



Polymer Hydrogel for Heavy Metal Removal Application

Seriously Problem:

Many heavy metals, including copper, lead and cadmium have contaminated surface and groundwater resources.



Image credited: www.google.com

What's Happen?

Heavy metals are persistent environmental contaminants

Heavy metals are toxic for all living organisms

Effect on human health through food chain contamination

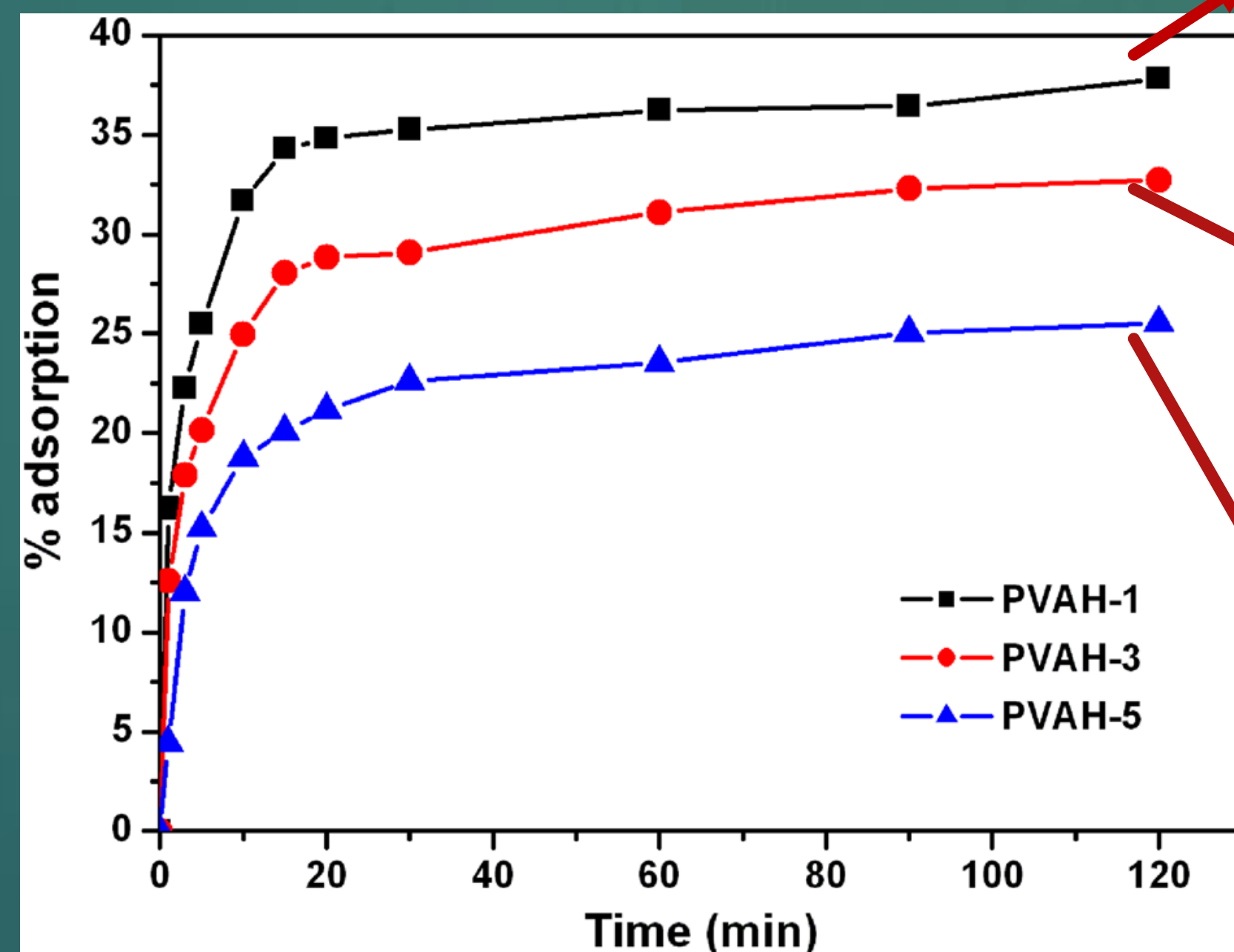
Our Research:

To develop new absorbents for heavy metal removal from wastewater

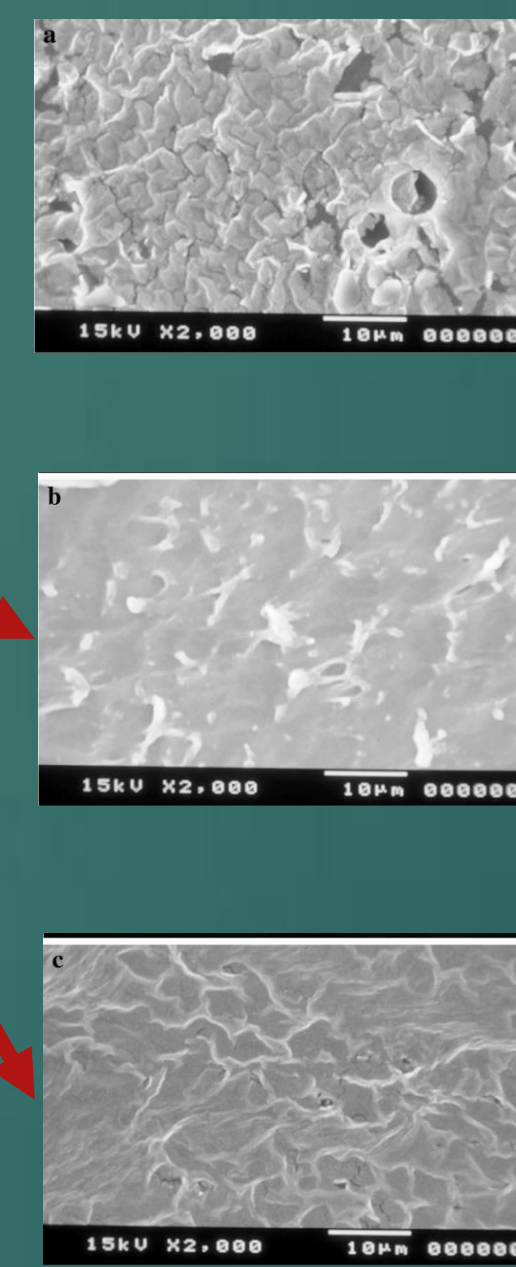
What We Done?



