been recently made by Piccini and are described in the *Gazetta Chimica*. By the reduction of a sulfuric acid solution of vanadium dioxid in the electrolytic cell in the presence of an alkali-sulfate an alum is formed. The ammonium vanadium alum is very soluble, those of rubidium and cesium much less so. By a similar reaction Piccini has obtained the cesium titanium alum, the first of the titanium sulfates to be formed. These salts are the first representatives of the alums among the elements of the fourth and fifth groups of the periodic system.

THE question as to the fusibility of platinum in a carbon heated furnace seems at least to have been definitely settled by Victor Meyer. A sheet of platinum completely enclosed in a mass of fire clay was fused to a globule in a blast furnace heated with gas carbon. In this case action of carbon or of furnace gases on the platinum was absolutely excluded. Under similar conditions an alloy of platinum with 25% iridium was unchanged.

IN the *Contemporary Review* for May, Dr. Alfred B. Wallace describes M. Elisée Reclus' proposed gigantic model of the earth, already noticed in this JOURNAL and argues that the construction of such a globe would be feasibile and desirable. But he thinks that the scale proposed by M. Reclus, $\frac{1}{100000}$ should be reduced by one-half. This would give an internal diameter of 167 feet, and a scale of almost exactly a quarter of an inch to a mile. The chief point made by Dr. Wallace is, however, that the model should be placed on the inner surface of the sphere.

ACCORDING to *Nature*, on July 2d the Second International Congress of Applied Chemistry will open in Paris. In addition to strictly technical questions, the Congress will discuss the analytical processes needed for the guidance of manufacturers and the benefit of the consumer. The proceedings will be conducted in ten sections, and, judging from the number and interest of the questions which will be brought up in each, there will be no lack of work. The sections represent such diverse subjects as chemical products, electro-chemistry, coloring matters and dyeing, pharmaceutical products, metallurgy and mining, surgar-refining, vintnery, brewing, distilling, agricultural chemistry, photography, alimentation and milk supply. The 'Association des Chemistes de Sucerie et de Distillerie,' which is organizing the Congress, has formed a committee, comprising several members of the French Government, a large number of members of the Institute, and many of the foremost men in science and industry in France. Further information with reference to the Congress can be obtained from M. Dupont, 156 boulevard Magenta, Paris.

UNIVERSITY AND EDUCATIONAL NEWS.

MRS. STANFORD has transferred to the trustees of Stanford University $2,500,000, the amount of the bequest left by the late Senator Stanford.

MR. JOHN D. ROCKEFELLER has agreed to give Vassar College $100,000 toward the erection of a new dormitory or a recitation hall.

AT a meeting of the trustees of Columbia University, on May 4th, Mr. E. A. MacDowell was appointed Professor of Music, and Dr. Franz Boas lecturer on physical anthropology. The name of the present faculty of the School of Mines was changed to that of the Faculty of Applied Science, which will be intrusted with the care of the School of Mines, the School of Chemistry, the School of Engineering and the School of Architecture. The building for the Department of Chemistry, to be erected as a memorial to the late Frederick Christian Havemeyer at a cost of about $450,000, by his sons and daughters, F. C., Theodore A., Thomas J., and Henry O. Havemeyer, Mrs. Katherine B. Belloni and Mrs. L. J. Louisa Jackson, and by his nephew, Charles H. Senff, was formally accepted by the trustees.

THE sum of $100,000 has been given by friends of Barnard College to pay the mortgage on the grounds, and secure the gift of $100,000 for building purposes pledged on condition that the mortgage should be paid by May 9th.

THE summer school of Union College will hold a session of six weeks at Saratoga, from July 6th to August 14th. Thirty courses are offered. The ninth annual session of the Wisconsin summer school will be held at the University for six weeks, from July 6th to August 14th,

1896. Thirty-seven courses of instruction will be offered in fourteen departments.

THE announcement is issued of the Fifth Annual Summer School at the University of Minnesota for the four weeks between July 27th and August 21st. The school is organized in two sections: University and Elementary. The University section offers 19 courses, of which 10 are in the Sciences, as follows:

Botany, Prof. MacMillan, ...2 Courses.
Chemistry, Prof. Frankforter,.....2 Courses.
Physics, Prof. Jones,.....2 Courses.
Physiography, Mr. Goode,.....2 Courses.
Physiology, Prof. Nachtrieb,.....1 Course.
Physiological Psychology, Mr. Gale,...1 Course.

Special courses of lectures will be delivered daily. Four Educational Congresses will hold sessions during the month, viz.: Institute instructors; State Normal School officers; City Superintendents, and the Society for Child Study. The School is authorized under the anthority and supervision of the State Department of Public Instruction. Tuition is free.

PROF. HAROLD B. SMITH, at present professor of electrical engineering in the Purdue University, Lafayette, Ind., has been elected to a new chair of electrical engineering, established in the Worcester Polytechnic Institute.

AMERICAN students going abroad for the summer may be interested to know that there will be held at Jena, from the 3d to the 15th of August, a *Ferienkurse*, including lectures on astronomy, botany, physics, zoölogy, hygiene, physiology, psychology, philosophy, pedagogy, modern languages, literature and history.

A COURSE of lectures on colonial botany is offered during the present summer semester at the Botanical Garden and Museum of Berlin, by Profs. Engler, Schumann, Volkens and Urban, and Drs. Warburg, Gilg, Lindau, Perring, Dammer and Gürke. The course occupies two hours per week and is given without charge.

WE learn from the *Academische Rundschau* that a regulation has been issued allowing women to attend lectures at the University of Berlin after securing permission from the Minister of Public Instruction and the instructor. The University of Munich has given one woman permission 'experimentally' to attend courses in geology and paleontology. Special courses for women, which include botany, physics and chemistry, have been arranged at the University of Göttingen.

THE sum of 460,000 Marks has been appropriated by the government for the construction of a library building for the University of Freiburg.

DISCUSSION AND CORRESPONDENCE.

PRINCIPLES OF MARINE ZOÖGEOGRAPHY.

PROF. THEO. GILL* has given a very interesting comparison of his own views of zoögeographical division of the earth's surface, especially of the oceans, and those set forth by myself in my 'Grundzüge der Marinen Tiergeographie.' This comparison is the more interesting since we agree in many points with each other. Nevertheless, there are some differences which, as Prof. Gill very properly states, are chiefly due to the different starting points. The discussion is consequently directed at once in a particular direction, and upon this I wish to lay the greatest stress: namely, upon the difference between my method of investigation and that generally employed hitherto. While the method of Prof. Gill, and of almost all the other students of zoögeography, is an inductive one, *i. e.*, constructing zoögeographical divisions according to the actual distribution of animals, I make use of the deductive method, considering merely the physical laws that govern the distribution of animals. In what follows I shall state briefly the reasons which have induced me to urge a change in the method of zoögeographical research.

1. Our knowledge of the actual distribution of marine animals is extremely incomplete; we do not know the exact limits of the range of *most* of the species, so that it is impossible at present to get a correct idea of the general features of their distribution, and of the assemblage of the different forms of animals in any particular locality.

2. We cannot derive any divisional limitations of general value from a particular group

*Science N. S. III., No. 66, April 3, 1896, p. 514–516.