How to make a successful poster

A successful poster conveys a clear message
by high-impact visual information and a minimum of text.

Posters have become one of the most important vehicles for presenting work at conferences. Poster sessions provide a wonderful forum to meet colleagues and discuss scientific work on a person-to-person basis. Unfortunately, a fairly large number of posters does not succeed in drawing significant attention. In this brochure we list some of the most frequent mistakes that presenters make and we make some recommendations for making efficient posters. A few nice examples are displayed at the EFCATS website: www.efcats.org.

What is a successful poster?

At the end of a meeting a poster can be considered successful if it conveyed a clear message to the visitors, and generated valuable comments to the presenter. In order to achieve these goals, the poster needs to be crystal clear about the objectives, the approach, the main results and the major conclusions of the work, and all this preferably within the proper perspective of existing knowledge on the particular subject.

Frequent mistakes

Too many posters do not succeed in getting their message across. Here are some of the main errors presenters make:

- **Too much text**. At the last EUROPACAT meetings, roughly 65% of all posters had way too much text on it. Posters containing 2000 words or more were no exception!
- **Unclear structure**. If key elements such as objectives, approach, conclusions, or perspectives are missing, everyone who is not an insider on your subject will not understand why your poster is relevant (and why he/she should spend time on it).
- **Inappropriate structure**. Many people blindly apply the standard structure of a written report (see text box), thereby using their poster as a sort of miniature article, which almost automatically leads to a lot of text. There is no standard structure for a poster.
- **Poor figures**. Some figures may be real puzzles, with incomprehensible legends, secret codes, small lettering, and cryptical captions, etc. Note that many spreadsheet and data programs do not produce “reader friendly” graphics (see Figures 4 and 6).
- **Information overload**. Many presenters overload their posters with too many data, and greatly overestimate the time that the average visitor is willing to spend on the poster.
- **No presenter present**. This is obviously a missed chance for valuable discussions. Another frequent mistake is that presenters take a passive attitude and make no effort to initiate discussions.

