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Editorial

On a wet and windy week in mid-September, 1999, three hundred and ninety eight registrants from 29 countries assembled at the Queen Elizabeth II Conference Centre, London for the Sixth Grove Fuel Cell Symposium. This was the largest such gathering from more countries than had convened since the inception of the event. In a preceding Workshop, delegates listened to three addresses of a more political flavour relating to fuel cells, including a rousing item from Rt Hon John Gummer, MP, who, whilst conceding that politicians ''usually get it wrong'', affirmed that the era of fuel cells was indeed nigh. Dr Bernie Baker of FuelCell Energy, formerly ERC, was presented with the Grove medal on the same opening evening of September 13th, in recognition of more than forty years of achievement in the field of fuel cells. Something of a record, more than 155 posters were submitted for consideration at the meeting. This Proceedings volume contains many of those presented, together with most of the formal papers of speakers. Both Dr Koch, the keynote lecturer and Dr Baker have supplied their manuscripts for inclusion here. Neither these, nor the policy statement from Dr Borthwick of the EU, DGXII, were appropriate for peer review, of course.

An attempt has been made to introduce as much uniformity into manuscripts as possible, consistent with individual styles. The linguistic qualities were as varied as the science described! Notably, the very best style and grammar was received in contributions from Japan, German and the USA — 'nough said! Scripts have been depersonalised as far as possible and the past tense adopted, according to accepted styles for technical publications. A surprisingly large number of authors seem unaware of the ambiguity that could result from non-technical use of the words ''current'' and ''potential'' in papers dealing with electrical and electrochemical matters — global search and replace for such transgressions has been requested. Much appreciated were manuscripts from authors who heeded a previous warning about the acronym PEM — once again, this has been construed to mean polymer electrolyte membrane alone; all references to protons exchanging have been deleted!

A worrying aspect of the technical language has emerged. Apparently, ''educt'' is used in German to imply an inlet or recycle duct or loop. The word does not exist in English. Worse, if it did, it would have been derived from the Latin and imply the exhaust duct. Probably, it could not justify its German meaning in English. Fuel cell engineers take note — hydrogen and oxygen streams are involved!

Solid oxide fuel cells are attracting ever increasing interest. Notwithstanding, the subject of powder rheology still seems to progress empirically, in many cases. Only the contribution from Japan Fine Ceramics discusses powders in terms of their three principle properties of mean size, size distribution and angularity. No mention is made of packing theory, octahedral and tetrahedral holes, although it must be presumed that major research groups are aware of the importance of these factors. Always burdened with excessive hype, SOFCs can be expected to demonstrate their real promise, or not, during the coming decade.

Much modelling is apparent from the present collection of papers. Readers need particular vigilance to distinguish what has been achieved in the laboratory from that issuing from the ubiquitous computer. Cynically, it might be asked as to whether government funding bodies prefer the cheaper, albeit necessary, paper studies to demonstrations with expensive hardware. Furthermore, fuel cell conferences seem to be proliferating. Let efforts be redoubled towards the common goal of placing equipment into service — less talk, perhaps?!

Finally, thanks go to all those authors and referees who willingly assisted in compiling these proceedings; equally, thanks to the team at Elsevier in Shannon for their support.

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