

Ad. 26th April 1906.

Reg. 30th April 1906.

Reg. 4th May 1906.

12. University of Pennsylvania—Dr. Gray.  
 13. Royal College of Science, London—Professor Skeats, D.Sc.  
 14. University of Manchester—A. Mica Smith, B.Sc.  
 15. University of Sydney—Hon. Sir Arthur Renwick, B.A., M.D., Vice-Chancellor of the University; Professor T. W. E. David, B.A., F.R.S., and Professor Anderson Stuart, M.D., LL.D.  
 16. University of London—Professor W. A. Osborne, M.B., D.Sc.  
 17. University of Toronto—W. J. Cross, M.D.  
 18. Trinity College, Toronto—The Very Rev. G. O. Vance, M.A., D.D.  
 19. Victoria University, Toronto—W. H. Fitchett, LL.D.  
 20. University College, London—W. Sutherland, M.A.  
 21. McGill University, Montreal—T. P. Strickland, M.Sc., and T. Tait.  
 22. Dalhousie College, Halifax—F. J. A. McKittrick, B.Sc.  
 23. British Museum—Professor T. G. Tucker, M.A., Litt. D.  
 24. University of Dorpat—Professor Alexander Vasiljev.  
 25. University of Dublin—Hon. W. H. Irvine, M.A., LL.D., and Alexander Leeper, M.A., LL.D.  
 26. University of Edinburgh—David Orme Masson, M.A., D.Sc., F.R.S.  
 27. Royal College of Physicians—H. Maudsley, M.D.  
 28. University of Aberdeen—John Farland, M.A., LL.D.  
 29. University of Glasgow—Professor M. MacCallum, M.A., LL.D., and Professor C. S. Carslaw, M.A., D.Sc.  
 30. University of Cambridge—His Grace the Archbishop of Melbourne, M.A., D.D.

A series of addresses was then delivered by the several delegates. Professor Ishikawa, of Japan, and Professor Vasiljev, of Russia, spoke on behalf of foreign universities. The Japanese delegate, on coming forward, had a most enthusiastic reception. Professor Vasiljev, who was also received with a great ovation, referred to the time of political unrest and turmoil through which Russia was now passing. But science, he said, had nothing to do with political crises or strivings for power. It pursued its course of progress despite such happenings. Science knew no national distinctions, racial antipathies, or political boundaries. It was the emblem of peace. It was, therefore, with the greatest pleasure on this new soil of Victoria that he extended the hand of friendship to his Japanese colleague. The announcement was received with great cheering.

Professor Ishikawa, who was sitting among the other delegates, promptly rose, and, bustling past his fellow-delegates, made his way to the platform on which Professor Vasiljev was standing, and grasped his hand with right goodwill. The Russian delegate responded with equal warmth.

The representatives of the two nations who were recently engaged in a death struggle, standing hand in hand, made a dramatic picture which strangely stirred the vast assemblage, and the incident was greeted with tremendous cheering.

Subsequently the woman delegates, past and present, gave a reception. In the evening the delegates were entertained at dinner at the Masonic Hall, and the students had a jolly, rollicking time in connection with the funniest torchlight procession ever seen in the streets of Melbourne.

## UNIVERSITY JUBILEE.

### CLOSING DEMONSTRATIONS.

MELBOURNE, April 29.

Not the least successful of the functions in the celebration of the jubilee of the Melbourne University and the Public Library was the conversation held last night under the joint auspices of the governing bodies of those two institutions. The Governor (Sir Reginald Talbot) attended with a viceregal party, and the Premier had sufficiently recovered from his indisposition to join with other members of Cabinet. Among the guests the church, political, military, and civil professions were all thoroughly represented, and the gathering was generally one worthy of the occasion. No room was given to speechmaking, and the guests were allowed to enjoy without any oratorical distractions a thorough survey of the interesting contents of the brilliantly lighted galleries.

