

*Supplementary Materials*

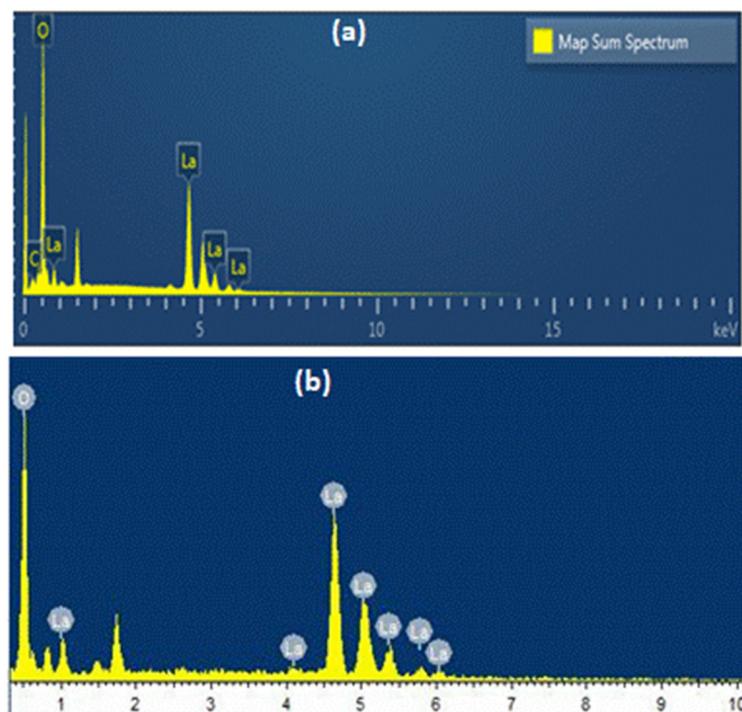
## Facile Synthesis, Characterization, and Adsorption Insights of Lanthanum Oxide Nanorods

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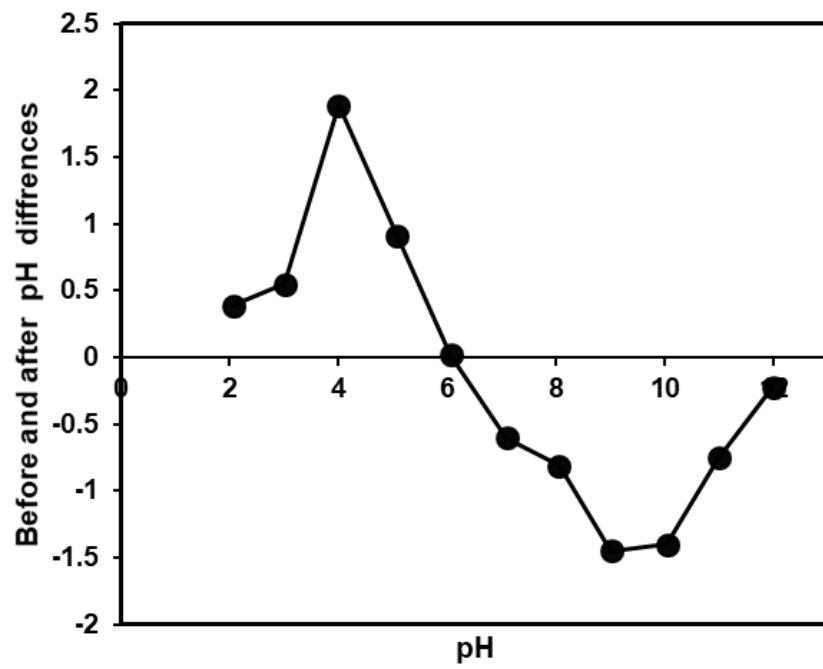
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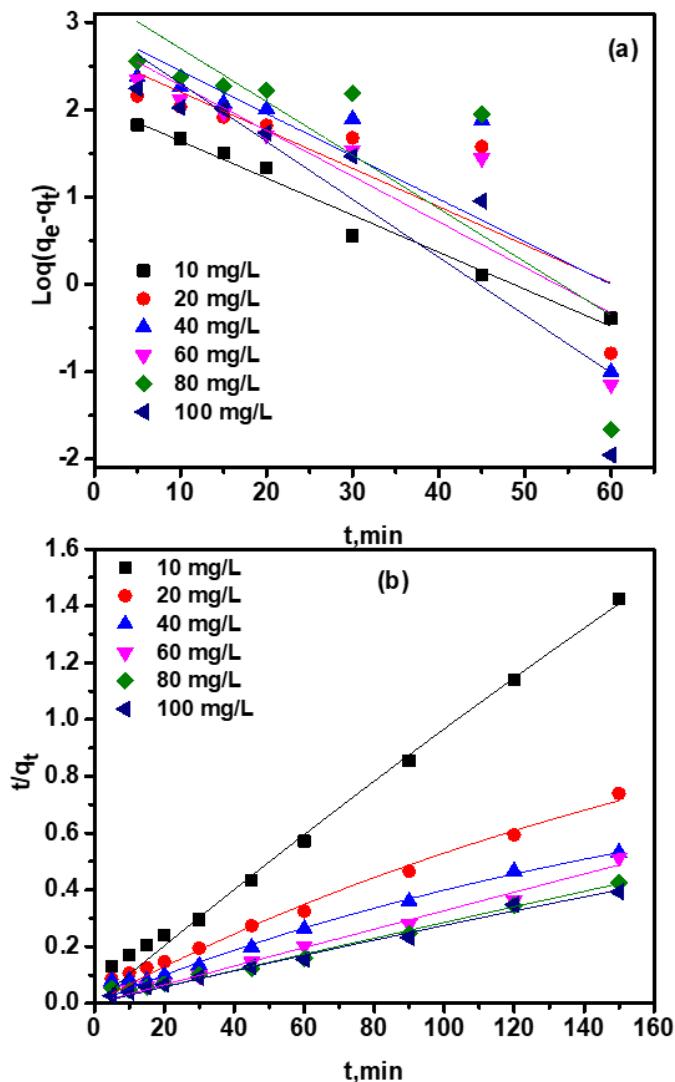
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**Figure S1.** SEM-EDX spectrum of  $\text{La}_2\text{O}_3$  nanorods without  $\text{N}_2$  atmosphere (a) and of  $\text{La}_2\text{O}_3$  nanorods with  $\text{N}_2$  atmosphere (b).

