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**PROCEEDINGS OF THE  
5<sup>TH</sup> INTERNATIONAL CONFERENCE  
ON  
COLD FUSION**

ICCF-5  
April 9-13, 1995  
Hotel Loews  
Monte-Carlo, Monaco

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# Proceedings of the 5<sup>th</sup> International Conference on Cold Fusion

April 9-13, 1995  
Monte-Carlo, Monaco



International Conference on Cold Fusion 5  
Valbonne FRANCE

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## PREFACE

The 5<sup>th</sup> International Conference on Cold Fusion was held at the Loew's Hotel complex in Monte Carlo, Monaco, April 9-13, 1995. The previous meetings were convened at Salt Lake City, Utah (USA, 1990), Como (Italy, 1991), Nagoya (Japan, 1992), and Maui (Hawaii, USA, 1994). The International Advisory Board elected at its meeting in Monaco to hold the 6<sup>th</sup> Conference in Hokkaido, Japan, in 1996.

There were over 200 registered participants at this Conference representing 15 countries: 67 from the United States, 51 from France, 47 from Japan, 38 from Italy, 5 from Russia, 4 from Canada, 4 from Germany, 3 from England, 1 from China, 1 from India, 2 from Spain, 1 from Hong Kong, 1 from Korea, 1 from the Netherlands, and 2 from Switzerland.

The Volume is divided thematically into 6 sections following the order in which the papers were presented at the Conference: Introduction and Overviews, Calorimetry and Excess Power, Nuclear Measurements, Theory and Modelling, Cathode Loading and Materials, and New Developments. The oral presentations were held in single sessions, which were followed by poster sessions. The Conference Program was organized around 14 special and plenary lectures, 44 oral presentations, and 132 poster presentations. The tasks of planning and organizing the scientific program, selecting the papers presented, and inviting of all the speakers and presenters were undertaken by Dr. Martin Fleischmann and Dr. David Thompson, to whom the ICCF5 Association is indebted.

We have published in these Proceedings the manuscripts that were received from the various authors following their presentation at the meeting. We apologize for not publishing the many manuscripts which were submitted to us for publication which were either (a) submitted by persons not present at the Conference, or (b) were far outside the designated manuscript length, or (c) were in addition to the allotted number of presentations allowed to the author, or (d) were markedly different from the actual paper(s) presented at the meeting.

New results reporting the generation of excess enthalpy in heavy water electrolytic cells continue to be reported. Significant new results were presented from workers in ENEA, Frascati, IMRA Europe, the United States and many Japanese laboratories including the NHE efforts.

Of special experimental interest were many of the papers dealing with the successes in achieving especially high levels of loading of hydrogen / deuterium into the palladium - palladium alloy lattice. There were several experimental techniques discussed for achieving high loading ratios, as well as papers dealing with the advantages of considering particular metallurgical properties of the cathode materials used. Reproducibly high loading ratios is clearly one of the most important technological problems that has faced the community, and it is gratifying to see that there is a significant amount of good work being undertaken in this area.

The theoretical contributions continued to represent a significant fraction of the total contributions made. While several consistencies are beginning to become evident in the work of several of the theorists, there remains significant disparity in the conclusions of others. Proposals of "New Physics" and new views of the atom continue to be a popular approach to explain several of the observed phenomena of

cold fusion, while others continue to seek to apply new boundary conditions and assumptions in order to be able to predict experimental observations using more "conventional" approaches.

The Organizing Committee was disappointed that several invited key researchers were not able to attend this particular Conference for personal or technical reasons. We look forward to hearing the latest results of all these researchers at ICCF6 in Hokkaido in 1996.

We gratefully acknowledge and thank the sponsors of ICCF5, without whose generous financial contributions the meeting would not have been possible. The sponsors were (in alphabetical order): AISIN SEIKI CO. LTD., AISIN AW CO., LTD., AGA, S.A., CEGELEC, S.A., ENECO, INC., NIPPON TELEPHONE AND TELEGRAPH, NOVOLEC, S.A., RIBER, S.A., SETERAM, S.A., RADIOMETER ANALYTIQUE, S.A., and TECHNOVA, INC.

The Organizing Committee thanks especially the volunteers who undertook the very difficult task of organization and management of the details of the Conference: Alexandra Carvalho, Jacqueline Chirio, Claudia Bartolomeo, Veronique Guillon, Gerardo Larramona, Carina Lopes, Monique LeRoux, Jacques Payet, Yumiko Payet, Sheila Pons, Jeanne Roulette, and Thierry Roulette. Without their very capable assistance, the meeting would have not been possible.

Organizing Committee  
S. Pons  
November 1995

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# Session 1

## Introduction

