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ANIL BHUSAN BISWAS

(1917—1979)

Elected Fellow 1977

The name of Professor ANIL BHUSAN BISWAS will remain fresh in the memories of his numerous colleagues, friends and students in India as well as abroad. Professor Biswas was not only an outstanding scientist and devoted teacher, but also an exceptionally generous and straightforward (rather blunt) person who enjoyed doing the maximum good to all around him in the spirit of a true 'Karmayogi'. His passing away on October 23, 1979 in Bombay due to heart failure has been a great loss to the scientific community the world over. To his students and friends in particular, he will always be remembered as a simple, self-effacing individual who not only loved and enjoyed to work extremely hard in his own scientific pursuits, but who also took an exceptional pleasure and pride in training younger people at all stages of their lives.

EARLY LIFE, EDUCATIONAL AND SCIENTIFIC CAREER

Born on January 12, 1917, Professor Biswas received his school and university education in Dhaka, obtaining a first class MSc degree in 1940. He was initiated into research work by Sir J C Ghosh at the Indian Institute of Science, Bangalore and was awarded the PhD degree based on his studies on the 'Electrochemical and Photochemical Properties of Colloidal Complexes' in 1944. After carrying out some post-doctoral work on catalysis (Fischer Tropsch synthesis), he joined as Lecturer in chemistry in the University of Delhi in 1945 and continued there till 1951. In between, the award of a government of India Scholarship enabled him to join as Research Fellow at the California Institute of Technology in USA in 1948 and to work for two years in the research group of Professor Linus Pauling on crystal and molecular structure determination of amino acids and peptides, i.e., building units of protein molecules.

In 1951, Professor Biswas joined the newly founded National Chemical Laboratories as SSO(I) and within two years, rose to the position of Assistant Director in charge of Physical Chemistry Division of the Laboratories. His perennial enthusiasm as an exponent of Chemistry took him in 1967 as a Senior Professor to IIT, Bombay, a position in which he continued to contribute his best till the last day of his life.



CONTRIBUTIONS TO RESEARCH AND DEVELOPMENT

Author of about 150 original research papers and reviews, he supervised the doctoral work of more than 50 students. The major research interests which engaged the attention of Professor Biswas for nearly four decades were in the areas of crystal and molecular structure determination by X-ray and neutron diffraction ; surface science and catalysis ; monolayer properties of long chain compounds on water surface ; semi-conductors ; magnetic and ferromagnetic materials ; and photo and radiation polymerization.

While working at the National Chemical Laboratories, Pune, Professor Biswas took seven patents. A special mention may be made of his pioneering work during this period on 'monomolecular films on water surface,' which led to the discovery of a new series of superior water evaporation retardants. These have been found to minimize the loss of water stored in lakes and reservoirs by evaporation much effectively than the conventionally used cetyl and stearyl alcohols. He was a pioneer in building up a strong School of Materials Science in Bombay with his research contributions to the chemistry and physics of the solid state. Many of the research publications of his school are widely quoted in review articles and books on these topics.

Keeping in view the new and developing horizons of chemistry, Professor Biswas was keenly interested in the introduction of innovations in teaching techniques and in the improvement of research training ; the report of a committee under his convenorship on the status of PhD research in the country reflects vividly the maladies in the system and effective steps to remove the same.

HONOURS AND DISTINCTIONS

Professor Biswas was widely respected in the scientific circles of the country and was a fellow of the Indian Academy of Sciences. He was elected to the Fellowship of INSA in 1977. Associated with a large number of committees of the CSIR, UGC., Department of Atomic Energy and Indian Standards Institution, his valuable advice was continuously sought on various policy matters and he was well known for the clarity of his analytical faculties on complex scientific as well as technological problems. Highly regarded for the objectivity of his views and sincerity of purpose, Professor Biswas continues to be held in the highest esteem by his students, scientific colleagues and a large circle of friends. He served as a member of the Board of Associate Editors of the Journal of Indian Chemical Society (1960-72) and Honorary Editor of the Journal for 1972-75. He significantly contributed to the planning and management of basic and applied research projects, and of research and development laboratories ; and to supervision and participation in



research work in several branches of physical chemistry, chemical physics, instrumentation and materials science.

Professor Biswas had a very happy family life. He married Anjali Guha while he was at NCL Poona. Mrs Biswas completed her studies after marriage by passing the MA examination in Mathematics from the University. They have two sons : the elder Gautam who is now an Assistant Professor in Computer science at the University of South Carolina with a BTech in Electrical Engineering from IIT Bombay and PhD degree from Michigan State University ; and Pratim who is doing graduate studies at Caltech after obtaining a BTech degree in mechanical engineering from IIT, Bombay.

R C MEHROTRA

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Patents

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