Short Communication

Voltage Reversal in Series-connected Three 1.5V AAA Alkaline Batteries

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Discharge curves for three 1.5V AAA alkaline batteries, series-connected, were completed. The voltage across each battery as a function of time has been directly measured. For this purpose a specific measuring system has been built. Periodically, by means of a switches block, consisting of reed relays pairs, terminals of each battery are successively connected to the floating inputs of an analog-to-digital converter. The whole measurement process runs continuously, automatically, without human or computer assistance. By using the described system, batteries unbalance and reversal voltage effect occurring in over-discharge conditions have been noticed.

Keywords: alkaline battery, electrochemical battery, batteries unbalance, voltage reversal, forced discharge

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