William Frederick Petterd (1849–1910).

Mr. W. F. Petterd was a shoemaker by trade, and the possessor of a very flourishing business in Tasmania. He was a native of Hobart, but for many years had lived at Launceston. As an amateur he seems to have always been interested in scientific pursuits and a keen collector of objects of various kinds. He was well known to conchologists, and as long ago as 1879 wrote a monograph on the land shells of Tasmania. Through making assays for prospectors he came into touch with the newly developed mining districts of Tasmania, and in some of these he had substantial interests. This naturally led him to the collecting of minerals, and the enthusiasm with which he worked at this is well shown by his 'Catalogue of the Minerals of Tasmania', reprinted from the 'Papers and Proceedings of the Royal Society of Tasmania'. By the constant addition of new localities and species of Tasmanian minerals this catalogue grew from 72 pages in the first edition of 1893 to 221 pages in the third edition of 1910; and the number of recognized Tasmanian species and varieties was increased to 356. In addition, he described several new species, some of them perhaps on rather slender evidence, but one—dundasite—has since been recorded from three localities in the British Isles. His valuable collection of minerals he bequeathed to the Royal Society of Tasmania, and it is now deposited in the Tasmanian Museum at Hobart.

Emil Philippi (1871–1910).

Dr. E. Philippi was born at Breslau on December 4, 1871, and died at Assuan on February 26, 1910. For a short time he was an assistant in the geological department of the Berlin Museum, and in 1907 was appointed Extraordinary Professor of Geology and Palaeontology in the University of Jena. He had, however, travelled extensively, and as geologist took part in the German Antarctic Expedition of 1901–3. Although most of his papers were on geology and palaeontology, a few related to minerals, the most important being on the origin of dolomite, published in 1899 and 1907. (*See* Geographen-Kalender, 1911, p. 270.)

Jakob Maarten van Bemmelen (1830–1911).

After a chemical training, J. M. van Bemmelen became in 1856 a teacher in the agricultural school at Groningen. This led him to his life's work on the study of soils, which he attacked from the point of view of colloidal chemistry. From 1874 to 1900 he was Professor of

Inorganic Chemistry in the University of Leiden. Many of the results of his work on colloids are only now being appreciated by chemists and mineralogists. He also discussed the accumulation of iron and the origin of chalybite and vivianite in peat-bogs; and quite recently, at the age of eighty, he gave (Zeits. Anorg. Chem., 1910, vol. lxvi, pp. 322–357) a detailed account of the various modes of weathering of silicate-rocks. (*See* H. E. Boeke, Centralblatt Min., 1911, pp. 225–226.)

Jacobus Henricus van 't Hoff (1852–1911).

The celebrated Dutch chemist, J. H. van 't Hoff, was in 1878 appointed Professor of Chemistry, Mineralogy, and Geology in the University of Amsterdam, a post held by him until his call to Berlin in 1896, as director of a research laboratory under the Prussian Academy of Sciences and as Honorary Professor of Physical Chemistry in the University. It was since he went to Berlin that he applied himself and directed his pupils in the systematic study of the formation of oceanic salt-deposits, with special reference to those of the Stassfurt area. The important results of this work were given in a series of fifty-two papers between the years 1897 and 1908, and a collected account has been published under the title 'Zur Bildung der ozeanischen Salzablagerungen' (2 parts, 1905 and 1909). The problem dealt with the equilibrium between different salts present in solution, and the determination of the limits of stability of the various double salts. A large number of minerals were so prepared artificially, and a new species (vanthoffite) discovered, but unfortunately the accounts of the experiments were unaccompanied by crystallographic descriptions of the materials obtained.

Henry Wurtz (1828–1910).

Dr. Henry Wurtz was a contemporary of W. P. Blake (see above, p. 157) at the Sheffield Scientific School of Yale University, where in 1851 he was teacher of chemistry. The mineral wurtzilite was named after him by Blake. In 1853 he was chemist and mineralogist on the New Jersey Geological Survey, and in 1858 Professor of Chemistry in the National Medical College at Washington. The minerals animikite, grahamite, huntilite, and melanolite were described by him.