Addendum: Elastomeric electrolytes for high-energy solid-state lithium batteries

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In our original article, we reported an elastomeric electrolyte having a three-dimensional interconnected plastic-crystal phase of succinonitrile (SN) within the cross-linked elastomer matrix—plastic crystal-embedded elastomer electrolytes (PCEEs)—using polymerization-induced phase separation. It has been brought to our attention that the original paper did not make clear the importance of Li salt concentration, and reagent purity with regard to the mechanical and rheological properties of the electrolyte, and we would like to provide further data to illustrate these points here. We thank Dr. Lei Shi and Professor Bin Li of Sun Yat-sen University and Professor Shujiang Ding (Xi'an Jiaotong University) for bringing this to our attention.

The Supplementary Information to this addendum contains data on a series of SN-based electrolytes with different lithium bis(trifluoromethanesulfonyl)imide (LiTFSI) salt concentrations (0, 0.2, 0.5, and 1.0 M of LiTFSI), including those prepared with and without degassing. We also provide data from varying butyl acrylate (BA) elastomer:SN ratio electrolytes, and a control classical polymer electrolyte to further support the proposed plastic crystal-embedded elastomer electrolyte structure.

Supplementary information is available in the online version of this Amendment.