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First-Principles Study on Interfaces between Sulfide Electrolyte and Oxide Cathode in All-Solid-State Battery

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We have addressed
(1) structure exploration of heterogeneous solid-solid interfaces,
(2) analysis of space-charge layer and electric double layer around the interfaces
in all-solid-state battery with sulfide electrolyte and oxide cathode.

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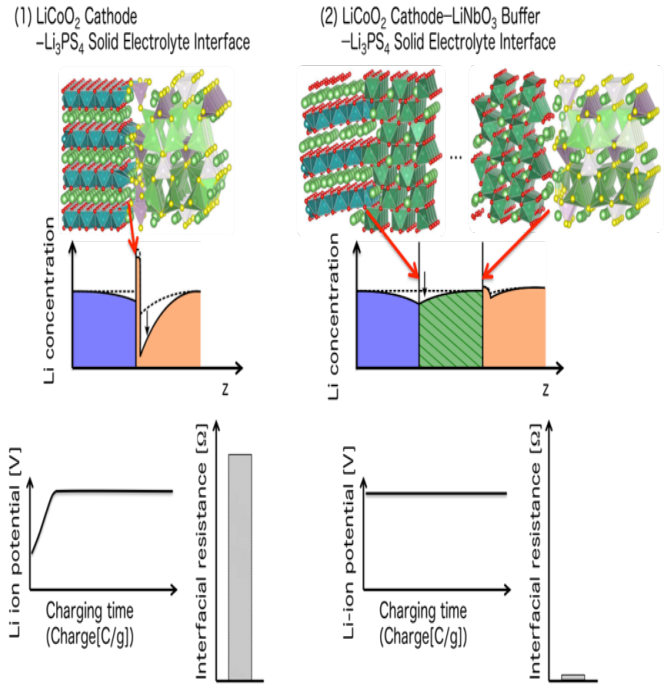

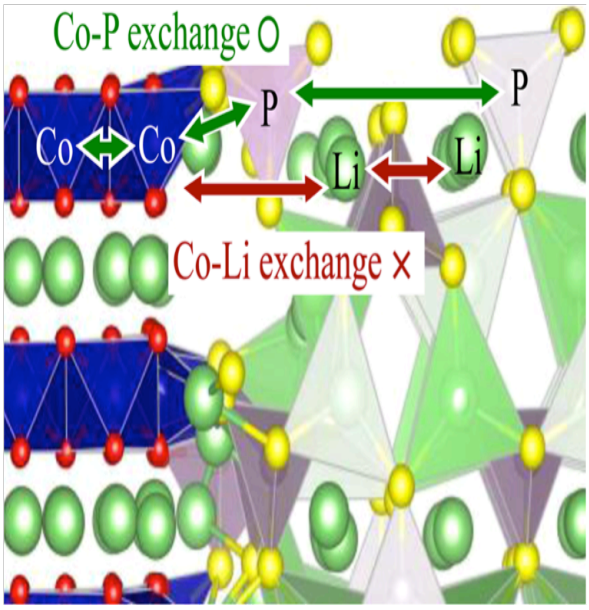

Growth of Li depletion can be an origin of interfacial resistance.

Co-P exchange highly possible. Li depletion still exists.