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(54) Title: LOW RESISTANCE COMPOSITE SILICON-BASED ELECTRODE



Figure 1

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(57) Abstract: A silicon-based electrode forms an interface with a layer pair being: 1. a thin, semi-dielectric layer made of a lithium (Li) compound, e.g. lithium fluoride, LiF, disposed on and adheres to the electrode surface of the silicon-based electrode and 2. an molten-ion conductive layer of a lithium containing salt (lithium salt layer) disposed on the semidielectric layer. One or more device layers can be disposed on the layer pair to make devices such as energy storage devices, like batteries. The interface has a low resistivity that reduces the energy losses and generated heat of the devices.

[Continued on next page]

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