

Supporting Information for

Balancing Stability and Li-ion Conductivity of $\text{Li}_{10}\text{SiP}_2\text{O}_{12}$ for Solid-State Electrolytes with Assistance of Body-Centered Cubic Oxygen Framework

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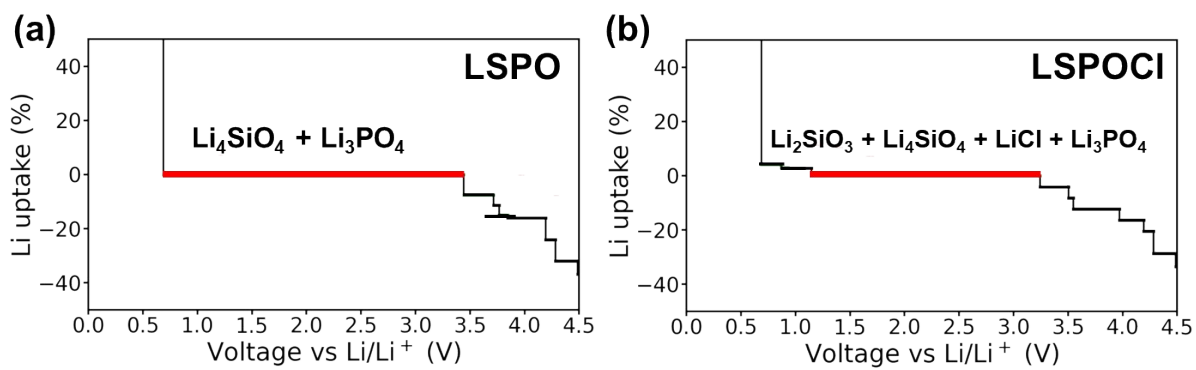


Fig. S1. (a) and (b) The plots of Li uptake per formula unit (f.u.) of LSPO and LSPOCl against voltage vs Li/Li⁺, respectively.

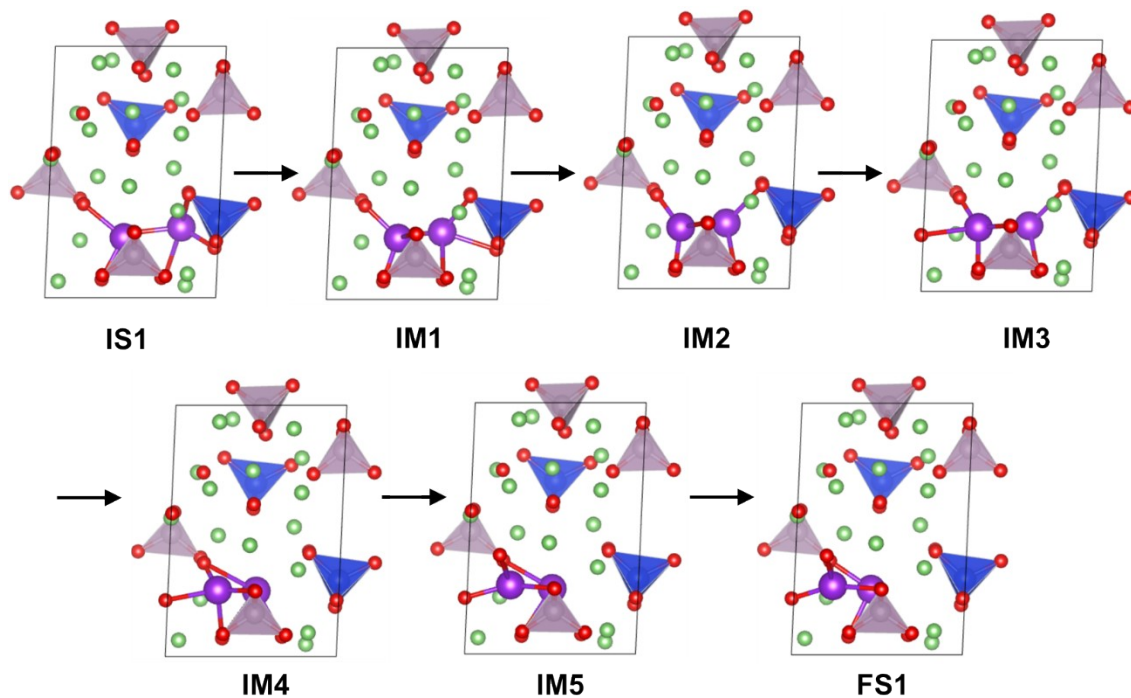


Fig. S2. The configurations of Li-ions cooperative migration along ab -plane in LPSO. The purple spheres represent the migrant Li-ions along the ab -plane in LPSO. Here, IS1, IM1, IM2, IM3, IM4, IM5, and FS1 correspond to the energy point listed in Figure 4d.

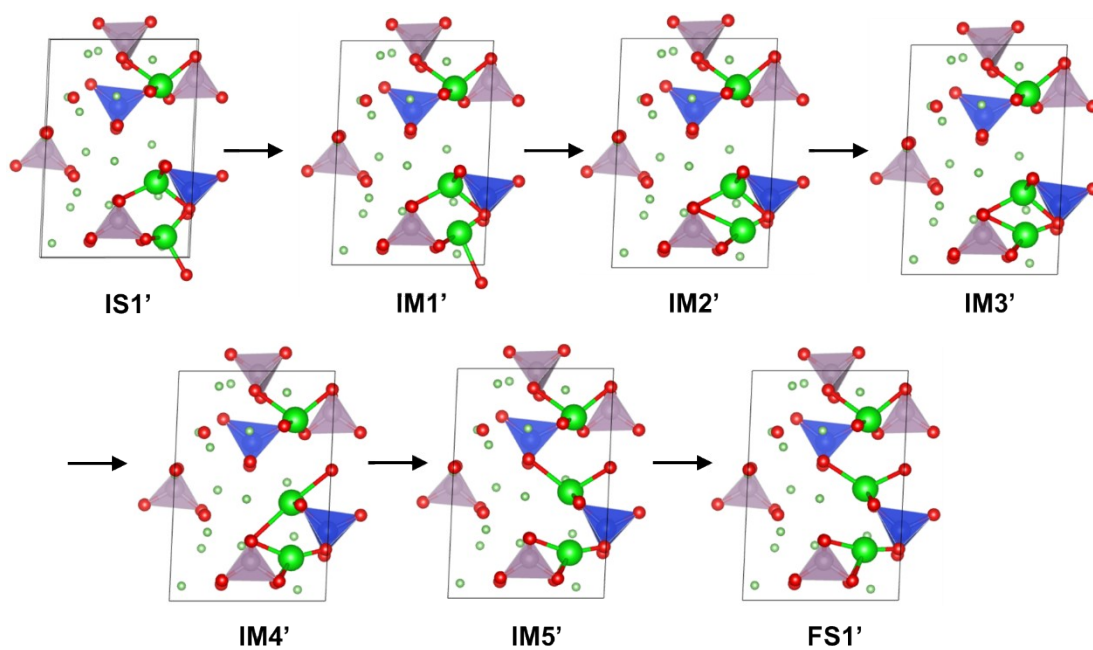


Fig. S3. The configurations of Li-ions cooperative migration along the c -axis in LPSO. The purple

spheres represent the migrant Li-ions along the c -axis in LPSO. Here, IS1', IM1', IM2', IM3', IM4', IM5', and FS1' corresponds to the energy point listed in Figure 4d.