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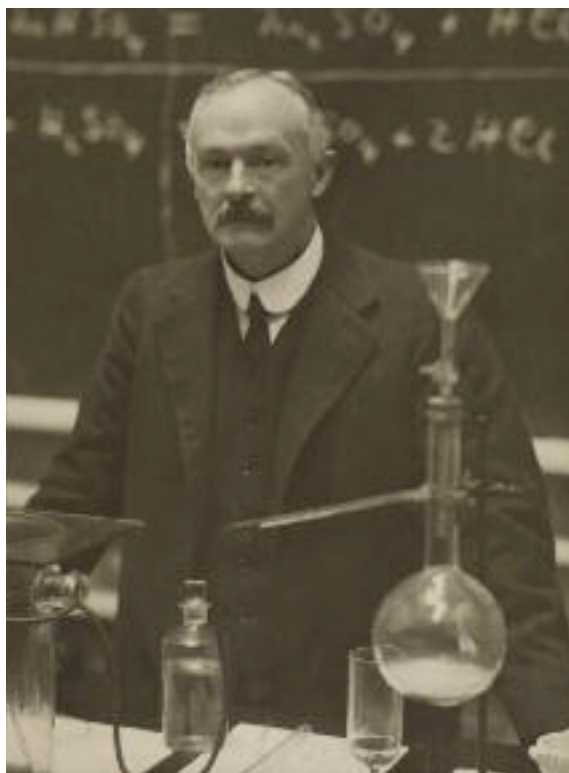
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# Our chemical cultural heritage

## Masson and Rivett (1858–1961)

PETRONELLA NEL

A new phase for chemistry at the University of Melbourne began in 1886, featuring David Masson and Albert Rivett, who also had instrumental roles in the birth of CSIRO.



**Figure 1.** David Orme Masson. Photograph by Kricheldorf, c.1920s. UMA/I/1438, University of Melbourne Archives.

### (Sir) David Orme Masson (1858–1937)

Masson was Professor of Chemistry at the University of Melbourne from 1886 to 1923. As well as being a teacher and researcher, he contributed to Australian scientific and public life. He was instrumental in the establishment and governance of many important bodies including the Council for Scientific and Industrial Research (CSIR), which was to become the Commonwealth Scientific and Industrial Research

Organisation (CSIRO). Masson supported Antarctic research for 25 years, beginning with Douglas Mawson's expedition of 1911.

Born and educated in England at the University of Edinburgh, he was a noted lecturer and researcher. After the death of Kirkland in 1885, chemistry became part of the science degree, along with the appointment of Masson as professor in 1886. His research work included the theory of solutions, and the periodic classification of the elements. Much of his research was done in collaboration with talented students such as David Rivett and his own son Irvine Masson. Masson was knighted in 1923. He is commemorated by the Masson Theatre and Masson Road at the University of Melbourne, a mountain range and island in Antarctica, a portrait painting by William McInnes in the foyer of the School of Chemistry, the Masson lectureship from the Australian National Research Council, and the Masson Memo-



**Figure 2.** Cleveite sample and helium in a discharge tube (presented by Sir William Ramsay). Cat. nos 155a & b, School of Chemistry Collection, University of Melbourne. Image credit: Petronella Nel.

rial Scholarship from the RACI (Radford 1978, Weickhardt 1986).

The cleveite sample and helium in a discharge tube (Figure 2) represent the enduring friendship and ongoing scientific collaboration and mentoring that developed between David Orme Masson and William Ramsay, one of England's leading chemists at the time. Masson's connection to William Ramsay started in 1880 when he was appointed as Ramsay's assistant at the University College of Bristol. In 1895, Masson was visiting England when Ramsay announced the isolation of helium, which he achieved using cleveite. Cleveite is a variety of uraninite, which contains at least 10% rare earth elements. Helium formed by the radioactive decay of uranium is trapped within the cleveite, but is released with the addition of acid. In 1904, Ramsay received the Nobel Prize for the discovery of the other noble gases. Masson's son Irvine Orme Masson later studied under Ramsay and was his last personal assistant.

### (Sir) Albert Cherbury David Rivett (1885–1961)

Rivett was born in Tasmania and grew up in Victoria. A brilliant student, he won scholarships to Wesley College, the University of Melbourne and Queen's



Figure 3. A.C. David Rivett (School of Chemistry).

College. Masson became his friend and mentor, persuading him to switch from medicine to science. Rivett received the Victorian Rhodes Scholarship for 1907. At Oxford he earned a BA and BSc (research degree), both with first-class honours. He spent six months at the Nobel Institute, Stockholm, under Svante Arrhenius, a noted figure in physical chemistry. In 1911, Rivett returned to the University of Melbourne and took up a lectureship in chemistry. He married Stella Deakin, daughter of the former Prime Minister Alfred Deakin. Rivett was associate professor from 1920 to 1924 and succeeded Masson as professor of chemistry from 1924 to 1927. Although an outstanding teacher, his major achievement was his involvement in building CSIRO. Rivett was knighted in 1935. He is commemorated in the name of an ACT suburb, the David Rivett Medal, the CSIRO Officers Association and a portrait by Max Meldrum held at CSIRO in Canberra (Radford 1978, Schedvin 1988).

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Ernst Johannes Hartung will feature in the next instalment of this series.

### REFERENCES

- Nel P. 2009, Rediscovered: An introduction to the School of Chemistry Collection. *University of Melbourne Collections* 4, 28-33 <[www.unimelb.edu.au/culturalcollections/research/magazine.html](http://www.unimelb.edu.au/culturalcollections/research/magazine.html)>.
- Radford J.T. 1978, *The Chemistry Department of the University of Melbourne: Its contribution to Australian science 1854-1959*, Hawthorn Press, Melbourne.
- Schedvin C.B. 1988, 'Rivett, Sir Albert Cherbury David (1885-1961)', *Australian Dictionary of Biography*, Volume 11, Melbourne University Press, Melbourne, pp. 398-401.
- Weickhardt L.W. 1986, 'Masson, Sir David Orme (1858-1937), chemist, professor and man of science', *Australian Dictionary of Biography*, Volume 10, Melbourne University Press, Melbourne, pp. 432-5.