlorins, texaphyrins[3] are among the most used dyes for photodynamic therapy investigations. It has been reported that titanium oxide, zinc oxide, and modified structure of BODIPY dyes [4] were also able to photogenerate singlet oxygen.

The photophysical properties of new BODIPY dyes functionalized with *p*-benzyloxybenzaldehyde in different solvents, and the TD-DFT calculations were investigated for photodynamic therapy applications.

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