

## ARTHUR CHARLESBY

1915–1996

Arthur Charlesby was a frequent visitor to Poland and particularly to our Institute in Łódź. All his visits were very fruitful scientifically.

In the eighties the research team headed by our Dr Rosiak was inspired by Arthur to begin studies on radiation crosslinking of polymers in aqueous solution. The first joint paper was devoted to investigations of polymerization and crosslinking of acrylamide by pulsed NMR techniques (Rosiak *et al.*, 1988a).

As Arthur indicated in a set of papers published just after his formal retirement from the Royal Military College in Swindon, the application of the measurements of the spin–spin nuclear magnetic relaxation times T2 in polymer systems is a powerful tool for providing information concerning supramolecular structure, i.e. the degree of crystallinity, crosslinking density as well as polymer chain entanglements.

The next step of joint work was devoted to the determination of the radiation yield of hydrogel crosslinking (Rosiak *et al.*, 1988b). The authors proposed the method which allows to calculate the *G* value on the basis of simple gravimetric measurements without the necessity for measurements of the initial molecular weight of polymer.

And finally, with Arthur's inspiration, the team of Dr Rosiak attacked the fundamental equation of radiation crosslinking, the so called Charlesby–Pinner equation. A modified version of this relation (Olejniczak *et al.*, 1991) is now used by a number of researchers working in the field of crosslinking and degradation of polymers.

In the meantime, Professor Rosiak was able to find some practical applications for these investigations. The radiation technology of hydrogel dressings for burn wounds, patented in a number of countries, as well as the hydrogel device for therapeutic induction of labour, are some examples of new products manufactured by means of radiation techniques, and were often presented and promoted by Arthur to the international audience during his scientific visits around the world.

In 1990 the Technical University of Łódź conferred on Arthur Charlesby an honorary degree D.Sci.h.c.

Apart from being a great scientist, pioneer, leader and mentor in the field of radiation chemistry of polymers he was also a charming and extremely warm person. Full of energy, showering hundreds of jokes and anecdotes, surprising his audience with most original ideas and concepts he was a *spiritus movens* of every conference and meeting. I had the opportunity to meet him at many conferences in almost all European countries and in places so distant as San Diego or Guadeloupe. He felt at home everywhere, and it was a real pleasure and great experience to spend time in his company.

Arthur made friends immediately at his arrival, sometimes even in spite of language difficulties.

Arthur and Irene were also extremely hospitable. Many Polish scientists stayed at their home. I remember one sunny day in August 1979 when I visited Watchfield with my wife and son. We were treated with a royal lunch and taken for a drive to the White Horse Hills, Avebury Circle and Marlborough. Owing to the company of our hosts this was one of the nicest events during our stay in Britain.

I never knew anybody who would not like, admire and respect Arthur. This certainly applied to all of us in Łódź—we always looked forward to his visits as most pleasant and inspiring events.

The death of Arthur Charlesby is a painful loss not only to science but also to his many friends all over the world.

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## REFERENCES

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