

## Preface

# PUBLICATION OF POWDER DIFFRACTION RESULTS

### “times are changing”

For a long time scientific results were published in printed form on paper in issues of scientific journals dedicated to the field of science concerned. The advent of the internet (world wide web = www) in recent years has revolutionized the way of scientific communication. Although anybody can now put unrestrictedly manuscripts on the www, it has become clear that organized presentation of, mostly peer reviewed, publications is required, also in case of electronic publication only. This explains the emergence of new electronic journals and electronic versions of the established journals. The endpoint of this development seems to be that there will be no paper printed versions of scientific papers any longer. Possibly, and, we think, hopefully, the monograph and the textbook do not fall victim to this destiny.

Although it is true that by electronic publication the speed of communication has increased remarkably and that, from an environmental point of view, giving up of paper printing is a gain, the cost of electronic publication is certainly not less than for the classical way of hard, printed copy publication. Furthermore, and this is another great disappointment of electronic publication for naive optimists, free access to published papers is usually not offered, as the established, now electronic journals are (remain), unfortunately, in the control of commercial publishers. In any case, any publication, also electronic publication, brings about costs and those must be paid by somebody. All this can be easily confirmed by any librarian and found out by us as customers (see also what follows).

Notwithstanding these positive and negative remarks, we do not want to embark on an extended discussion about virtues and vices of electronic publishing. In the following we take it for granted that there is no way back and we as scientists have to deal with publication of our results in electronic form primarily.

These proceedings of EPDIC 8 are probably the last EPDIC proceedings to appear in paper printed fashion as hard copy. All previous EPDIC proceedings have appeared as volumes of the journal Materials Science Forum; both in hard copy and electronically in full text on the web. However, the web edition is available only to subscribers of the magazine; all others have free access only to the first page of each paper and, in case of interest, must purchase the paper or place a limited subscription.

The ideal form of EPDIC proceedings publication, as expressed by a small majority of the EPDIC committee some time ago, involves both *maintaining publication of a paper printed, hard copy of the proceedings*, additionally to *electronic publication, which is freely accessible to anybody searching the internet*. At the time this goal appears unachievable against acceptable costs.

The EPDIC Committee presently considers giving up paper printing of the entire EPDIC proceedings, thus making funds free that would allow us to have the proceedings freely available on the web to everybody. Of course, this option has important consequences for archiving that should not be minimized. Wishing to preserve the EPDIC proceedings for ever, on the basis of electronic publication only, certainly makes us much more vulnerable to changes in the techniques of publication and communication, that take place on an explosively increasing rate in our times. The printed paper has lasted for centuries and remains an easily retrievable medium for at least centuries to come. The CD may not survive the next 50 years and will then soon become inaccessible to most of us. Further, the website chosen for publication of the proceedings may have a modest life as well, on the time scale of centuries.

So, preservation of the accessibility to the EPDIC proceedings may not be easy to guarantee, even for a limited amount of years, as compared to decades or centuries. These problems are much more severe for (high quality) scientific journals, which go "electronic", than for the EPDIC proceedings. Conference proceedings, with the exception of the "proceedings" of conferences designed to arrive at a monograph on a certain topic (example: the well known book on "The Rietveld Method" (editor: R.A. Young, Oxford University Press 1993)), usually contain many contributions which are published later more extensively in scientific journals and incorporate also contributions of lesser importance and quality. Proceedings, as compared to scientific journals, have a relatively short "scientific life", but their historical importance (e.g. for tracing back the origin of an idea or development of method or technique) is not impeded by this remark.

The above is more or less a summation of the main advantages and disadvantages of the transition to only electronic publication of the full EPDIC proceedings. The likely route to be followed - to be decided upon by the EPDIC committee - has been indicated. Reluctantly we leave the age of paper bound volumes of printed EPDIC proceedings behind us. Yet, we are convinced that, also as an only electronic publication, the EPDIC proceedings will continue to serve as a platform of powder diffraction activity at the highest level and of the highest topicality. See you on the web!

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August 2003.

## Editorial Notes

The number of papers in these proceedings is 88. The total number of papers published in the proceedings of preceding EPDIC conferences ranges from about 120 to 190.

The relatively small number of submitted papers together with the reduction of the number of pages per paper as compared to earlier proceedings made the present proceedings fit into a single volume. The subdivision of the papers over the sections has been largely maintained as for preceding EPDIC proceedings. Only a few sections had to be deleted as no corresponding papers had been submitted. A new section 'IV.4.3 Determination of Magnetic Structure' has been included.

Reviewing the eight editions of the EPDIC proceedings, the ratios of the numbers of papers on developments in the methods and techniques of powder diffraction and those on applications of powder diffraction methods to specific classes of materials are found to be 1.0, 0.7, 0.5, 1.0, 0.9, 0.5, 0.7 and, for the current proceedings, 0.7.

A paper to be published in proceedings of a conference has to fulfil at least some basic requirements as for example: (i) new findings and / or insight should be contained, (ii) the theory suggested and / or analysis employed has to be correct (iii) the paper should be readable.

As compared to earlier proceedings, a rather strict refereeing procedure had been adopted for the proceedings of EPDIC8. Each contribution was considered by at least two referees. The referees were, to a large extent, participants of EPDIC8 being experts in the fields concerned. A few external referees were contacted as well. The Editors would like to thank all referees for their efforts and time spent on the manuscripts.

Roughly ten percent of the submitted papers did not fulfil the above mentioned basic requirements and were rejected.

Nowadays one is flooded with an ever increasing number of publications per year. It is therefore of utmost importance for anyone taking part in the publication procedure, as author, referee or editor, to critically evaluate the scientific merit of a contribution. All too many papers just increase the entropy of the subject without providing substantial advancement of science.

We sincerely hope that these proceedings will be a helpful collection of papers outlining the newest developments in the field of Powder Diffraction.

Finally, we would like to thank all authors for contributing to these proceedings.

Yvonne Andersson, Uppsala

Eric J. Mittemeijer and Udo Welzel, Stuttgart

September 2003.



## **European Powder Diffraction Conference Award**

**Sponsored by Philips Analytical**

The EPDIC award honours outstanding scientific achievement by young scientists in the areas covered within the European Powder Diffraction Conference (EPDIC) Programme. The award winner will be invited to present a plenary talk at the next European Powder Diffraction Conference. The award has a value of 1000 Euro.

The EPDIC Programme Committee, which is responsible for the nomination of the award, invites everyone to submit short proposals containing descriptions of scientific contributions to be assessed, together with the name of suitable candidates. These proposals should be addressed to the Chairman of the EPDIC Programme Committee.

