

Foldable battery

Battery sheet capable of long-term storage

Overview

Metal-air batteries composed of a metal electrode (negative electrode), an electrolyte, and an air electrode (positive electrode) have the advantage of being lighter than other batteries and have been used practically as power sources for hearing aids. On the other hand, the degradation of the metal electrode caused by contact with the electrolyte and the low voltage compared with other batteries have been pointed out as problems.

The present invention relates to a new form of metal-air battery which solves the above problems. The present battery is a "foldable metal-air battery" in which a plurality of metal electrodes, electrolytes, and air electrodes are arranged on a sheet, and a plurality of laminates of metal electrodes/electrolytes/air electrodes are formed by folding the sheet. Since the sheet is folded to function as a battery, the electrolyte and metal electrodes do not come into contact with each other when not in use, and deterioration can be prevented. The figure on the right shows the measured voltage when the number of cells in the laminate is increased. By stacking multiple cells as in origami, the problem of low voltage of metal-air batteries can also be solved.

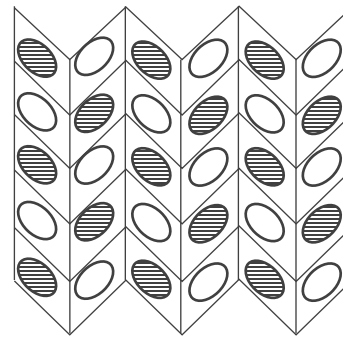
Since this battery solves the conventional problem and has a new foldable type, it is expected to be put into practical use in the following applications.

Product Application

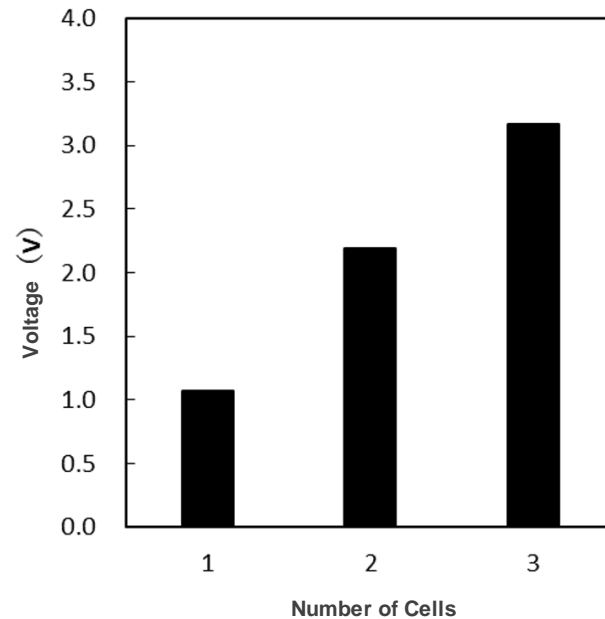
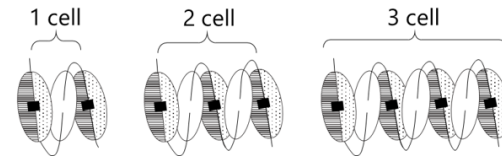
- ❑ Stockpiling battery capable of storing without deterioration
- ❑ Experimental teaching materials for learning how air batteries work

IP Data

IP No. : International Publication WO2023/276283
 Inventor : ABE Hiroya, YABU Hiroshi, ITO Koju
 Admin No. : T19-848



Features・Outstandings



Contact

Download OnePager



Contact

<https://www.t-technoarch.co.jp/en/contact.html>



Check Out Our Inventions

<https://www.t-technoarch.co.jp/en/anken.php>



Follow us

<https://www.linkedin.com/company/tohoku-techno-arch>



Leading you to Successful Industrialization



TOHOKU TECHNO ARCH

株式会社 東北テクノアーチ