E2-06 : DISCHARGE CHARACTERISTICS OF SOLID STATE CONCENTRATION CELL WITH VANADIUM BRONZ ELECTRODES AND A SYNTHETIC CLAY ELECTROLYTE

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Solid-state concentration cells of configuration $Na_xV_2O_5/Na^+$ clay/$Na_yV_2O_5$ have been fabricated and their constant- load discharge characteristics investigated.

The synthetic clay material showed an ionic conductivity of 3.75 x $10^{-2}(Scm^{-1})$ at 350°C. The cell operating at 350°C exhibited an open circuit voltage (V_{oc}) of 178 mV and a short circuit current (I_{sc}) of 320 λ A. The capacity of the cell was estimated to be 2.4 mAh.