

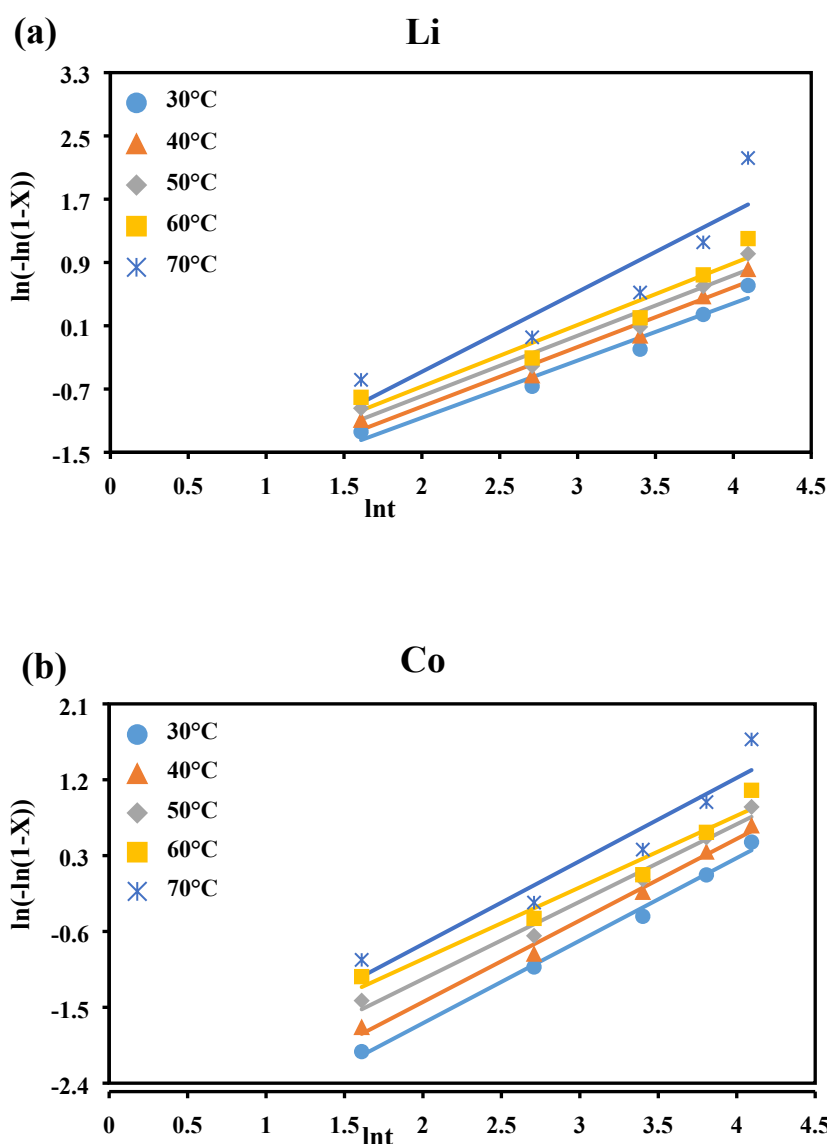
**Supporting information for**  
**Two-step leaching of spent lithium-ion batteries and effective regeneration**  
**of critical metals and graphitic carbon employing hexuronic acid**

