

## **Impressive performance for proton-conducting solid oxide fuel cells using a first-generation cathode with tailored cations**

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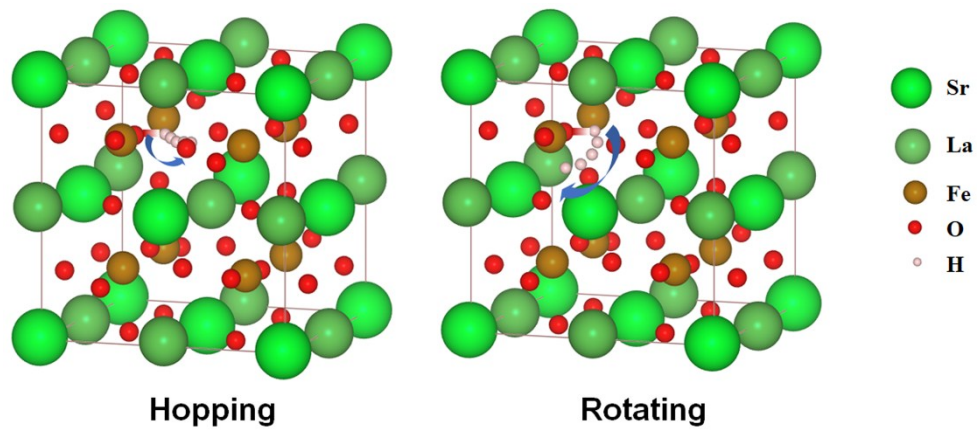
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**Figure S1.** Schemes of proton hopping and rotating process in proton migrations for LSF.