

All-solid-state lithium-ion battery using $\text{Li}_2\text{C}_0.8\text{B}_0.2\text{O}_3$ electrolyte

Abstract Since the electrochemical potential of lithium metal was systematically elaborated and measured in the early 19th century, lithium-ion batteries with liquid organic electrolyte have been a key energy storage device ...

Lithium-ion conductivity of $\text{Li}_{2.2}\text{C}_{0.8}\text{B}_{0.2}\text{O}_3$ pellet is $2.1 \times 10^{-6} \text{ S cm}^{-1}$ at 30°C after sintering at 450°C by spark-plasma sintering (SPS) process, which is about three times ...

The LLZ-LGVO multilayer is combined with a LiCoO_2 positive electrode and a lithium metal anode through annealing at 700°C . The resultant all-solid-state battery can ...

In this work, we directly observed the reaction distribution formed in a composite cathode of the all-solid-state lithium-ion battery (ASSLIB) $\text{LiCoO}_2/\text{Li}_{2.2}\text{C}_{0.8}\text{B}_{0.2}\text{O}_3|\text{Li}_{2.2}\text{C}_{0.8}\text{B}_{0.2}\text{O}_3|\text{PEO}|\text{Li}$...

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Abstract Oxide-based all-solid-state lithium-ion battery is prepared by a conventional sintering process, thanks to the intrinsic low melting point of $\text{Li}_{2.2}\text{C}_{0.8}\text{B}_{0.2}\text{O}_3$. A well-defined interface ...

3-based solid-state lithium-ion conductors have been recently used for assembling bulk-type all-solid-state lithium-ion battery (hereafter denoted as ASS-LIB), which could be applied ...

All-Solid-State Batteries with LiCoO_2 -Type Electrodes: Realization of an Impurity-Free Interface by Utilizing a Cosinterable $\text{Li}_{3.5}\text{Ge}_{0.5}\text{V}_{0.5}\text{O}_4$ Electrolyte Toyoki Okumura, Tomonari ...

The all-solid-state lithium battery (ASSLIB) is one of the key points of future lithium battery technology development. Because solid-state electrolytes (SSEs) have higher safety ...

Oxide-based all-solid-state lithium-ion battery is prepared by a conventional sintering process, thanks to the intrinsic low melting point of $\text{Li}_{2.2}\text{C}_{0.8}\text{B}_{0.2}\text{O}_3$. A well-defined interface between ...

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All-solid-state (ASS) lithium-ion battery has attracted great attention due to its high safety and increased energy density. One of key components in the ASS battery (ASSB) ...

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In ASS-LIB, the desirable electrolyte/electrolyte and electrode/electrolyte interfaces should be prepared by a simple powder sintering process, which confers good contact at the atomic scale ...

Garnet-based bulk-type all-ceramic lithium battery (ACLB) is considered to be highly safe, but its electrochemical performance is severely hindered by the huge cathode/electrolyte interfacial ...

SUMMARY Garnet-based bulk-type all-ceramic lithium battery (ACLB) is considered to be highly safe, but its electrochemical performance is severely hindered by the huge cathode/electrolyte ...

In this work, we directly observed the reaction distribution formed in a composite cathode of the all-solid-state lithium-ion battery (ASSLIB) $\text{LiCoO}_2/\text{Li}_2\text{C}_0.8\text{B}_0.2\text{O}_3|\text{Li}_2\text{C}_0.8\text{B}_0.2\text{O}_3|\text{PEO}|\text{Li}$ during ...

Graphical Abstract All-solid-state batteries (ASSBs) promise high energy density and safety, but as most research is focusing on optimizing individual components, their impact on key performance parameters is often ...

All-solid-state lithium-ion battery using $\text{Li}_2\text{C}_0.8\text{B}_0.2\text{O}_3$ electrolyte Oxide-based all-solid-state lithium-ion battery is prepared by a conventional sintering process, thanks to the intrinsic low ...

Title All-solid-state lithium-ion battery using $\text{Li}_2\text{C}_0.8\text{B}_0.2\text{O}_3$ electrolyte **Journal** Solid State Ionics **Authors** Okumura, Toyoki **Author** Takeuchi, Tomonari **Author** Kobayashi, Hironori **Author** Year ...

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The all-ceramic lithium battery (ACLB) is regarded as the ultimate goal to exclude the safety concerns for Li-ion battery (Janek and Zeier, 2016; Zhang et al., 2018a, ...

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All-solid-state lithium-ion batteries (LIBs) are considered promising energy storage devices owing to their high energy density and safety. The development of solid electrolytes with high Li^+ conductivity, wide ...

High-rate operation of oxide-based bulk-type all-solid-state batterie (ASSB) is achieved not only by the development of novel oxide electrolyte (OE) with high bulk ionic ...

All-solid-state lithium-ion battery using Li_2ZrO_3 electrolyte

[56]Kotobuki M, Kanamura K, Sato Y and Yoshida T 2011 Fabrication of all-solid-state lithium battery with lithium metal anode using Al_2O_3 -added $\text{Li}_7\text{La}_3\text{Zr}_2\text{O}_{12}$ solid ...

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This review describes fabrication requirements of solid state lithium ion batteries and highlights recent examples of digitally fabricated solid state lithium ion batteries,...

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