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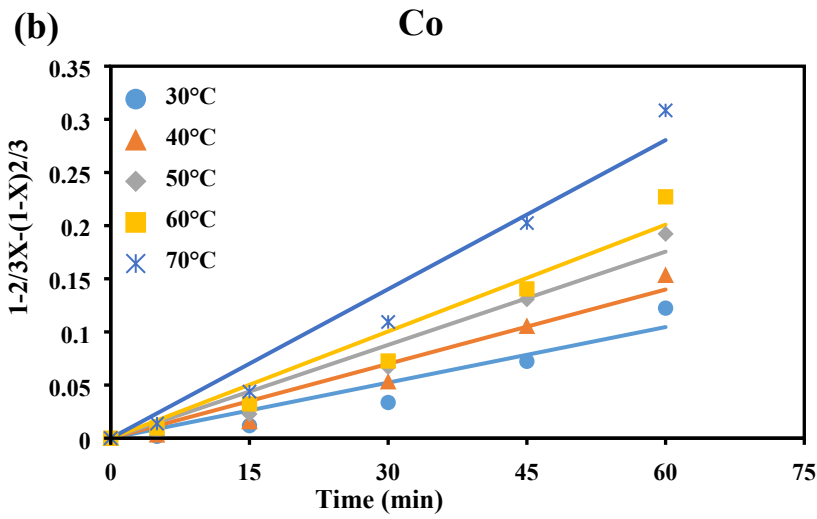
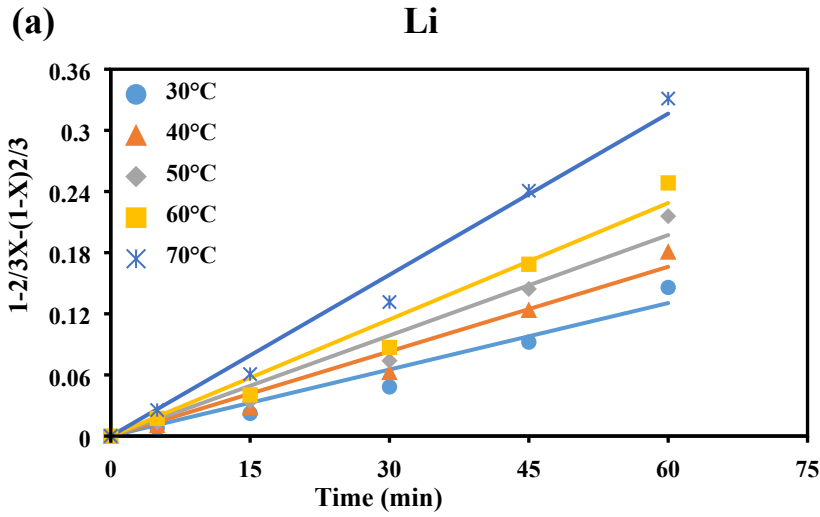
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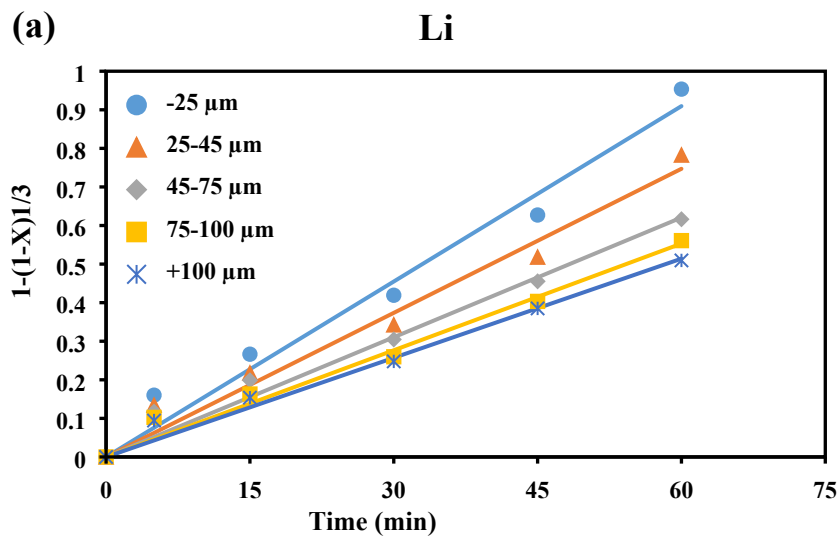
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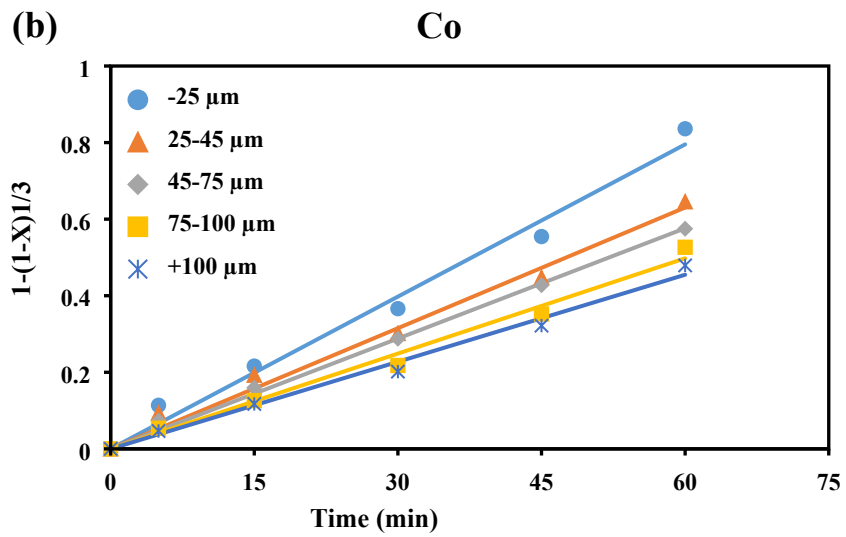


**Fig. S1** Dissolution of Li and Co vs time at different temperatures, fitted by Avrami equation model for leaching of (a) Li and (b) Co.



**Fig. S2** Dissolution of Li and Co vs time at different temperatures, fitted by diffusion control through the product layer for leaching of (a) Li and (b) Co.





**Fig. S3** Applicability of surface chemical reaction control model for leaching of (a) Li and (b) Co with different particle sizes.