Thermoelectric Effect in Single Crystal Zinc Wires

E. G. Linder

State University of Iowa

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sure effects, may be quite serviceable in the field, but it cannot be said to give without further assumption, the proper temperature coefficient of resistance.

STATE UNIVERSITY OF IOWA.

A STUDY IN EXAMINATION METHODS.

C. J. LAPP

(ABSTRACT)

A carefully set-up experiment in methods of conducting examinations in physics is being carried out. All of the variable human factors have been eliminated as far as possible. Students hearing the same lectures, studying the same text-book, and writing the same examinations are pitted against each other: one group using their books and any notes which they care to bring to class with them, the other group using no notes or helps of any kind. The results obtained in this experiment are expected to shed definite light upon the much discussed problem of the aid or hindrance of books during examinations.

STATE UNIVERSITY OF IOWA.

THE STUDY OF AN OBJECTIVE ACHIEVEMENT EXAMINATION IN PHYSICS

C. J. LAPP

(ABSTRACT)

A carefully prepared objective achievement examination in physics was given to a class of freshmen for their final examination at the end of the first semester. To compare with these results, there was available twenty-seven ten-minute, and fifty-minute examinations. The correlation between these two sets of data for about 230 students was extremely high.

STATE UNIVERSITY OF IOWA.

THERMOELECTRIC EFFECT IN SINGLE CRYSTAL ZINC WIRES

E. G. LINDBER

(ABSTRACT)

Single crystal zinc wires of any desired orientation may be prepared by the method of Gomperz. The thermo-electric power of
such crystals against a standard metal is a function of the orienta-
tion of the crystal lattice. The method of growing the crystals
is described and data are given on the thermoelectric power against
copper of wires of various orientations.

State University of Iowa.

Optical Constants of Molybdenite in
The Ultra-Violet
A. W. Meyer

(ABSTRACT)

The index of refraction and extinction index of molybdenite
(MoS) for a natural cleavage surface have been determined in
the ultra-violet by the crystelliptometer. The computed reflect-
tivity is compared with the values directly determined by Coblentz.

State University of Iowa.

Quantitative Measurements on the Trans-
mission in Solid Acoustic Wave Filters
With Varying Physical Dimensions
H. F. Olson

(ABSTRACT)

The object of these experiments was to test the transmission
of solid acoustic wave filters with the view to the establishment
of empirical formulas to be used in future designs. The length
of sections, the conductivity into the branch lines, and the volume
of the branch lines were altered in the case of low-frequency-pass-
filters. In all cases the variations produced effects that are
analogous to those found with acoustic wave filters in fluids.
But more than this, so far as a test has been made, the cut-off
frequency is in agreement with the Stewart theory for fluids.
This means that the phenomena is caused almost exclusively by
the longitudinal waves. Moreover, recurring bands were found
in high frequencies and these seemed to be in accord with the
more extended theory of Stewart concerning the presence of such
additional bands. The conclusion in that the acoustic wave filters
in solids can be designated on the basis of the formulas obtained
for fluids.

State University of Iowa.