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## Synthesis of fluorescent supramolecular complexes containing pillar[5]arenes and benzothiadiazoles

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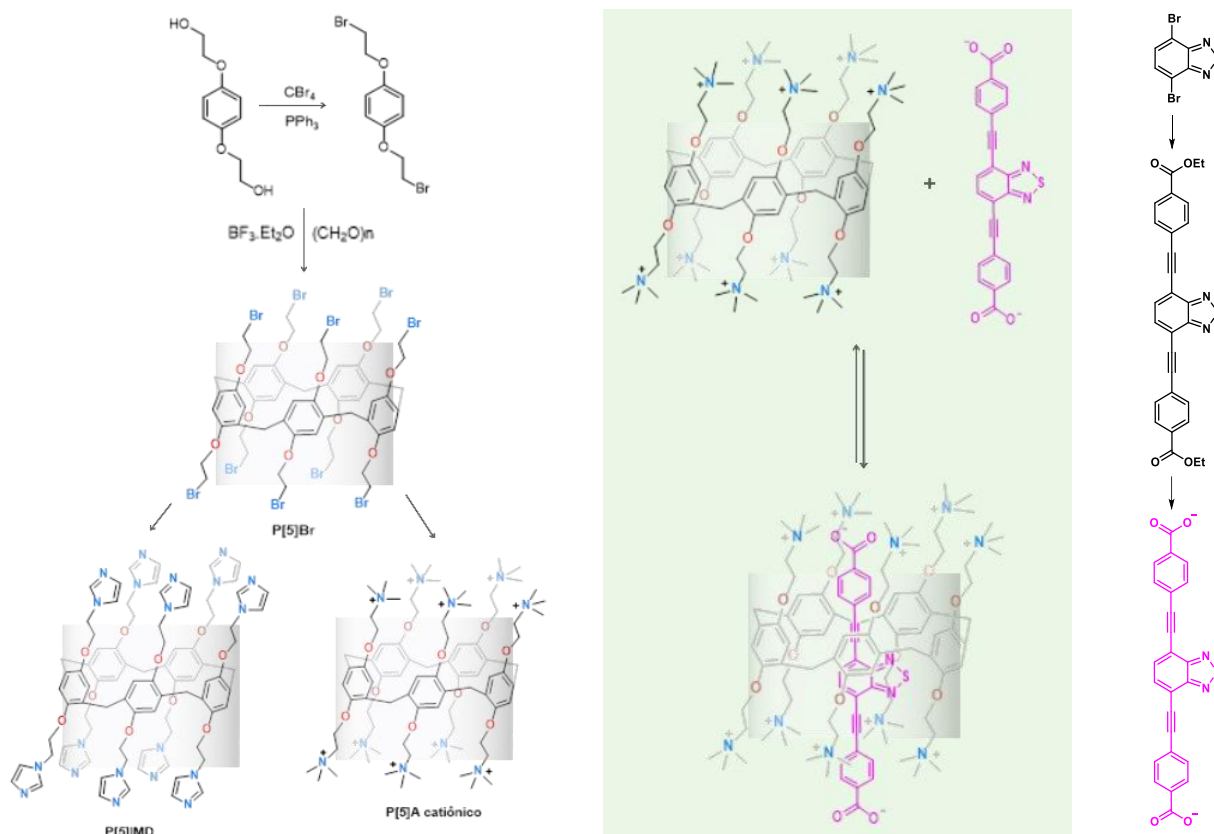
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### ABSTRACT

Pillararenes are a class of hosts widely used in the formation of host-guest complexes due to their versatile functionalization.<sup>1</sup> Additionally, the benzothiadiazole (BTD) core possesses characteristics that make it an excellent luminescent material, with its derivatives typically being efficient fluorophores capable of being excited by visible light and exhibiting large Stokes shifts.<sup>2</sup> The introduction of organic fluorescent molecules into macrocycles through non-covalent interactions can change the photophysical properties of fluorophores.<sup>3</sup> In this context, our work explored a synthetic route for the preparation of supramolecular complexes containing pillar[5]arenes and benzothiadiazoles. The characterization of BTD derivatives and verification of the formation of supramolecular systems were performed using <sup>1</sup>H NMR, UV-Vis absorption spectrophotometry, and fluorescence emission spectroscopy. Tests are ongoing to verify if the formed complex can act as a natural fluorescence sensor for DNA.



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