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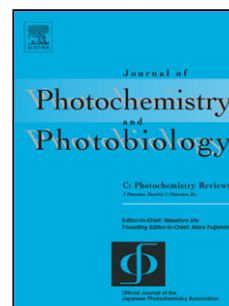
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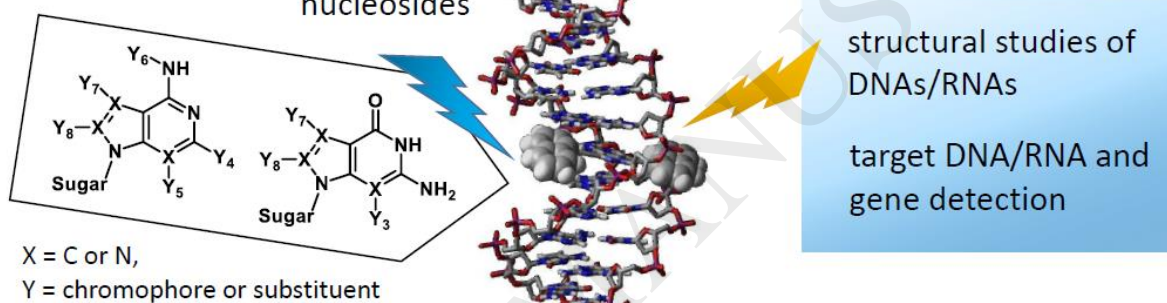
Base-modified fluorescent purine nucleosides and nucleotides for use in oligonucleotide probes

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Graphical abstract

Base-modified fluorescent purine nucleosides



Highlights

- Comprehensive survey of purine-based for ‘intelligent’ fluorescent probes that report on environmental parameters
- Classification of structural type of modification and design considerations highlighted
- Correlation of photophysical mechanism and fluorescence responsiveness to the environment
- Highlight of future opportunities for development of intelligent probes

Abstract

Recent years has witnessed increasing development and exploitation of fluorescence techniques which has been spurred by the discovery, design and synthesis of novel fluorescent molecules. In the realm of nucleic acids, both modest and dramatic structural modification of the nucleobase may engender it with fluorescence. This review focusses on the design, synthesis and applications of purine nucleoside analogs possessing fluorescently modified nucleobases, particularly for detection of nucleic

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