Prof. David Phillips
Imperial College, London

Light, particularly sunlight, has always occupied a mystical power over all civilisations and is commonly held to bestow good health upon recipients of its rays.

That there is both truth and fallacy in such beliefs will be demonstrated in this lecture, which deals with the science of photo-medicine. The subject encompasses effects of light on the skin, diagnostic uses of light, and therapeutic aspects. We will concentrate on the latter, but not before a brief consideration of harmful effects of solar radiation.

Therapeutic uses include treatment of skin complaints such as psoriasis, treatment of neonatal jaundice, and photo-inactivation of viral, bacterial and fungal infections. The laser has revolutionised some aspects of medicine, and laser applications discussed will include surgery using infrared and ultraviolet lasers and the use of lasers plus chemical sensitisers to destroy tumours selectively (photodynamic therapy).

The topic is illustrated with many demonstrations, and gives an overview of the subject from the point of view of a chemist.