



Large-scale Cell Assembly and Smart Manufacturing of Self-Healing Batteries

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Message from the Guest Editors

Dear colleagues,

Next-generation batteries are prone to performance degradation in long-term use. Electrical isolation of electrode particles, loss of interfacial contact, extensive SEI formation, and particle pulverization are among the most important mechanisms undermining the lifecycle of batteries. Cell degradation is becoming more important in the case of large volume changes happening during the intercalation/deintercalation process. Therefore, improving the long-term cyclic performance of batteries has attracted increasing interest. The integration of battery components with self-healing properties into batteries paves the way for a longer lifespan. Self-healing has proven its adequacy in the battery field by involving a special deformation-driven reparation process. However, research is currently limited to lab-scale cells and small-size prototypes.

In this Special Issue, we are looking for contributions addressing the challenges in the field with a particular focus on cell assembly and manufacturing methodologies. Scale-up cell manufacturing and/or smart manufacturing methodologies integrating self-healing battery components are highly encouraged...





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Message from the Editor-in-Chief

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