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Improvements and Advanced Characterizations of Silicon-Based Anode Materials

Guest Editor:

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Message from the Guest Editor

Lithium-ion batteries (LIBs) are a very popular rechargeable battery technology, but graphite, their traditional anode material, has limited specific capacity and is not able to meet the market demands.

Silicon is an attractive alternative to graphite, given its high values of specific capacity and volume capacity. Moreover, its relatively low working potential and natural abundance make it a promising candidate for LIB anodes. Hower, its significant volume expansion upon lithiation makes it difficult to utilize in practical lithium batteries. Other issues which need to be addressed are silicon's poor life cycle and its production through a solid electrolyte interphase.

This Special Issue is aimed at collecting papers on silicon-based anode materials, with a special focus on their synthesis and characterization.

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Message from the Editor-in-Chief

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