

TUNING pKa IN NEW MOLECULES BASED ON INDOLINES FOR TWO-PHOTON ABSORPTION BIOIMAGING APPLICATIONS

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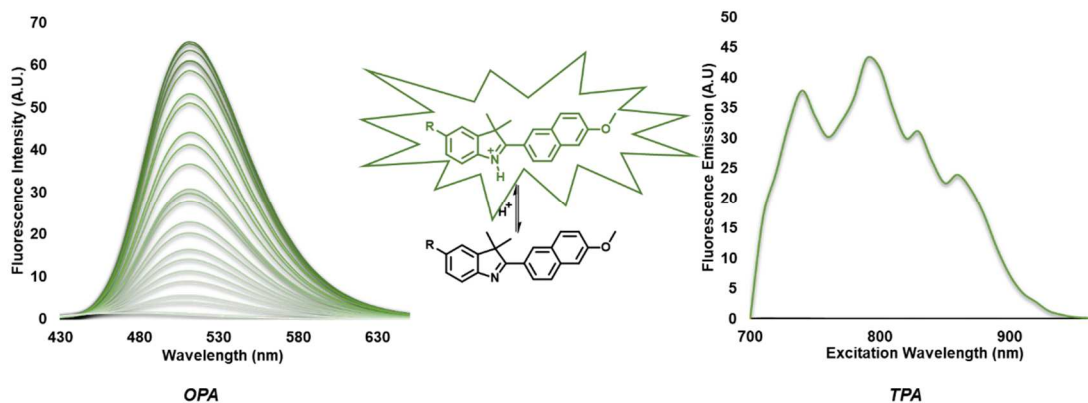
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Fluorescence-based biosensors have become essential tools for modern biology, allowing real-time monitoring of biological processes within living cells. The differences between pH play a significant role in multiple biological process such as proliferation, apoptosis, endocytic process and defense.^[1] Therefore, intracellular fluorescent pH probes comprise one of the most widely used families of biosensors in microscopy.^[2]

In this work, we present the design, synthesis and characterization of new one and two photon pH activatable fluorescent probes based on naphthalene-indoline derivatives with an off-on response to different pH environments. These compounds are easy to achieve with good yields and have good photophysical properties.^[3] Simple modifications in the structure of these compounds allow tuning their pKa easily and cover a width range of pH in their applications.

The preliminary results obtained with these fluorescent probes indicate that they have promising properties to be use in bioimaging applications in living cells.



References

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