

An Appreciation of Andrew Jonscher

Those in the dielectric community will be saddened to hear of the death earlier this year of Professor Andrew Jonscher. The controversial views held by Andrew on the nature of the dipole dynamics responsible for the frequency and time dependencies of the linear dielectric response are well known to all and stimulated a body of work that is still ongoing. Andrew himself was still publishing work in this area up to a few years ago, some 16 years after his formal retirement. His two books stand as a fitting monument to his contribution in the area of dielectrics. The first one “Dielectric Relaxation in Solids”, published at his own expense, presents the subject in a very clear manner that can be easily understood by engineers as well as physicists. It has the added advantage that the concepts and arguments are illustrated by an enormous wealth of experimental data. Above all Andrew was a scientist whose attitude was: here is the data provided by Mother Nature, this is the way it behaves whether theory says it should or not, now explain it. These features of Andrew’s book have made it indispensable reading to researchers entering the field for over twenty years, as a means of both gaining a clear idea of the basics of the subject and of a realisation as to where and what the unresolved questions are. It is one of sciences finest achievements to challenge the young to a voyage of discovery in the future. In Andrew’s own words “I have stood on the shore and pushed the boat out to sea”.

Many people’s memories of Andrew are of his staunch defence of his views in debate at conferences and the often amusing and novel insights into the interpretation of experimental data provided in his presentations. No one who saw it will forget the data that could be fitted by an elephant, or his explanation as to why most relaxation-time activation energies reported lie between 0.35 eV and 0.65 eV, or the statement made at a spectroscopy conference that all of dielectric spectroscopy lay in the point that the previous speakers had labelled as zero on their plots. Of course, as Andrew pointed out, dielectric spectroscopy covers half of the logarithmic age of the universe. My first memory of Andrew was of a man who looked and perhaps even argued as an ancient prophet. He had taken a chance on a not so young researcher returning from the antipodes, for which I am enormously grateful. Over a decade he and Robert Hill helped find funding from various and odd sources to keep me going and the work supported. During this period we had a large number of graduate students and visitors that formed a multinational and multicultural laboratory that functioned more or less amicably. Robert Hill, Andrew Jonscher, and myself came to be known to them as ‘the gang of three’, with the students manipulating us unmercifully to obtain our different insights into their data. They were wonderful days.

Robert Hill was already with Andrew Jonscher when I arrived from Australia, so his memories of Andrew go back much further than mine. Below he gives an account of the first time that he came into contact with Andrew.

“Very soon after joining the Electrical Research Laboratories in Leatherhead I was instructed to attend a one day discussion conference in London. The meeting was to be held in a Hall in the upper end of Regent Street and by the time I arrived the Hall was almost overflowing and the proceedings started almost immediately. Like most such informed gatherings the papers were well presented and the questions from the audience were directly relevant to the speakers’ presentations and, indeed, informative. In particular one of the attendees had a strong background in the general area and used this to guide the discussion. The result was that there was an effective exchange of information and the discussions continued during the lunch break and on well into the afternoon. At my first Regent Street attendance I was left

feeling that the group had generated an honest, scientifically based, discussion of real problems and sound solutions. The key that unlocked the flow was the voice from the hall, and the voice was Andrew Jonscher's. Some years later I joined his group in Chelsea and the debate continued."

I suspect that many people would accept this as a description of their own first meeting with Andrew Jonscher. I would like to hope that whether or not one agreed with him, we all found him to be an exiting person who challenged our intellect to come up with new ideas whether to prove him right or wrong. To misquote Andrew, this is surely Mother Nature's methodology for progress. May the debate ever continue.