Electromotive Cells in Investigation of Phase Transitions in Ionic Ferroelectric Crystals

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The electrochemical cell: Se|TGSe_{single crystal}|Se, with tri-glycine selenide as solid electrolyte was employed to observe the ferroelectric-paraelectric phase transition. The charge, which normally occurs on the surface of the ferroelectric crystal in the polar phase, is thus incorporated in the electrical double layer of the cell and can be precisely monitored. The pyroelectric currents can also be measured with this cell. The concentration changes on the surface of the single crystal after direct current polarization are observed.

Key words: Ferroelectrics; Phase Transitions.