
THE SCIENTIFIC COMMUNITY

Awards and honours



Prof. Govind Swarup, Tata Institute of Fundamental Research, Bombay, is to receive the physics prize of the Third World Academy of Sciences, Trieste, Italy, for 1988. Prof. Swarup will receive the award (a cash prize and a medal) in Bogota, Colombia, on 16 October. The award is for Prof. Swarup's contri-

butions to radio astronomy in the last thirty years. Prof. Swarup designed the Ooty radio telescope in Udhagamandalam (Ooty) and is now Director of TIFR's giant metre-wave radio telescope (GMRT) project, which hopes to complete construction of the world's largest radio telescope near Pune in 1992.

Appointment

Dr Sushil Kumar, Professor of Molecular Biology and Biotechnology, IARI, New Delhi, has been appointed Scientist G and Head, Human Resource Development Group, CSIR Headquarters, New

Delhi (11 April). Dr Sushil Kumar worked on the organization of the tryptophan operon in *Salmonella typhimurium* and on phage lambda in the USA. At IARI he investigated the function of cAMP in *Escherichia coli*. His most recent work is in the genetical analysis of the symbiosis between *Rhizobium* and leguminous plants.

Dr R. A. Mashelkar has been appointed Director, National Chemical Laboratory, Pune (31 May). Dr Mashelkar's work is in polymer science and engineering, molecular and convective diffusion, non-Newtonian fluid mechanics and rheology.

Retirement

Dr L. K. Doraiswamy retired as Director, National Chemical Laboratory, Pune (31 May). Dr Doraiswamy has made significant contributions in chemical engineering thermodynamics and process development. Among his achievements are a continuous catalytic process for making dimethylaniline from aniline and methanol, a fluid-bed reactor for making chloromethanes from chlorine and methanes, a fluidized-bed method for making chlorosilanes from ferrosilicon and methyl chloride, and basic engineering designs for the commercial plant at Indian Petrochemicals Ltd (IPCL), Baroda, for making acrylates.

William Shockley passes away

William Bradford Shockley, co-inventor of the transistor with John Bardeen and Walter Brattain, died in Stanford, California, USA, on 12 August. Shockley was born in London on 13 February 1910 and had his higher education in the US. After obtaining a PhD in physics from Harvard University in 1936, Shockley worked at the Bell Telephone Laboratories (now AT and T Bell Labs) until 1955. He then headed the Shockley Semiconductor Laboratory at Beckman Instruments. In 1963 Shockley was appointed the first Alexander M. Poniatoff Professor of Engineering Science at Stanford University. He was elected to the National Academy of Sciences (USA) in 1951.

In 1946, at Bell, Shockley began work with Bardeen

and Brattain on developing a semiconductor device for electronic amplification. The point-contact transistor, the field effect theory and the junction transistor were soon developed, and led to the electronics revolution. The invention of the transistor is a milestone in the development of solid state physics. Shockley also did research on energy bands of solids, ferromagnetic domains, plastic properties of metals, theory of grain boundaries, and order and disorder in alloys. For the invention and development of the transistor, he shared the Nobel Prize for physics in 1956 with Bardeen and Brattain.

In later years Shockley was also interested in the inheritance of intelligence and eugenics, but some of his ideas led to controversy.
