

# SCIENCE

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## CONTENTS

### *The American Association for the Advancement of Science:—*

*Asymmetric Syntheses and their Bearing upon the Doctrine of Vitalism:* PROFESSOR WILLIAM MCPHERSON ..... 49

*The Committee of One Hundred on Scientific Research:* PROFESSOR J. McKEEN CATTELL ..... 57

### *Scientific Events:—*

*Congress on Medical Education, Public Health and Medical Licensure; Addresses and Lectures; A School of Fisheries at the University of Washington* ..... 58

*Scientific Notes and News* ..... 61

*University and Educational News* ..... 63

### *Discussion and Correspondence:—*

*The Influence of Disease in the Extinction of Races:* DR. ROY L. MOODIE. *Vertical Filing for Pamphlet Collections:* DR. W. L. EIKENBERRY. *Phrenology:* DR. A. HRDLICKA. 63

### *Quotations:—*

*The Teaching of Science in Great Britain.* 65

### *Scientific Books:—*

*Waddell on Bridge Engineering:* PROFESSOR GEORGE F. SWAIN ..... 66

### *Special Articles:—*

*On the Electric Organs of Gymnotus carapus:* DR. ELMER L. SHAFFER ..... 67

*The American Society for Pharmacology and Experimental Therapeutics:* DR. JOHN AUER. 69

### *Societies and Academies:—*

*The Tennessee Academy of Science:* ROSCOE NUNN. *The Biological Society of Washington:* DR. M. W. LYON, JR. .... 71

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## THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE ASYMMETRIC SYNTHESSES AND THEIR BEARING UPON THE DOCTRINE OF VITALISM<sup>1</sup>

IN the history of the development of any science certain discoveries stand out boldly as epoch-making in importance. In the domain of organic chemistry the observations of Liebig and Wöhler (1826) that cyanic and fulminic acids have the same percentage composition, rank with this class of discoveries; for the establishment of this fact laid the foundation for the development of the principle of isomerism. Likewise to this class belongs the investigation of Wöhler (1828) in which he proved that urea results from the spontaneous rearrangement of ammonium cyanate, a discovery of no great significance in itself, but of the greatest importance when regarded from its bearings upon the ideas concerning organic compounds prevalent in the first quarter of the nineteenth century; for it carried with it the abandonment of the universal belief that compounds elaborated within the living organism can not be prepared synthetically by laboratory methods. Following Wöhler's classical discovery came those brilliant investigations of Pasteur (1844-49) on the tartaric acids which led to the development of our modern ideas concerning space-isomerism or stereo-isomerism.

Since it is my purpose to deal with a certain phase of stereo-isomerism I will re-

<sup>1</sup> Address of the vice-president and chairman of Section C, Chemistry, American Association for the Advancement of Science, New York, December, 1916.