

Fluorescent Boronic acid-Based Saccharide Sensors

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The identification and localization of glycosylation in biological systems has been a very complex and expensive process often requiring the use of radioactive labeling and complex mass spectrometric and NMR techniques. Thus, the fluorescent detection of specific saccharides is of great value. A facile method for the identification of effective photo-induced electron transfer (PET) quenching saccharide-sensing fluorophores is demonstrated and two novel fluorophores are presented for use as saccharide sensors. These fluorophores are shown to function well under physiological conditions and are shown to recognize both biological saccharides and glycosylated proteins. These novel sensors provide an important stepping stone on the path to effective fluorescence-based oligosaccharide detection.

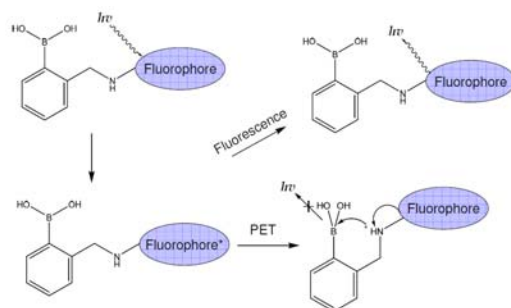


Photo-induced electron transfer (PET) quenching