

## **Adsorption Competition between $H^+$ and $Cd^{2+}$ Ions Toward Active Sites on Ionic Imprinted Mercapto-Silica Hybrid**

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### **ABSTRACT**

Adsorption process on  $Cd^{2+}$  ionic imprinted mercapto-silica hybrid material (Cd(II)-IIP HMS) has been carried out with studying an adsorption competition between ion  $H^+$  and  $Cd^{2+}$  ion upon active sites of Cd(II)-IIP HMS material. Characterization of surface material was based on specific surface area, total volume, and porous diameter. Cd(II)-IIP HMS material with template ionic concentration of each 0.107; 0.214; 0.429; 0.658 mmol  $g^{-1}$  shows that adsorption model is relatively similar, the higher of  $H^+$  ion competed, the lower of adsorption capacity of Cd(II)-IIP HMS material upon  $Cd^{2+}$  ion.

**Keywords:** adsorption, active site, mercapto-silica hybrid, ionic imprinted