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Online estimation of battery equivalent circuit model parameters and state of charge using decoupled least squares technique

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## **ACCEPTED MANUSCRIPT**

- A novel adaptive estimation method of battery ECM parameters and SOC is presented.
- The battery parameters of the fast and slow dynamics are estimated separately.
- The proposed method does not require a full-order observer for SOC estimation.
- The battery modelling and SOC estimation accuracy is improved.
- The proposed algorithm is suitable for both offline and online implementation.

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