**MOLECULAR CLEFTS DERIVED FROM KAGAN’S ETHER. SYNTHESIS AND SOLID STATE INCLUSION COMPLEXES OF A CHIRAL MOLECULAR TWEEZER**

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**SAMPLE ABSTRACT**

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*Names and Places*: Times New Roman, 12 pt, italics, align left

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Kagan’s ether (**1**) represents one of a family of related polycyclic structures which include such well-known entities as Tröger’s base.[[1]](#footnote-1) We recognized the potential of Kagan’s ether and its congeners as constituents of a new class of chiral molecular tweezers which we anticipated would show characteristics unique among the extant representatives of molecular tweezers. Work in our group has focused on the synthesis, solid-state binding, chromatographic behavior and bioorganic applications of such molecular tweezers.[[2]](#footnote-2)

This poster will center on a discussion of the synthesis of molecular tweezer **2** and complexes it forms with pi-acidic compounds in the solid state. It will be seen that **2** forms inclusion complexes with several different pi acids and that thesesignificance of pi-stacking interactions and edge-face interactions in directing complex formation.

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Chromatographic studies of molecular tweezers on a pi-acidic chiral stationary phase have allowed us to assess the thermodynamic variables associated with substrate binding. The efficiency of resolution based on the transient formation of diastereomeric inclusion complexes will be seen to be a function of surface area of the pi-bases in the molecular tweezer. In combination with crystallographic data involving achiral substrates, a model for chiral recognition has been formulated.

1. 1. Harmata, M.; Smith, A.; Marx, K. Stuff we have done. *Org. Lett.* **1999**, *1*, 101-102. (b)…

   2. Else, S.; Too, K. [↑](#footnote-ref-1)
2. [↑](#footnote-ref-2)