ARTICLE STRUCTURE

- Abstract
- Introduction
- Experimental
- Results
- Discussion
- Conclusion

is not recommended for a poster

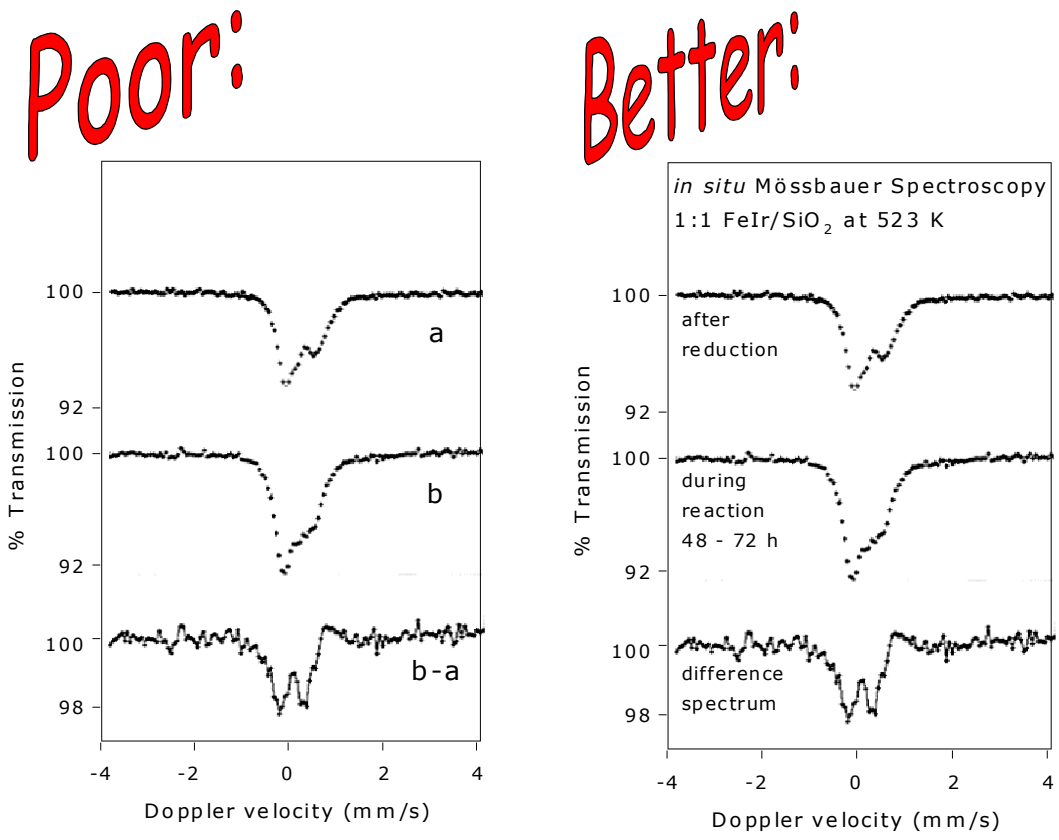

Figure 6 To understand the left figure one must read the caption; the right figure explains itself.

In five steps to an efficient poster

1) **The message of your poster**. Try to formulate the essence of what you want to present in a single sentence. Examples of such sentences are:

- *I want to convince the audience that my new catalyst is the best one for converting methane into ethylene.*
- *Analyzing kinetic data on reaction x with our microkinetic model enables one to define better processing conditions.*
- *The new ABC technique yields reliable surface areas of supported oxide catalysts*

Use this sentence as a guide for selecting the data you need to include. You probably won't actually print this sentence in the poster but it helps you to make up your mind and focus on what your poster is about.

2) **Introduction**. Write a few sentences of introduction to identify the problem you address, what is known about it, the objectives of your work and what your approach is to investigate the problem. Use short sentences and keep this section as concise as possible. Consider if complete sentences might be replaced by a bulleted list or by a graphic.

3) **Results**. Select the most pertinent results that support your message. Remove everything that is not absolutely necessary. Think about attractive ways to present the data in figures. Try to avoid tables as much as possible. Figures and captions should be easy to read (see also Figures 4-6). Consider adding a brief conclusion below every figure.

4) **Conclusion**. Write the conclusions in short, clear statements, preferably as a list. Finish with an assessment of what you have achieved in relation to your objectives, and, perhaps, what your future plans are.
5) **Attention getters**. How are you going to draw the people's attention? An attractive title serves as such to some extent, but is not enough. Select one of your most important results, a photo, a scheme explaining the scientific background, a model or the main conclusion, or whatever you consider as highlight of your presentation and give it a prominent place on your poster, for example in the middle or at the beginning. This is what the audience will see first. It should raise their interest and stimulate them to read your poster.
6) **Layout.** Arrange all the parts of the poster around your attention getter. Add headers if necessary to clarify the structure of your poster, and add everything else that is needed, such as literature, acknowledgements. Ensure that author name(s) and affiliation are on the poster.
7) **Review, revise, optimize.** Ask your co-authors and/or colleagues to comment on a draft version of your poster. Assess very critically if the poster indeed conveys the message you want.

A good poster enables the reader to grasp the message in a short time, e.g. less than a minute. If he finds the subject of interest he will stay to learn about the details, and discuss the work with the presenter. If you fail to get the reader's attention in a short time, he is likely to go on to the next poster, unless he really wants to know about your work.

Finally

We hope that the recommendations in this brochure will help you to present effective talks and posters at future scientific meetings. Too many interesting pieces of research go lost because they are not presented properly. Your's will not, if you work on your presentations skills. Remember that this brochure does not intend to offer a standard template for talks or posters, you should develop your own presentation style. Just try to avoid the mistakes that so many of your colleagues (including experienced scientists, yes, even Nobel Prize winners) make……

J.W. Niemantsverdriet
EFCATS President 1999-2001
Schuit Institute of Catalysis
Eindhoven University of Technology
March 2000

Literature:

- P. Kenny, A Handbook of Public Speaking for Scientists and Engineers, Adam Hilger Ltd, Bristol, 1982.
- V. Booth, Communicating in Science: Writing a Scientific Paper and Speaking at Scientific Meetings, 2nd Edition, Cambridge University Press, Cambridge, 1993.
- M. Davis, Scientific Papers and Presentations, Academic Press, San Diego, 1996.

A checklist for analyzing oral presentations, and examples of posters can be found on www.efcats.org