A solemn thanksgiving service, to mark the conclusion of the university jubilee celebrations was held this afternoon in St. Paul's Cathedral. The pews, aisles, and even the sanctuary were thronged. The Governor attended. The lessons were read by Professors Allen and Namson, and the Rev. A. G. B. West was the preacher.

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We have received a neatly prepared brochure containing the papers set for examination in primary theory of music at the Adelaide University between 1897 and 1905 inclusive. The work should be valuable to teachers and students of music.

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## IS IT RADIUM?

### INTERESTING MINERAL DISCOVERY.

#### CARNOTITE AT OLARY.

#### 'STRONGLY RADIO-ACTIVE.'

A mineral discovery that may prove valuable has just been made at Olary, on the Broken Hill line. Reports of a somewhat similar find affected the share market yesterday relative to the Peninsula copper mines. Olary is 257 miles from Adelaide and 103 miles from Petersburg. On Thursday morning the Commissioner of Crown Lands (Hon. L. O'Loughlin) handed the following report from the Government Geologist (Mr. H. Y. L. Brown) to the press:—

"I have just received from Mr. A. Smith some specimens of a mineral, which has been analysed by Mr. Chapman at the School of Mines, and determined by him as carnotite. It comes from a lode located on a lease held by Mr. Smith, in the Olary district. Carnotite contains:—Uranium oxide, 62 to 65 per cent.; vanadic acid, 19 to 20 per cent.; and potash—both the former being rare compounds. The importance of this discovery centres in the fact that pitchblende (oxide of uranium) is the mineral from which the rare substance radium is obtained. The owner of the lease has arranged to provide samples of the ore for examination and analysis. I propose to visit the locality at an early date."

Mr. Brown subsequently added this postscript:—"Since handing in the above a sample of this mineral was forwarded to Professor Bragg, of the University of Adelaide, who on experiment declares it to be strongly radio-active."

—Mr. Brown at Olary.—

The Commissioner of Crown Lands has been out of town for several days, and he was absent when the report was made. Mr. O'Loughlin, however, was communicated with, and Mr. Brown received instructions to catch the Broken Hill express on Wednesday afternoon to make a complete examination, and report concerning the extent of the deposits. The Government Geologist therefore reached Olary on Thursday morning, and the Commissioner expected to hear from him during the day. Up till a late hour last night no message had been received, and it was presumed that the wire which was sent had not reached him.

—Chat with Professor Bragg.—

Professor Bragg was busy lecturing at the University of Adelaide on Thursday morning, but he had a telephonic conversation with a reporter concerning the discovery. He said the find was exceedingly interesting, but he preferred to wait for a complete analysis of the specimens before committing himself to a definite opinion. The professor was not pessimistic about the matter. He remarked that the few details that had been received were strikingly suggestive to mineralogists, but he seemed to strike a note of caution.

Professor Bragg was seen again at the Observatory in the evening, and he said:—"The matter is really one of simple arithmetic. Radium is found in uranium minerals, and the proportion of radium to uranium in almost all the substances hitherto investigated is always all the same. The reason is probably that radium is a product of uranium, and that where the mineral has been undisturbed for countless years the uranium has had time to form slowly the radium which goes with it."

"In almost every case which has been investigated radium is found in proportion of two parts radium to a million parts of uranium. Consequently it is no difficult matter to calculate the probable value of the radium in any uranium mineral, supposing this law to hold in fresh cases, as it has been found to hold already in dozens of others. Carnotite contains a large proportion of uranium, and therefore if any big quantity of carnotite can be found it is probable that considerable radium will go with it."

"Radium is worth something like £5 to the milligram, or roughly £100,000 an ounce; but it is, of course, a costly process to extract it. These figures give the approximation to real value of any find. In regard to the present discovery nothing can be said until one hears how much of the carnotite is actually available."

—Mr. O'Loughlin "Interested."—

The Commissioner of Crown Lands was asked to express an opinion about the find, and he replied:—"I am not a mineralogist, as you know, but I am deeply interested in the discovery, because the Government Geologist is earnest about it. He seems exceedingly enthusiastic, and there must be something in the discovery if Mr. Brown is so optimistic. He has lost no time in getting to the spot, and there is a splendid indication of a good thing."

