chemistry at Armstrong (now King's) College, Newcastle upon Tyne. At Easter 1920, he succeeded the late Prof. Crossley as Daniell professor of chemistry, King's College, London, where he remained until his retirement in 1938.

During the First World War, he was engaged upon problems connected with tracer ammunition, and for these services received the O.B.E. in 1918. In that year also he was elected a Fellow of the Royal Society. He was a Fellow of both University College and King's College, London, and an honorary D.Sc. of Queen's University, Belfast.

Prof. Smiles rendered considerable service to the chartered chemical bodies. A Fellow of the Chemical Society from 1898, he served as secretary during 1912–20, and was a vice-president during 1920–23. He became a Fellow of the Royal Institute of Chemistry in 1916, was examiner in general chemistry for the associateship during 1920–24, and a member of Council during 1931–35 and 1936–39.

In 1920 he married Minnie, youngest daughter of the late G. N. Patterson, of Newcastle, who survives him. During most of the war and post-war period, Prof. and Mrs. Smiles lived at Inverness, but had quite recently returned to Tunbridge Wells, where they had resided during his tenure of the King's College professorship.

Almost all Prof. Smiles's published papers, numbering more than a hundred, are concerned with organic compounds of sulphur (or selenium). The only exceptions are those with Moissan on silicon and silicon hydrides; that with Knorr on β-methylmorphimethine; and his last three papers. His studies touched on many different types of sulphur compounds, including sulphonium bases, sulphoxides, sulphinic and sulphenic acid derivatives and cyclic compounds. Typical investigations were those on disulphoxides, which were shown to be thiolsulphonic esters; and on the two isomeric sulphides of β-naphthol. As early as 1911, he had been interested in the problem presented by the β-naphthol sulphides; with his collaborators he elucidated it in a long series of papers, and showed the interconversion of the two compounds to be a special example of what came to be called 'the Smiles' rearrangement'. His last three papers were concerned with other examples (not sulphur compounds), including aryl salicylates and *o*-carbamyl derivatives of diphenyl ether. Appropriately, all this work was adequately summarized, just after Prof. Smiles's retirement, in the *Annual Report on the Progress of Chemistry* (36, 197; 1939).

Except the work published with Moissan in the *Comptes rendus* of the Paris Academy of Sciences and a few papers in the *Berichte*, all Prof. Smiles's papers appeared in the *Journal of the Chemical Society*, its *Proceedings* and *Transactions*. His only published book was "The Relations between Chemical Constitution and some Physical Properties", published in 1910. It was never reprinted and copies are not easy to come by. Although progress both of accumulation of data and of underlying theory has left the book behind, it still has interest as an introduction to its subject.

Valuable as his research work was, it is even more as a teacher that Prof. Smiles will be remembered. In the period 1917–19 at University College, he lectured on systematic inorganic chemistry as well as organic, and at King's College he always maintained the excellent practice of lecturing on inorganic chemistry to the first-year students. He was accustomed to say himself that one of the most difficult tasks of those in academic life was to maintain a proper balance between research and the teaching and training of students. In his later years, he tended to shift the balance towards the teaching side, and indeed to regard research as a part of student training. He came to have a fine reputation as a teacher, and to have been a student under Smiles was a recommendation in itself.

His interest in his students did not stop short with their academic life; he was a kind and wise adviser on their choice of employment, and took a deep and practical interest in their subsequent careers. The affection and esteem in which he was held by his old students and colleagues were evident on his retirement, and are simply expressed by the inscription in the watch which they presented to him in the autumn of 1938: "Samuel Smiles—Teacher and Friend".

Reginald Child

Prof. A. Mittasch

On June 4 last, Prof. Alwin Mittasch died in Heidelberg in his eighty-third year. He started as a chemist, studied the then mysterious phenomenon of catalysis under Ostwald and was later commissioned by Carl Bosch in Ludwigshafen to find a method of putting into commercial production Fritz Haber's experiments on the catalytic formation of ammonia from nitrogen and hydrogen. In this he was fully successful. Later he broadened his studies and thoughts about catalysis so considerably that in 1948 he published a book under the title, "Von der Chemie zur Philosophie". The philosophical aspect of catalysis is release (*Auslösung*)—a relation between cause and effect which does not obey energetic laws, such as, for example, the action of the will. These trains of thought brought Mittasch into contact with Robert Mayer, and he published a great number of essays dealing with Mayer's writings. In the last year of his life Mittasch published two books of considerable importance—"Friedrich Nietzsche als Naturphilosoph" and, quite recently, "Erlösung und Vollendung". Mittasch enjoyed the rather exceptional honour of being made member of the Heidelberg Academy of Science without being a university professor, but, on the occasion of his eightieth birthday, the title professor was awarded to him. Up to his last illness, which led to his death within a few weeks, the old scholar was in the full possession of his mental powers and incessantly busy writing articles and answering, mostly by return mail, the letters of a wide circle of friends which his enthusiastic temperament and his kind nature attracted to him.

Miss Henrietta Jex-Blake

Miss Henrietta Jex-Blake, who died on May 21 at the age of ninety, was principal of Lady Margaret Hall, Oxford, during 1909–21. Her father was Dr. T. W. Jex-Blake, Dean of Wells and formerly headmaster of Rugby. After being headmistress of St. Margaret's, Polmont, from 1889 until 1909 she succeeded Dame Elizabeth Wordsworth, the first principal of the Hall, who had held office for thirty years.

The demand among women for an Oxford education had, throughout the Hall's history, led to a steady expansion in its numbers, and Miss Jex-Blake's term of office coincided with a marked increase in this demand. Under her a considerable building pro-

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