

Ricky's Afterthought:

The Case for a Journal

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New format of the Newsletter

Issue 117 of the Newsletter was the first that had not included any scientific papers as such. This will continue for the foreseeable future.

Dan Slocombe in Issue 117 wrote about the establishment of the European Microwave Energy Journal (EMEJ) sponsored by Cardiff University Press. It is an item that was discussed many times in the past and finally it looks as though this will materialise. So scientific papers will now be included in the peer review EMEJ so allowing the Newsletter to concentrate on profiles of individual researchers and groups, company news and announcements of projects and other activities relating to the promotion of RF and microwave energy for ISM applications.

Let us however reflect back at numerous attempts to establish such a Journal. The preeminent Journal in our field of activity is the Journal of Microwave Power with its inaugural issue in 1966. In addition researchers deemed prudent to publish in other Journals with higher impact factor such as the IEEE Transactions on Magnetics, IEEE Transactions of Plasma Science, IEEE Antennas and Propagation Magazine, IEEE Transactions of Microwave Theory and Techniques, the Journal of Physics D: Applied Physics, Nature, IET Proceedings of Science Measurements and Technology and Applied Physics Letters.

What is staggering is the breadth of the Journals of all disciplines that include papers on various aspects on utilisation of RF and Microwave energy. The list is endless, however, glancing "randomly" through the reference section of the papers that Prof Willert-Porada published concerning the 8th International conference on Microwave and High Frequency Heating held at Bayreuth in 2001 revealed the following: Drying

Tech. J., AIChE Journal, J of Food Engineering, Int. J. of Food Science. and Tech., Food Techn., J. of Appl. Polym. Sci., Metalurgia, Phys. Rev. B, Ceram. Trans., J. Amer. Ceram. Soc., Ceramic Bulletin, Ceram. Trans., J. Mat. Sci., J. Phys. Chem. Solids, SIAM J. Appl. Math., J. Engin. Math., J. Phys. Chem., Chem. Soc. Rev., J. Org. Chem., Tetrahedron, J. Phys. Org. Chem., Appl. Catal. B, J. of Comput. Phys., J. of Appl. Computat. Electromagn. Soc., COMPUMAG, Plasma Sources Science and Technology, and a host of papers presented at numerous MRS (Materials Research Society) and PIERS (Progress in Electromagnetic Research Symposia) annual meetings. Occasionally papers appeared in the International Journal of Hyperthermia where RF or microwave was the prime energy source. This shows quite clearly the multidisciplinary nature of RF and microwave energy as applied to processing a host of materials and the necessity of having a couple of dedicated and complimentary Journals where our papers could be published.

I was the Guest Editor of the Journal of Microwave Power in 1987 when I pointed out to Geoffrey Voss, the then Editor in Chief, that there were many applications in electroheat or electro-technology that fall outside microwave frequencies and it would be interesting if these were included in the Journal. The decision was then taken shortly afterwards to change the title to the Journal of Microwave Power and Electromagnetic Energy. Special Issues followed on Radio Frequency industrial applications, Infrared Energy, Exposure effects, Microwave Oven Design and performance and so on.

This was during the time when I was involved heavily in teaching topics on electroheat to 4th year

undergraduates at the Engineering Department of Cambridge University. When my textbook associated with that course was published in 1995 I approached my publishers, J Wiley and Sons with the view to start a Journal of Electroheat encompassing many topics including RF and Microwaves. I wrote copious letters to various bodies in an attempt to elicit support for such a Journal but alas my publishers thought that there was not a sufficient body of researchers that warrant the introduction of such a Journal. I was also then the Editor of the British National Committee of Electroheat (BNCE) Newsletter which covered many developments in the field of Electroheat and electro-technology from DC to laser frequencies. I knew that I could get a sufficient number of good peer review papers for such a venture. Alas, with the privatisation in the early 1990's of the Electricity Supply Industry in the UK many of the activities in electroheat were downgraded and left me powerless to pursue such a venture. In fact BNCE, as an entity which was supported by the Electricity Council, was shut down with the consequence that all its operations were terminated. Many pamphlets were commissioned by BNCE up to that point using experts from the Electricity Council Research Centre or indeed by eminent academics on various aspects of Electroheat. One such for example was the pamphlet written by Prof Bill Milne at the Engineering Department in Cambridge about industrial applications of lasers. I have in my possession copies of various monographs and pamphlets, of about 30-50 pages in length, which I am willing to give away to whoever is interested to assist one's teaching or research activity (see list below).

So we continued with the Journal of Microwave Power and Electromagnetic Energy where occasionally special Issues focussing on other non-microwave applications appeared. AMPERE

came into existence and with it the birth of the quarterly Newsletter which included articles supporting RF and microwaves activities, biographies and other news items. Enter Eli Jerby who was a strong advocate of a Journal supporting our activities and who aptly demonstrated during his two years as Editor in Chief of the AMPERE Newsletter during 2015-2017 that there were sufficient good papers which could form the basis of such a Journal. Alas, we could not find somebody to continue his excellent work and after he stepped down we reverted to publishing one of two technical papers per issue.

Hopefully the new European Journal of Microwave Energy will also encompass RF applications and will complement the Journal of Microwave Power and Electromagnetic Energy.

If anybody is interested in receiving any of the following do email me your full address.

Monographs

- Lasers and their industrial applications by WI Milne
- Heating with Electromagnetic fields-A unified approach by AC Metaxas 2 copies
- The arc furnace by DJ Swinden
- Direct Resistance Heating by EC Davies
- Electric Discharges for Heating by JE Harry

Pamphlets

- Plasma Heating for Industrial processes
- Electric heating elements (Sheathed)
- Electric heating elements (Unsheathed)
- Heat transfer for induction heating 2 copies
- The electrode boiler
- Induction heating 2 copies
- Heat pumps-an option for energy efficient and clean energy