

water with high fluoride content viz. 22.5 ppm (1.5 ppm is the maximum permissible limit) and asymptomatic has very low circulating levels of haptoglobin.

The observations emerging from the studies on sulphated glycosaminoglycans, cortisol and haptoglobin have provided valuable information in understanding the pathogenesis of the disease and the nature of its affliction.

Modelling and control of Automated Manufacturing Systems by N. Viswanadham, *School of Automation, Indian Institute of Science, Bangalore 560 012, India.*

The use of computers in a manufacturing environment has stimulated many new developments and

innovations. Manufacturing technology today stands at the centre stage of what we may call the third industrial revolution and has already strongly influenced the areas of electronics, aerospace and durable goods industries such as garments, wood, etc. The ultimate of these efforts is the creation of the *factory of the future* without people, without paper, working 24 h and 100% inspection.

The lecture presents the architecture of the *factory of the future*, including local area network and material handling system, the modelling issues and finally the computer control systems for real time control of automated factories.

NEWS

METHOD DEVELOPED TO INFLUENCE GENES

Academician Sergei Gershenzon and his colleagues at the Academy of Sciences of the Ukraine, have discovered a regularity important for the selection of agricultural animals and plants.

It is known that physical or chemical impacts can evoke in a live organism a change in genetic information (mutation). This leads to accidental, unpredictable changes in the cell's genetic apparatus which, in most cases, are harmful to the organism. Sergei Gershenzon and his colleagues have developed a method of selective influence on separate genes to obtain the present change in the organism's

properties. It has also been established that as different from all known mutagens, DNA, separated from biological objects (mammals, birds, fish, insects, plants and viruses), and influencing other organisms, evokes in them a strictly definite set of mutations. Research has shown that not only natural DNA but also their synthetic analogues have the same property. (*Soviet Features*, Science and Technology, Information Department, USSR Embassy in India, P.B. No. 241, 25, Barakhamba Road, New Delhi 110 001.)