

SCIENCE

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FRIDAY, APRIL 20, 1900.

THE ATOMIC THEORY FROM THE CHEMICAL STANDPOINT.*

CONTENTS:

<i>The Atomic Theory from the Chemical Standpoint:</i>	
DR. H. N. STOKES.....	601
<i>Some Objections to the Atomic Theory:</i> DR.	
FRANK K. CAMERON.....	608
<i>On Artificial Parthenogenesis in Sea Urchins:</i>	
PROFESSOR JACQUES LOEB.....	612
<i>A Curious Phase of Inter-stream Erosion in Southern Oregon:</i> OSCAR H. HERSHEY.....	614
<i>The Sixty seventh Annual Report of the Coast and Geodetic Survey:</i> E. D. P.....	616
<i>Scientific Books:—</i>	
<i>The Decennial Celebration of Clarke University:</i>	
C. S. PEIRCE. <i>Ellis's Analysis of the White Paints:</i> PROFESSOR JAS. LEWIS HOWE. <i>Davis on the Refraction of the Eye:</i> C. A. O.....	620
<i>Scientific Journals and Articles</i>	623
<i>Societies and Academies:—</i>	
<i>New York Academy of Sciences, Section of Astronomy and Physics:</i> DR. WILLIAM S. DAY.	
<i>Section of Geology and Mineralogy:</i> DR. THEODORE G. WHITE.....	624
<i>Discussion and Correspondence:—</i>	
<i>The Plumages and Moults of the Indigo Bunting (Passerina cyanea):</i> DR. JONATHAN DWIGHT, JR. <i>Indian Pictographs on the Dakota Sandstone:</i> CHARLES NEWTON GOULD. <i>Systematic Arrangement of Ore Deposits on a Geological Basis:</i> DR. CHARLES R. KEYES.....	627
<i>Notes on Inorganic Chemistry:</i> J. L. H.....	632
<i>Tobacco, Tobacco-pipes and Smoking:</i> A. S. G.....	633
<i>Scientific Notes and News</i>	634
<i>University and Educational News.....</i>	639

THE Atomic Theory is the most fundamental hypothesis of the chemistry of to-day and plays a greater part in this than in any other science, and to give an account of all the classes of chemical phenomena which it is sought to explain by its aid would require far more time than I have at my disposal. I shall limit myself to giving as briefly as possible the main facts which have led chemists to adopt it and to stating which of the various properties which have been ascribed to the atoms are, and which are not, essential to its use in chemistry, and what properties may be attributed to them, solely on the basis of chemical experiments.

The question whether any given portion of matter is continuous, absolutely the same throughout, even if infinitely divided, or whether it consists of particles separated by comparatively empty space, is, of course, almost as old as philosophic thought. The beginnings of chemistry lie still further back; the first man who questioned why wood burns, or why grape juice turns to wine, was an incipient chemist.

About the middle of the seventeenth century, Robert Boyle, who originated our present conception of element and compound, applied the atomic theory to chemistry, in-

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