

CENTRAL INTELLIGENCE AGENCY
 INFORMATION REPORT

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1. There are presently five leading physical chemistry institutes in East Germany. These institutes are for the most part associated with universities. The chief personnel, interests presently concerning the institutes, and research problems currently underway at each of these institutions follows:

A. Physical Chemical Institute, Halle University.

The principal area of investigation at this institute is the physical chemistry of metals and alloys. Close cooperation is maintained between the institute and the metals laboratory of the Elektrochemische Kombinat Bitterfeld. Research work also includes the exposition of phase diagrams of light metals alloys in addition to determinations of the heat of mixing in binary alloy systems. Professor Dr. R. Sauerwald 1/ is the director of this institute.

B. Physical Chemical Institute, Jena University, Dr. Ernst Kordes, Director.

1. Research work on the X-ray structure determinations of ferromagnetic soft irons (Ferriten) and on magnetic studies on these materials as a function of foreign-ion content is being done under the supervision of Dr. (fnm) Roettig.
2. In initial tests at low temperatures, dissociation pressures of metal oxides, sulfides and halides were determined in various gas buffer mixtures (with temperatures ranging from 900 down to 100 degrees C.) because these dissociation pressures cannot be measured directly.
3. Structure elucidation of ceramic materials, particularly double oxides.
4. Cryoscopic investigations of binary salt melts and experimental verification of Cailletet's rule which does not adhere to the recent investigations at curve maxima. At present a refined

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theory is being worked out. Research funds for this project amount to about DM 140,000. Dr. Kordes' entire research program is interesting in that he probable can be considered an authority in the field of experimental crystal chemistry. The research contract for the ferronagnetic soft irons was received directly from ZAFI (Zentralamt fuer Forschung and Technik). On the basis of the importance of his work, Kordes obtained permission to spend four weeks this summer [redacted] with his wife. Dr. Kordes speaks fluent Russian, belongs to no political party, and is absolutely opposed to the SED.

25X1

- C. Institute for Physical Chemistry and Theoretical Metallurgy, Mining Academy, Freiberg/Saxony.

The academy is under the directorship of Professor Dr. Mannchen who previously worked in the industry and who was called to Freiberg only a short time ago. [redacted]

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- D. Institute for Physical Chemistry and Electrochemistry, Technical University, Dresden.

The main area of interest at this institute concerns electrochemical problems but additional investigations are also being carried out on the mechanism of cathode reduction of organic compounds. In cooperation with Schott of Jena, investigations are under way in the field of glass electrodes, especially the influence on the potential of the composition of the glass membrane. Dr. Burt Schwabe, director of the institute, has a great deal of experience which was obtained while working at the Technological Institute in Meiningen. At present, research work is also in progress on the electrochemical oxidation of carbon monoxide and hydrogen with the application of alkali fusions as electrolytes. Contrary to the work performed at Benhoeffler's Max-blanch Institute, the Dresden Institute deals solely with pure experimental electrochemistry. [redacted]

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- E. Physical Chemical Institute, Leipzig University.

The institute is chiefly concerned with the investigations of photographic problems based on the earlier work of Professor Dr. Herbert Staude, director. In close cooperation with Drs. Arens, Bruenhen, and Auester of Agfa-Welfen, research work is carried out on the reaction mechanisms of photographic development processes, especially on the fixer-developer. In addition, investigations are made on simple classical physical problems such as the ion product of organic silver complex compounds as they occur in the photographic development process. Staude has ten assistants at present and his newly built institute is well equipped. Although Staude belongs to the SED, he is a member in name only. His character is reported to be above reproach.

2. As far as research work is concerned, Professor Kordes' institute in Jena might be considered the most important in East Germany. In addition, the institutes at Rostoch and at Greifswald will develop and can be expected to attain a certain importance in three years.

- 1/ [redacted] COMMENT: Huerschner's Deutscher Gelehrten-Kalender 1950 lists Dr. Frans Sauerwald in this position.

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