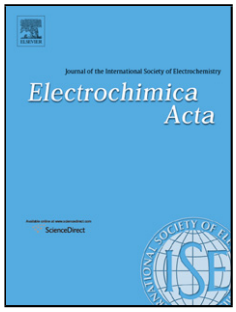

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Sodiation *vs.* Lithiation of $FePO_4$: A comparative kinetic study

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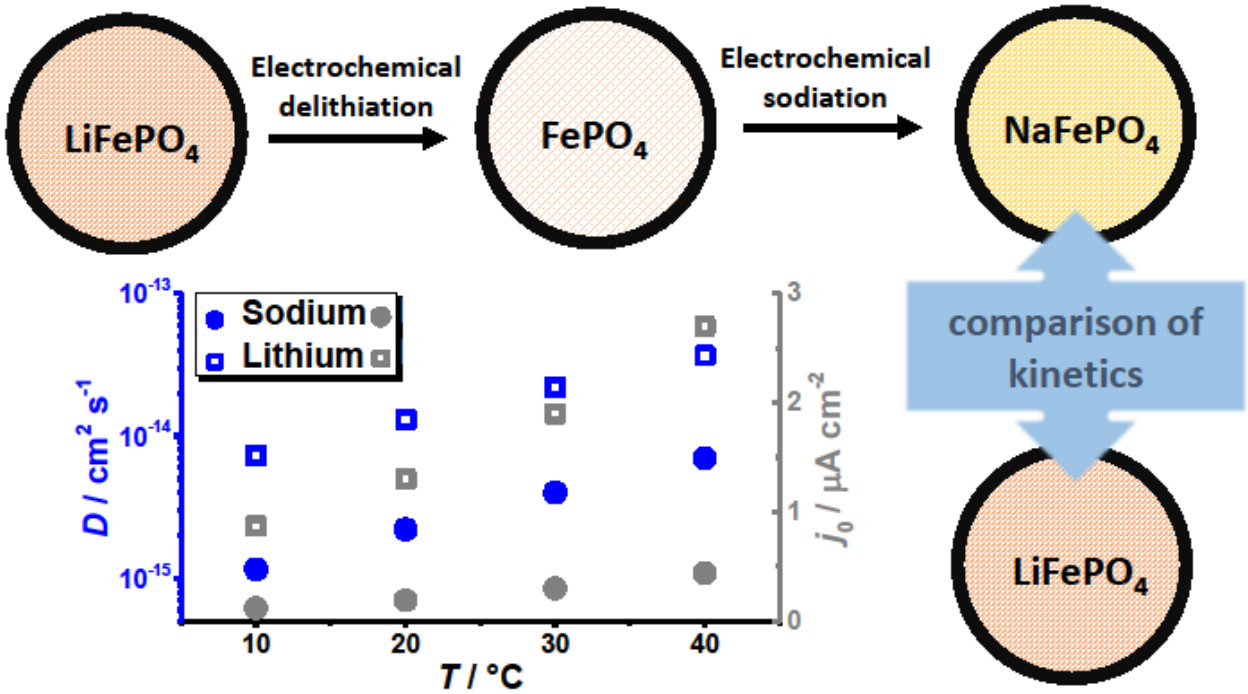
Graphical abstract



Highlights:

- Comparison of intercalation kinetics: sodiation vs. lithiation of $FePO_4$
- Rate constant of sodiation is significantly lower compared to lithiation
- Solid state diffusion of sodium in $FePO_4$ is slower compared to lithium
- Larger activation energies of sodiation compared to lithiation of $FePO_4$

Abstract

A comparative study of sodiation and lithiation of $FePO_4$ host material for secondary sodium- and lithium-ion batteries is performed. To ensure the best possible comparability, $NaFePO_4$ based electrodes are prepared by an electrochemical