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(54) **COMPOSITION WITH SMALL MOLECULE ADDITIVES FOR IMPROVED SAFETY AND PERFORMANCE IN HIGH VOLTAGE BATTERIES**

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ABSTRACT

A battery cell may include an electrolyte, a first electrode including a first electrode layer and a first current collector, a second electrode including a second electrode layer and a second current collector, a separator interposed between the first electrode and the second electrode, and at least one protective layer. For example, a protective layer may be interposed between the first electrode layer and the first current collector, the second electrode layer and the second current collector, the separator and the first electrode, and/or the separator and the second electrode. When activated, the one or more protective layers may reduce or interrupt current flow through the battery cell. The composition of the one or more protective layers may include one or more small molecule additives to increase its stability and conductivity, thus improving the performance as well as the safety profile of the battery cell.