"How were the specimens discovered?"  
—"I don't know. We have had them for a week or more."

"Who sent them to Adelaide?"—"They came from Mr. Smith, a prospector on the Olary field. There has been a bit of a gold rush there lately. Smith sent down a few samples of the mineral for assay, and they were immediately sent to Mr. Chapman, of the School of Mines, for assay. Mr. Brown seemed so earnest about the matter that I have become interested. By Jove! wouldn't it be a good thing for South Australia? Radium! How much is it worth an ounce? Scores of thousands of pounds, I believe the papers said the other day."

"Have you heard from Mr. Brown?"  
—"No; but I have sent him a wire, asking him to tell me the definite locality and his genuine opinion about the find."

—The School of Mines Analysis.—

Mr. W. S. Chapman, analyst at the School of Mines, who treated the specimens, which were taken from a point on the Outalpa Run, about 20 miles east of

Olary, is awaiting with interest the return of the Government Geologist (Mr. H. Y. L. Brown) from the scene with further specimens. The pieces of mineral which he analysed contained the carnotite in only very small quantities, and he had some difficulty in detaching the substance from the rock. The grains lay in a thin layer of bright yellow powder on the surface of the stones, and had to be scraped off to be treated. Dana's "System of Mineralogy," first appendix, 1899, states that "Carnotite occurs as a yellow crystalline powder, or in loosely cohering masses, easily separated by the fingers." The small quantity from Olary is of the former class. The radio-activity of this substance has been investigated by M. and Madame Curie, whose achievements in their laboratory in Paris have made the scientific pair world-famous. M. Curie met a tragic death a fortnight ago by being run over in the streets of Paris by a heavy dray. Up to 1899 the mineral had only been identified from one locality—Montrose County, Colorado. The name "carnotite" was derived from that of M. Adolphe Carnot, a famous French scientist.

—Radio-Active Substance at Wallaroo.—

What renders the discovery of radio-active material the more interesting is that something of the same kind has been found on the property of the Wallaroo and Moonta Mining Company. Of course, it may yet be proved that, although of great scientific value, these discoveries possess no commercial possibilities. Almost by accident the assistant chemist of the company learned that a material which had been brought from the mines was radio-active. Knowing the importance of radium a sample was sent to Professor Bragg, but it was not of sufficient bulk to allow of a definite expression of opinion, and a larger sample is now being procured. The material is obtained from various parts of the mine; but even should it be found to yield radium the problem would be to discover a mechanical process whereby separation could be successfully performed. The manager of the mines has been asked to include in his next fortnightly report the results of the investigations, so that the shareholders may be informed.

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## UNIVERSITY EXAMINATIONS IN MUSIC.

The University of Adelaide, which ten years ago entered into an arrangement with the Associated Board, London, by which that institution conducted the board's local examinations in music, has resolved to discontinue the system on the expiry of the second period of five years, in December, 1906. The committee appointed to advise the council was able to show the great advantages, to the University and the people alike, of the South Australian University conducting its own examinations from the recognised centre of education in the State. It was encouraged doubtless by the success attending the operations of the sister University in Victoria. The May entries just completed show again a marked increase, amounting to over 50 per cent, on those of last year, and make the number of candidates for the year 1,209, as contrasted with 481 in 1902-3, the first year of the scheme. Representatives from the University of Adelaide have been instructed (says the "Argus") to meet the Conservatorium committee and the Ormond professor during jubilee week, to discuss how far it may be possible for the two schools to act in concert. If some measure of co-operation is found possible, covering as it will Victoria, South Australia, Western Australia, and Tasmania, a considerable step will have been taken towards the establishment of an "associated board" for Australia, which might be expected to do the same splendid service for the country that the Associated Board in London has done at home—directing extramural and secondary education in music, and applying to purposes of musical education in Australia the legitimate profits, amounting annually to a large sum, and which at present are sent to London, not only to the Associated Board, but to institutions which do not hold the same status or recognise any public responsibility whatever.