SCIENCE

Vol. 78

FRIDAY, OCTOBER 27, 1933

No. 2026

				Chemistry:		
ARTHUR B. LAMB						371

Obituary:

Clement Dexter Child: PROFESSOR ERNEST MER-	
RITT. Paul Ehrenfest: PROFESSOR G. E. UHLEN-	
BECK, PROFESSOR S. GOUDSMIT and DR. G. H.	
DIEKE. F. Fülleborn: PROFESSOR H. W. STUNK-	
ARD. Recent Deaths	377

Scientific Events:

The Tercentenary of the Astronomical Observatory at Leiden; New German Geographical Publications; Elections to the Royal Society of Edinburgh; The North American Council on Fishery Investigations; The Geological Society of America and Affiliated Societies 378

Scientific Notes and News 381

Discussion :

Honor Bestowed on Dr. David Eugene Smith by the Shah of Persia: FREDERICK E. BRASCH. Expeditions: Professor T. D. A. Cockerell. Alfalfa Yellows: Dr. L. F. GRABER and V. G. SPRAGUE. Conjugation in Rhizopus Inhibited by Female Sex Hormone: G. W. PLUMB and PROFESSOR L. W. DURRELL 384 Scientific Apparatus and Laboratory Methods: An Electrically Driven Contact Breaker: DR. ROB-ERT GESELL. A Tilting Blackboard for Geologic Special Articles: Evaporation, Transpiration and Oxygen Consumption by Roots: Dr. W. A. CANNON, DELZIE DEMAREE and Dr. EDITH A. PURER. Sprouting and Grafting Fractional Parts of Avocado Em-bryos: Dr. HAMILTON P. TRAUB and Dr. E. C. AUCHTER. New Data on the Deep Sea Fish Stylophthalmus and Idiacanthus: DR. WILLIAM BEEBE 388 Science News

SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. MCKEEN CATTELL and published every Friday by

THE SCIENCE PRESS

New York City: Grand Central Terminal

Lancaster, Pa. Garrison, N. Y. Annual Subscription, \$6.00 Single Copies, 15 Cts.

SCIENCE is the official organ of the American Associa-tion for the Advancement of Science, Information regard-ing membership in the Association may be secured from the office of the permanent secretary, in the Smithsonian Institution Building, Washington, D. C.

PROGRESS IN **CHEMISTRY**¹ A CENTURY OF

By Professor ARTHUR B. LAMB

DIRECTOR OF THE CHEMICAL LABORATORY OF HARVARD COLLEGE, PRESIDENT OF THE AMERICAN CHEMICAL SOCIETY

WHOEVER considers the history of the past 100 years can not but conclude that its outstanding feature has been the progress of mankind in science, that is, in the ordered knowledge of the world about us. In agreement with this, Mr. Dawes and his able co-workers have made the scientific sections of this exposition of unexampled completeness and excellence. Never have the achievements of science been so adequately portrayed at any exposition. Never anywhere has such a galaxy of scientific exhibits been gathered together, as is housed in this brilliant Hall of Science where we are now assembled.

Three thousand of the 18,000 members of our American Chemical Society have convened this week in Chicago from every corner of our country, to present and to discuss the most recent results of their

¹ A popular address (The President's Address) delivered at an evening meeting of the American Chemical Society at the Century of Progress Exposition in Chicago, September 14, 1933.

researches. At this evening meeting of our Society, within the confines of the Century of Progress Exposition, it is eminently fitting that the contributions of chemistry to the advance of science during the past one hundred years should be set forth. It is, then, all but inevitable that I should address you this evening on

A CENTURY OF PROGRESS IN CHEMISTRY

In 1833 chemistry was, so to speak, still in her swaddling clothes. Less than fifty years had elapsed since Priestley and Scheele had discovered oxygen and chlorine; since Volta had discovered how to produce electricity by chemical means; since Lavoisier had elucidated the age-old problem of the nature of fire, and since Dalton had demonstrated the existence of atoms and had shown how their relative weights could be ascertained.

In 1833, chemistry was a small and compact science.

New McGraw-Hill Books =

The Principles of Metallurgy

By DONALD M. LIDDELL, Weld and Liddell, Engineers and Economists, New York, and GILBERT E. DOAN, Associate Professor of Physical Metallurgy, Lehigh University. *Metallurgical Texts.* 626 pages, \$5.50

This new book attempts a complete recasting of metallurgical ideas in terms of the new discoveries of physics. The German and English viewpoints are fully recognized and reviewed. Emphasis is placed on properties, treatment, and fabrication, with less attention to methods of concentration. The physics of crystals and crystalline aggregates is stressed and the structure of metals is thoroughly explained in the light of modern conceptions arising from X-ray crystallographic research.

Thin Section Mineralogy

By AUSTIN F. ROGERS, Professor of Mineralogy and Petrography, Stanford University, and PAUL F. KERR, Associate Professor of Mineralogy, Columbia University. 310 pages, \$3.00

Gives a simplified outline of the methods used in the identification of minerals in thin sections of rocks. Part I deals with the principles of optics employed in examining minerals with the polariz-

ing microscope and discusses methods of identification. Part II furnishes a concise description of the optical properties of common rock-forming minerals.

The Mineral Industry

Volume 41—Covering 1932.

Edited by G. A. Roush. 930 pages, \$12.00

This latest edition of this comprehensive reference work covers every fact and development of importance in the mineral industry through 1932. The subjects covered include production and trade statistics, technical improvements, extensions of plant, new sources and uses, market conditions, prices, and other items of interest both domestic and foreign. This issue contains a great deal of information on foreign mineral resources and includes an important section on gold.

Electrons at Work

By CHARLES R. UNDERHILL, Consulting Electrical Engineer. 320 pages, \$3.00

Presents a clear, general treatment of electronic devices, their circuits, and industrial uses. Explanations are made as simple as possible without deviating from strict technical accuracy. The author tells what electrons are, how the various tubes and cells function in harnessing them, and how these devices are applied in industry and biology.

Send for copies on approval

McGraw-Hill Book Company

330 West 42nd Street, New York

Aldwych House, London, W.C.2