

List of Tables

Table II-1. Yields for the synthesis of II-46 under different reaction conditions.	43
Table V-1. Comparison of thermodynamic data and binding constants for bibracchial lariat ethers in Figure V-3 .	101
Table V-2. Dependence of Weber's "probability of binding" upon experimental conditions. Black entries are suitable p values. ^a In this example $[R]_o$ and $[S]_o$ are always equal.	121
Table V-3. Suitable concentrations (M) for $[S]_o$ and $[R]_o$ for given values of K_a .	122
Table V-4. Results from the graphical methods used to determine the 1:1 association constants for the complex between BMP32C10 the dibenzyl ammonium salt the dibenzyl ammonium salt V-9•PF₆ using the H _c proton of BMP32C10 in acetonitrile-d ₃ .	139
Table V-5. Data for determination of K_a from Creswell-Allred graphical method for complex of BMP32C10 (R) and V-9•PF₆ (S) in acetonitrile-d ₃ . (p = Δ/Δ_o)	141
Table V-6. ΔH and ΔS obtained from van't Hoff plots for different graphical methods for BMP32C10:V-9•PF₆ in acetonitrile-d ₃ .	142
Table V-7. Comparison of crystal parameters (Å).	146
Table V-8. Data for determination of K_a from Creswell-Allred graphical method for complex of BMP32C10 (R) and V-14•2(PF₆) (S) in acetone-d ₆ . (p = Δ/Δ_o), $[R]_o$ (mM) 10.0, δ_R (ppm) = 6.473, Temp(°C) = 23.0.	150
Table V-9. Results from the graphical methods used to determine the 1:1 association constants for BMP32C10:V-14•2(PF₆) using the H _a proton of BMP32C10 in acetone-d ₆ (Temp = 23.0 °C).	150
Table V-10. Association constants (M^{-1}) for DB24C8:V-8•PF₆ and DB24C8:V-9•PF₆ in various solvents.	157
Table V-11. Results from the graphical methods used to determine the 1:1 association constants for DB24C8:V-10•PF₆ using the H _a proton of DB24C8 in acetone-d ₆ (Temp = 23.0 °C).	160
Table V-12. Results from the graphical methods used to determine the 1:1 association constants for 30C10:V-9•PF₆ using the proton signal of 30C10 in acetone-d ₆ (Temp = 23.0 °C). ^a Average for Benesi-Hildebrand and Creswell-Allred methods only.	174
Table V-13. Data for determination of K_a from Creswell-Allred graphical method for complex of 30C10 (R) and V-9•PF₆ (S) in acetone-d ₆ . (p = Δ/Δ_o), $[R]_o$ 10.0 mM, δ_R = 6.473 ppm, Temp(°C) = 23.0.	174
Table V-14. Summary of complexation in solution. T = 23.0 °C (25.0 °C for BMP32C10 + V-9), nc = no complex, nm = not measured. Counterions = PF ₆ .	182
Table V-15. Volumetric amounts titrated and resulting concentrations of BMP32C10 for Mole the Ratio experiment for BMP32C10 + V-9•PF₆ . $[V-9•PF_6] = 10$ mM.	185

Table V-16. Volumetric amounts titrated and resulting concentrations of V-14•PF₆ for the Mole Ratio experiment for BMP32C10 + V-14•PF₆ . [BMP32C10] = 10 mM.	187
Table V-17. Volumetric amounts titrated and resulting concentrations of V-10•PF₆ for the Mole Ratio experiment for DB24C8 + V-10•PF₆ . [DB24C8] = 10 mM.	188
Table V-18. Volumetric amounts titrated and resulting concentrations of V-9•PF₆ for the Mole Ratio experiment for 30C10 + V-9•PF₆ . [30C10] = 10 mM.	190
Table V-19. Volumetric amounts titrated and resulting concentrations of 32-Cryptand for the Mole Ratio experiment for 32-CRYPTAND + V-9•PF₆ . [V-9•PF₆] = 10 mM.	191
Table V-20. X-Ray crystallographic data.	193