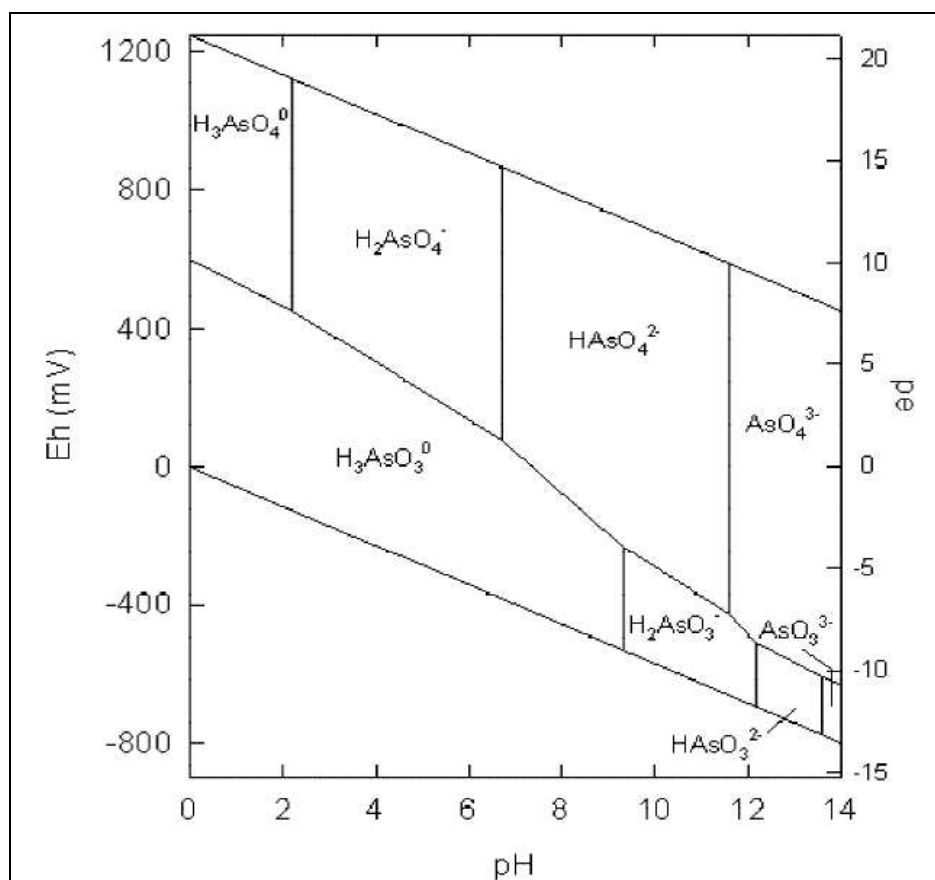


**Characterization of Surface Bound Zr(IV) and its Application to  
Removal of As(V) and As(III) from Aqueous Systems using Phosphonic  
Acid Modified Nano-porous Silica Polyamine Composites**

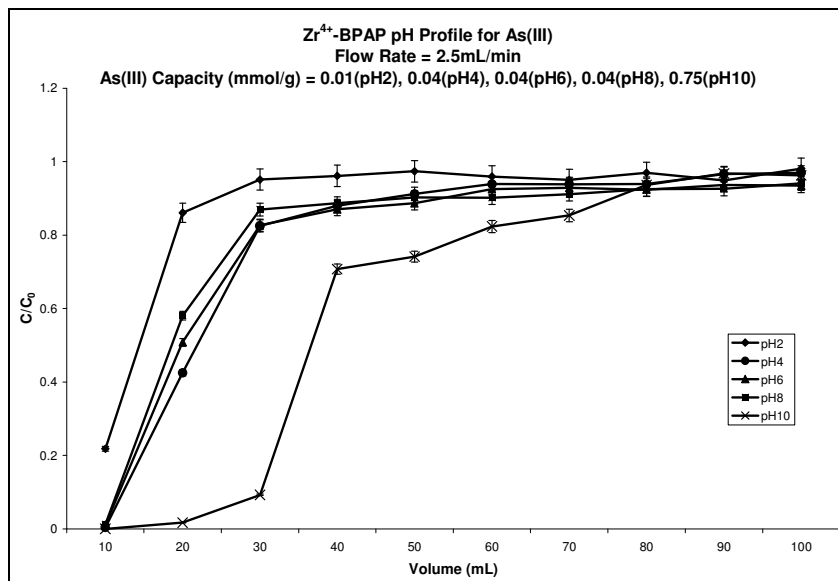
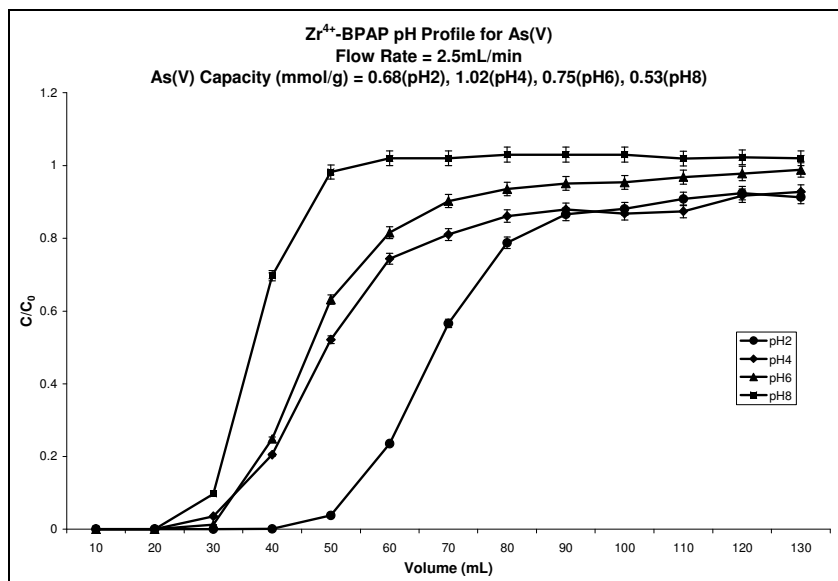
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**Figure S1. Pourbaix Diagram for Arsenic Speciation**



**Figure S2. Breakthrough Curves for Arsenate (top) and Arsenite (bottom) Sorption on ZrBPAP at various pH Values:** Breakthrough curves were run at pH = 2–8 for arsenate and at pH = 2–10 for arsenite capture with **ZrBPAP**. Both were run in 5mL columns at the flow rates indicated in the respective figures.



**Figure S3** Schematic Diagram of Apparatus Used for Longevity Testing of **ZrBPAP**

