a view to ascertaining the condition of their origin, to be conducted in the highlands of Norway and Scotland.

Dr. Charles Henry Behre, Jr., professor of economic geology at Northwestern University: Appointed to make a comparative study of certain lead-zinc deposits, for the purpose of forming generalizations about the nature and structural control of ore deposition in comparison with the lead-zinc ores in limestones in the Mississippi Valley.

Dr. Donald Keith Adams, assistant professor of psychology at Duke University: Appointed to formulate a comprehensive theory of the structure and growth of mind and its testing by application to the data and problems of child psychology.

Dr. Melville J. Herskovits, professor of anthropology, Northwestern University: Appointed to write a book on primitive economics.

SIGMA XI LECTURES AT THE UNIVERSITY OF CALIFORNIA AT LOS ANGELES

THE following public lectures have been given under the auspices of the University of California at Los Angeles Chapter of the Society of the Sigma Xi, in the academic year 1936–37, under the presidency of Dr. George E. F. Sherwood, professor of mathematics:

September 30, 1936: "Periodogram Analysis," by Dr. Dinsmore Alter, director, Griffith Observatory and Planetarium.

October 28: "Sex Determination and Fish Hybrids," by Dr. Albert W. Bellamy, associate professor of zoology, University of California at Los Angeles.

November 4: "The Use of Magnetic Methods in Chemistry," by Dr. Linus Pauling, professor of chemistry, California Institute of Technology.

December 2: "Earthquakes," by Dr. Beno Gutenberg, professor of geophysics and meteorology, California Institute of Technology.

January 6, 1937: "Genes and Hormones in Sex Determination," by Dr. Richard B. Goldschmidt, professor of zoology, University of California, Berkeley.

February 17: "Bright-Line Astronomical Spectra," by Dr. I. S. Bowen, professor of physics, California Institute of Technology.

March 3: "Recent Advances in the Chemotherapy and Serumtherapy of Hemolytic Streptococcal Infections," by Dr. Ralph R. Mellon, director, Institute of Pathology, Western Pennsylvania Hospital.

March 10: "Studies in Language Disabilities," by Dr. Grace M. Fernald, associate professor of psychology, University of California at Los Angeles.

March 19: "Transmutations of Atomic Nuclei," by Dr. Niels Bohr, professor of physics, University of Copenhagen, and Hitchcock Lecturer, University of California, Berkeley, 1936–37.

March 24: "Plant Growth in Relation to Minute Amounts of Certain Chemical Elements," by Professor Dennis R. Hoagland, professor of plant nutrition, University of California, Berkeley.

April 7: "Visitors from Cosmic Space," by Dr. Frederick C. Leonard, chairman, department of astronomy, University of California at Los Angeles.

May 5: "Some Aspects of the Cosmic-Ray Problem," by Dr. Carl D. Anderson, assistant professor of physics, California Institute of Technology.

May 7: "Did Man Originate in Africa?," by Dr. Robert Broom, South African biologist and paleontologist.

SYMPOSIUM ON THE STRUCTURE OF METALLIC PHASES

A SYMPOSIUM on the structure of metallic phases has been arranged by the department of physics at Cornell University for July 1, 2 and 3. The address of welcome will be made by the president of the university, Dr. Edmund E. Day.

The symposium will deal primarily with the "cooperative phenomena" in solids. The factors determining the stability of phases will be discussed from the standpoint of thermodynamics by Dr. J. C. Slater, of the Massachusetts Institute of Technology; statistics by Dr. J. G. Kirkwood, of Cornell University, and by Dr. F. Bitter, of the Massachusetts Institute of Technology, and the quantum theory by Dr. F. Seitz, of the University of Rochester.

The phenomena which will receive special attention are the changes of structure and ferromagnetism. The first topic is divided under two headings, phase changes of the first kind, characterized by the existence of a latent heat, and those of the second kind, for which there is only a jump of the specific heat at the transformation temperature. The most commonly known phase changes, melting and allotropic transformations, are of the first kind; the experimental material will be presented by Dr. E. R. Jette, of Columbia University. The formation of superlattices, to be discussed by Dr. F. C. Nix, of the Bell Telephone Laboratories, involves generally a phase change of the second kind. In all cases, the speed of the transformation has an important bearing upon its occurrence or non-occurrence, which is seen by the often large effect of annealing, and by phenomena such as the aging of alloys which show that statistical equilibrium is frequently attained only after a very long time. Dr. R. F. Mehl, of the Carnegie Institute of Technology, will discuss these questions and their relation to the diffusion in solids. The relation of ferromagnetism to the general theory of cooperative phenomena will be discussed by Dr. Bitter, who will also show how the ferromagnetic properties of alloys can be correlated with those of the pure metals. The relation of ferromagnetism to the crystal structure and especially the dependence of the magnetization on the direction relative to the crystal axes will be discussed by Dr. L. W. McKeehan, of Yale University, and by Dr. R. M. Bozorth, of the Bell Telephone Laboratories.

An effort is being made to correlate the various reports so that those not familiar with the field may gain a clear understanding of the topics discussed.