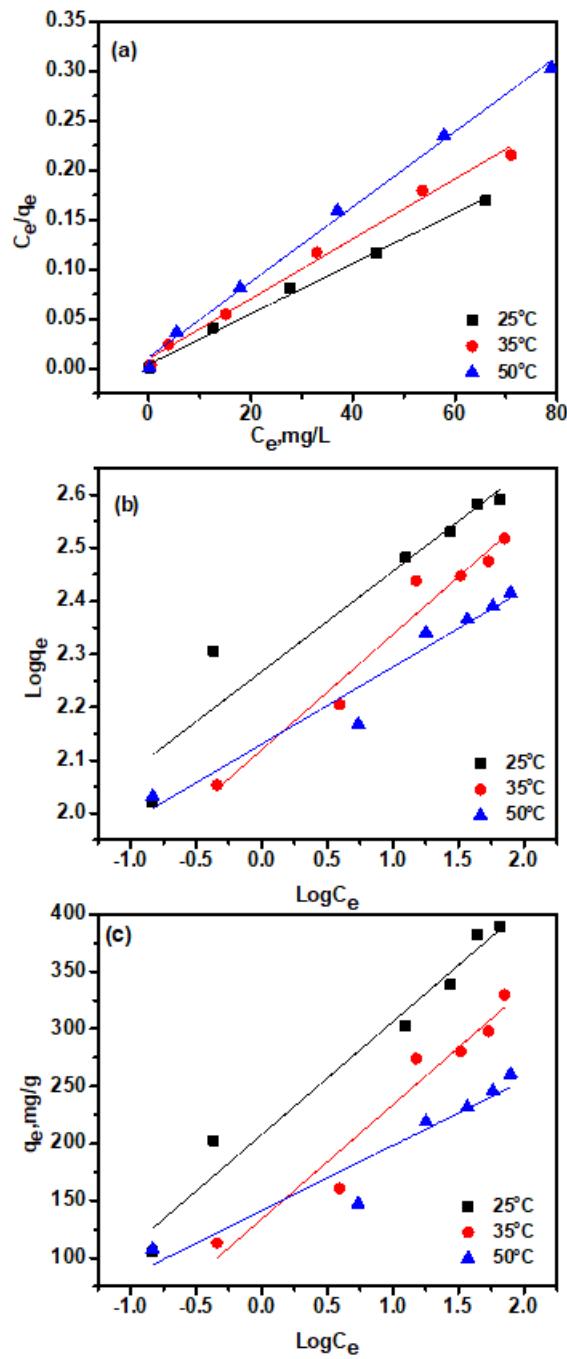


**Figure S2.** pH initial versus pH final graph and initial difference for pH pzc calculation for  $\text{La}_2\text{O}_3$ .



**Figure S3.** PFO (a) and PSO (b) kinetics model linear fitting plots for As(V) adsorption on  $\text{La}_2\text{O}_3$  nanorods.

Metal initial concentration: 10 mg/L, Adsorbent dosage: 0.1 g/L, at pH 6, and 25 °C.



**Figure S4.** Langmuir (a), Freundlich (b) and Temkin (c) isotherms on adsorptive removal of As(V) on to  $\text{La}_2\text{O}_3$  nanorods. Metal initial concentration: 10–100 mg/L, Adsorbent dosage: 0.1 g/L, at pH 6, and 25 °C for 60 min equilibrium.