

## **pH-driven variation of the outer-sphere binding mode of cis-[Co(Ad)(en)<sub>2</sub>Cl]Cl (en-ethylenediamine, ad-adeninate) with p-sulfonatothiacalix[4]arene**

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### **Abstract**

The non-symmetrical cobalt (III) complex cis-[Co(Ad)(en)<sub>2</sub>Cl]Cl (1Cl), possessing two flexible ethylenediamine chelate rings (en) and monodentate N(9)-bound adeninate (Ad-) was chosen as the guest of p-sulfonatothiacalix[4]arene (STCA) to study the inclusion complex formation at wide range of pH 2-10. It was shown by <sup>1</sup>H, NOE NMR methods and pH-metric procedure, that pH-driven variation of the inclusion mode of 1 + into calixarene cavity is the result of the protonation of 1 + via adeninate moiety. © 2006 Springer Science+Business Media, Inc.

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### **Keywords**

Co (III) bis-ethylenediamine-adeninate, Inclusion complex, NMR <sup>1</sup>H spectroscopy, Outer-sphere coordination, p-Sulfonatothiacalix[4]arene