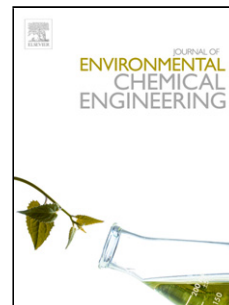


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**Isotherms, kinetics and thermodynamics of hexavalent chromium removal using biochar**Bharat Choudhary <sup>a</sup>, Debajyoti Paul <sup>\*a,b</sup>

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**Highlights**

- *Eucalyptus globulus* bark biochar (EBB) efficiently applied for aqueous Cr(VI) removal.
- Cr(VI) removal data were evaluated by two- and three-parameter isotherm models.
- Kinetic data suggest Cr(VI) removal dominantly controlled by film diffusion.
- Relatively good Cr(VI) sorption capacity of 21.3 mg/g achieved by EBB at 303 K.
- Negative  $\Delta G^\circ$  confirm spontaneous Cr(VI) sorption dominated by physisorption.

**Abstract**

This study investigates the isotherm and kinetics of aqueous Cr(VI) removal using *Eucalyptus globulus* bark biochar (EBB) produced by pyrolysis of residual bark biomass at 500 °C. Various

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