PHYSICS

New Electron Microscope May Some Day "See" Atoms

New Model Achieves Magnifications Up to 30,000 Diameters, Instead of 5,000 Hitherto Possible

A MICROSCOPE that "sees" by electrons, or particles of electricity, instead of light, and that can reach so far into the depths of matter that eventually it is expected that it will be possible to "see" atoms themselves was demonstrated to members of the American Philosophical Society by Dr. V. K. Zworykin of RCA's Electronic Research Laboratories.

This latest electron microscope achieves magnifications of 25,000 to 30,000, instead of about 5,000, maximum with even ultraviolet light optical microscopes.

First research application of the perfected electron microscope is expected to be in biological fields. It is considered possible that the new microscope may help solve the problem of the nature of the viruses that cause certain unconquered diseases. Already in preliminary work unidentified particles evidently associated with disease germs, but hitherto unsuspected, have been seen. Extremely fine particles in materials of industrial importance, such as rubber latex, are shown to have shapes different from those they were believed to have.

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MAY "SEE" ATOM

This latest electron microscope achieves magnifications of 25,000 to 30,000 instead of about 5,000, maximum with even ultraviolet light. Seated looking at the instrument is Dr. Ross Harrison, Yale University. Standing are: Dr. Ladislaus Marton (left) who with Dr. V. K. Zworykin, RCA Research Laboratories, developed the microscope, and (center) Dr. A. V. Hill, of Cambridge, England.

GENERAL SCIENCE

Franklin Medals Awarded To Compton and Baekeland

FRANKLIN medals, highest awards of the Franklin Institute, will be presented on May 15 to Dr. Arthur H. Compton of the University of Chicago for his researches on X-rays and to Dr. Leo H. Baekeland for his invention of the synthetic plastic, Bakelite.

Other awards announced are: Elliott Cresson medals to Dr. Frederick M. Becket, president, Union Carbide and Carbon Research Laboratories, for his researches on alloys, and to Dr. Robert R. Williams, chemical director, Bell Telephone Laboratories, for his researches on vitamin B_1.

The Louis E. Levy medal jointly to Dr. Charles Rosenblum of Princeton and Dr. John R. Flagg of the University of Rochester, for their researches on artificial radioactive indicators.

The George R. Henderson medal to William E. Woodard, Lima Locomotive Works, for steam locomotive design.

The John Price Wetherill medals to Laurens Hammond of Chicago, for the Hammond Organ, and to Edward E. Kleinschmidt, Highland Park, Ill., and Howard L. Krum, Beverley Hills, Calif., for the development for the teletypewriter.

The Edward Longstreth medals to Leopold Godowsky, Jr., and Leopold D. Mannes of Eastman Kodak Company, for development of Kodachrome film, to Games Slayter of Owens-Corning Fiberglas Corp., for development of spun and blown glass filaments, to Richard L. Templin of the Aluminum Company of America for an automatic deformation recorder, to Dr. Maxwell M. Upson, Raymond Concrete Pile Company, for contributions to foundation engineering and construction. Certificate of merit to George H. Ernsbarger of Honolulu and Frank L. McCarty of Ogden, Utah, for development of a loading device.

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For many years *heart disease* has been the leading cause of death among physicians in the United States.