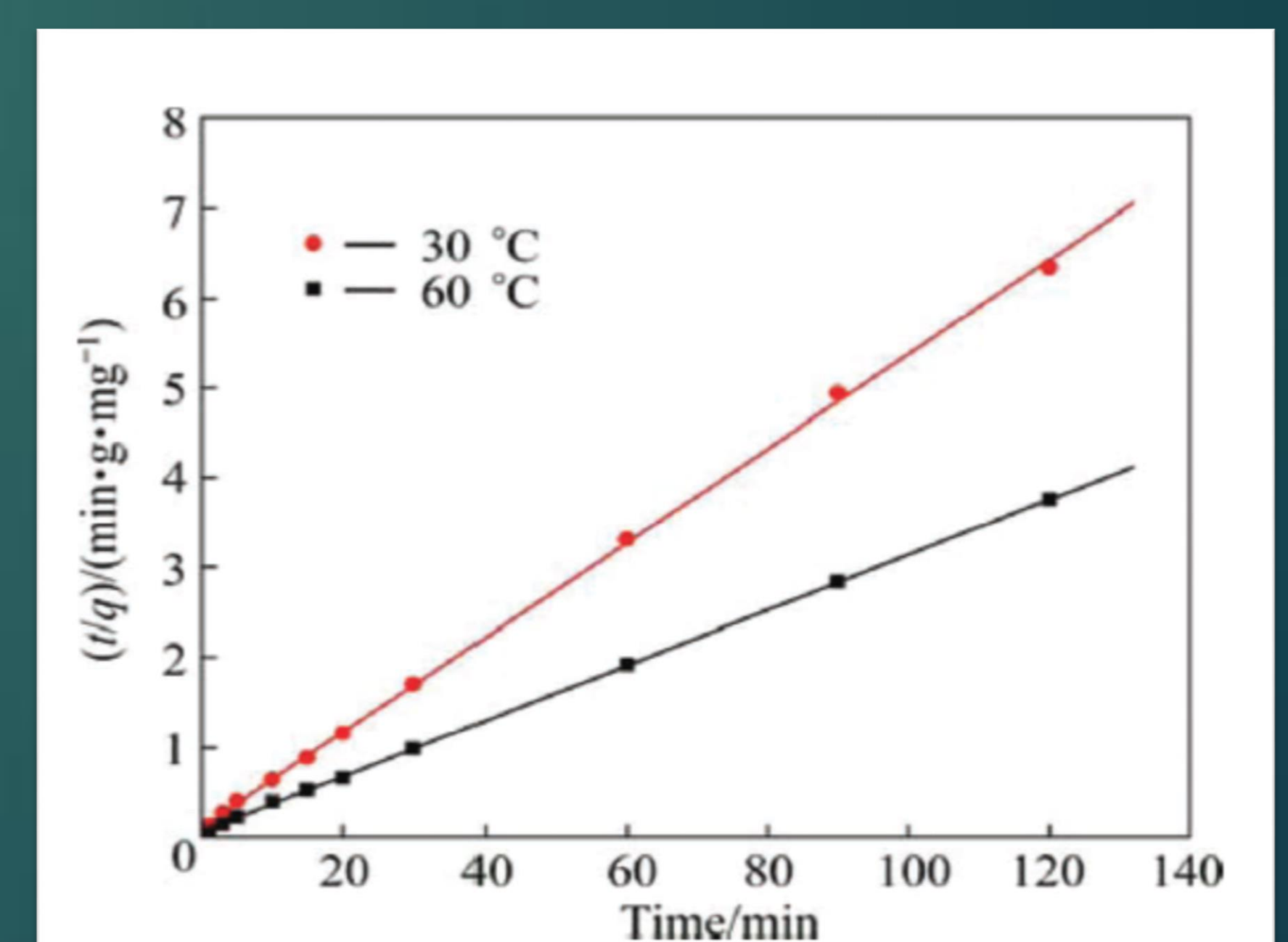
Poly(vinyl alcohol)/chitosan hydrogel, swollen and dry states, was used in this study



Adsorption of copper(II) ion as a function of contact time
Jamnongkan et al., *Polym. Bull.* (2014) **71**: 1081-1100



Thai Petty Patent



Pseudo-second-order kinetic plots for adsorption of copper(II) ion

Jamnongkan et al., *Trans. Nonferrous Met. Soc. China.* (2014) **24**: 3386-3393

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