

SELECTIVE BINDING OF FLUORIDE BY A NAPHTHYLENE-BASED DIPODAL UREA RECEPTOR FOR ANIONS

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Abstract: Over accumulation of anions in the environment contribute to a plethora of detrimental conditions such as acid rain and bone decay. Effective detection methods for anions are crucial to the maintaining plant and mammal health. A 2-Nitrophenyl-based naphthylene receptor (**L**) has been synthesized through the reaction of 1,5-diaminonaphthylene and 2-nitrophenyl isocyanate in dichloromethane. Naked-eye colorimetric studies with this receptor revealed color response only upon addition of F⁻. UV-Vis titration studies of **L** also exhibited significant change for fluoride exclusively over other anions. Further studies with **L** include ¹H NMR titrations with common anions.

Keywords: Anion binding, urea, dipodal receptor, naphthylene, NMR, UV-Vis, Colorimetric

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