

## OBITUARY.

We very much regret to record the loss of

SIR WM. CROOKES, O.M., D.Sc., LL.D., F.R.S., Vice-President of the Society.

Sir William Crookes passed away on April 4th in his eighty-seventh year. His connection with the Society began at the very close of his singularly fruitful life, in which he had enriched science in many branches by discoveries of an exceedingly important character. Both his acute powers of observation and his wonderful skill as an experimenter continually kept him in the position of a pioneer, particularly in those branches of science where physics and chemistry are closely allied. In his hands the use of the spectroscope became one of the most valuable instruments which the chemist possesses, and by its aid he was successful in elucidating many problems connected with the so-called rare elements, some of which are now important commercial products. It would be difficult, indeed, in a short notice of this character even to refer to the chief objects of his energies. He was interested in distinctly practical subjects as well as those which lay more in the domain of chemical theory, and, amongst others, dealt with the subjects of the world's wheat supplies, water purification and examination, the treatment of sewage, dyeing, and the disinfection of cattle in disease, and his authority and eminence were recognised by the large number of universities which conferred on him their honorary doctorates, and by the numerous foreign societies which were themselves honoured by adding his name to their list of honorary members.

He will be specially remembered in the glass industry for his work on eye-preserving glasses for spectacles. The researches of Sir William in this direction were undertaken after he had passed his eightieth year, the results being published at the end of 1914. The object of the research was to obtain a glass which would shield and preserve the eyes of furnace operators from certain of the rays of light given off by the furnace. In this connection, he visited the works of Messrs.

Nuttall at St. Helens, and Mr. Dixon-Nuttall has informed the writer that Sir William was there on several occasions, where he was provided with a dark-room in order that he might develop the plates after his series of spectroscopic photographs of the light given off from the molten glass. Once or twice he spent Saturday afternoon and evening late into the night at the works, and was there again on the Sunday morning, in the endeavour to complete his measurements.

Sir William was never able to attend a meeting of the Society owing to the state of his health, but the Secretary received several communications from him which indicated his interest in its work.

MR. J. H. CROWTHER, manager of Messrs. R. Waddington and Sons, Mexborough, and of Messrs. Turner's Glass Co., Ltd., Worksop.

Mr. Crowther, who died on May 31st, at the age of fifty-two, was one of the original members of the Society. More than that, he knew of the project for some time in advance of the initial meeting, for it was his enthusiasm which in a very great measure helped in his own district to stimulate the interest of manufacturers and men in the subject of the application of science to the glass industry. It was, indeed, Mr. Crowther who first brought the writer into contact with the industry, for he brought the first questions concerning difficulties in glass making to the notice of the University of Sheffield Scientific Advisory Committee, of which the writer was Secretary, and a few months later he invited the writer to his home in Mexborough to meet a number of the local Trade Union leaders to discuss what could be done to form classes of instruction for the workers. With the enthusiastic help of Mr. Crowther, the first class was formed in Mexborough, and throughout the three and a-half years which followed he was the faithful shepherd, or perhaps father, of all the students in that neighbourhood. Although his early education had been but scanty, he himself, as a member of the classes, achieved success by sheer hard work, and his constancy and his enthusiasm were a joy and inspiration to his teachers.

By his fellow-students and associates a small fund has been inaugurated to establish a prize, called the Crowther Prize, to be awarded to the most successful student each year who attends the Saturday or evening courses in glass technology held at any centre under the auspices of the Sheffield scheme.