

The adsorptive removal of Pb(II) and Cr(VI) ions from aqueous solution by graphene oxide

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Graphene oxide (GO) is the aim in this investigation to test its adsorptive properties toward chromium and lead ions. The GO synthesis was done using the Hummers process of chemical oxidation, which converts graphite particles into oxide-rich ones. FTIR and UV-Vis spectroscopy were used to analyze the produced GO adsorbent.

This material was utilized to adsorb Cr(VI) and Pb(II) ions. The concentration of these ions after the adsorption was determined using Atomic Absorption Spectrometry (AAS). To study the best adsorption location, adsorption type, and adsorption energy of GO toward Pb(II) and Cr(VI) ions, the DFT and Monte Carlo calculations were used.

Finally, to determine noncovalent interactions, adsorption sites that are the most stable were selected.

References

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Figures

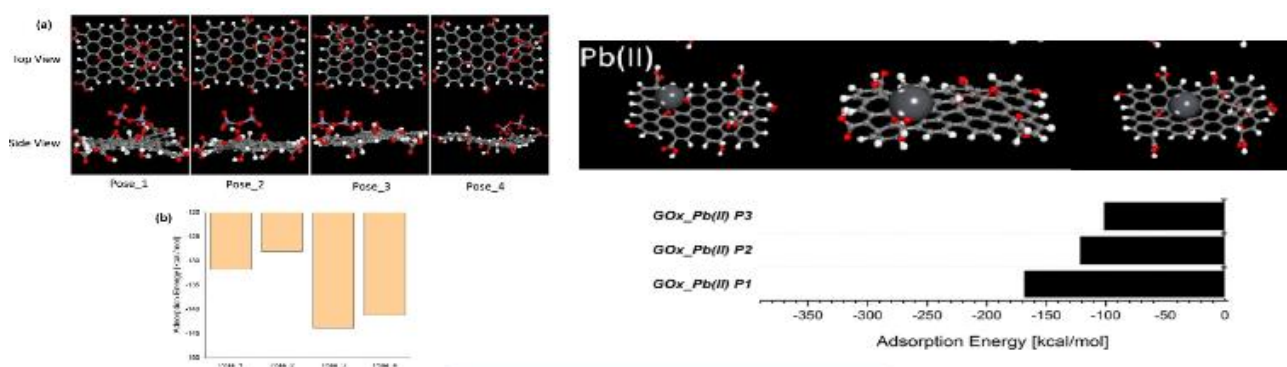


Figure 1: