

COLD FUSION IN ITALY

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INTRODUCTION

I will speak of the book on the history of Cold Fusion in Italy, produced by ENEA: I will touch the following issues:

- The book
- The beginning of the Italian History of CF
- The years of maximum effort
- The decay
- Comments

THE BOOK 1

- Prof. Sergio Martellucci, Chairman of the Scientific Council of ENEA, wrote to all participants in the research on CF in Italy, asking for a contribution.
- All contributions were accepted: only 'format' issues were addressed.
- There was no refereeing.

THE BOOK 2

- Prof. Martellucci, Dr. Vittorio Violante and myself, as the members of the Italian Editorial Committee, are aware that this collection of contributions is by no means complete.
- We are sorry for some missing reports, and are planning to produce them with the occasion of the English edition of the book. In particular, I want to recall the contribution of the Padova Group (Mengoli, Manduchi et al.).

THE BEGINNINGS 1

- Less than a month after the Fleischmann & Pons announcement, in April 1989, an experiment at ENEA Frascati had an enormous success, with exaggerated participation of the media.
- Eventually, it will come out that that experiment was not very meaningful: but however ENEA was committed on CF.

THE BEGINNINGS 2

- Very rapidly research on CF developed in Italy, in almost every Physics and Chemistry Department, in Universities and in other laboratories.
- Many lively discussions, a lot of interest, but also the “ghost” of skepticism began to appear, promoted by theoretical issues and by lack of reproducibility.

THE BEGINNINGS 3

- By the end of the year (1989), the various positions are clear. On the one side, most of the scientific community rejects CF as good science. On the other side, those who had performed successfully experiments in CF are convinced of its reality.
- It is the beginning of the “dark ages” of CF.

THE BEGINNINGS 4

Four International Conferences take place on the subject within the first two years:

- Santa Fe, May '89 (DOE & Los Alamos)
- Varenna, September '89 (SIF)
- Salt Lake City, March '90 (Univ. of Utah)
- Provo, October '90 (BYU)
- Como, June '91 (Univ. of Milano & Torino)

The latter was very relevant

The years of maximum effort 1

- After the Como Conference a relevant number of Italian Groups proceeds in the research on CF. A paper of mine in the Book describes the situation at the ICCF3 Conference, in Nagoya in 1992. There are about 20 Italian Groups active.
- A National Conference is held at the 3rd University of Rome in February 1993, promoting interactions among the Groups.

The years of maximum effort 2

Many relevant results are obtained in these years. I will just quote a few of them:

- Confirmation of the heat production in electrolytic cells (ENEA/Frascati, Padova)
- Detection of ^4He (Gozzi, Univ. of Roma)
- Studies of material sciences (various labs)

In general, it can be stated that there is a definite improvement of reproducibility.

THE DECAY

- increased skepticism in the scientific world
- detachment of Academic World
- t decreasing attention from the funding agencies
- The attempt by Giuliano Preparata
- the present picture

COMMENTS

- cold fusion is a reality
- it is prominently a scientific problem, very much interesting at that
- need for a coordinated effort in material science
- it is important to convince the scientific world of the validity of the issue, through neat, reproducible experiments
- it is still too early to put the accent on the possible applicative fall-outs, even though everyone hopes in them, in particular in the field of energy production.