

# Welcome of the Italian Physical Society (SIF)

I am pleased to extend a greeting of the Council of the Italian Physical Society to all participants to the to ICCF15-2009 symposium.

The Italian Physical Society (in the following I will use the acronym SIF, for Società Italiana di Fisica) is a non-profit, scientific association devoted to promoting and favouring the progress of physics in Italy, to increasing its understanding and applications, and to supporting physicists.

SIF represents the Italian scientific community in the research, educational and professional fields, both private and public, relevant to all areas of physics and its applications. It has an extensive membership - mainly national - and is a leading communicator of physics to all audiences, from specialists through government to the general public.

My presence here today and the SIF patronage to the meeting confirm the loyalty of SIF to its original mission and its determination to work for advancing science, while keeping the research within the border of the experimental method.

In fact, from its foundation, which dates back to 1897, SIF has been tightly bound to the Galilei's method. This strong ideal tight is shown, among other things, by the title of its own journal of physics, *Il Nuovo Cimento*, that recalls the ancient *Accademia del Cimento*, the association founded in 1657 by Prince Leopoldo de Medici and the disciples of Galileo Galilei. SIF also adopted the association logo of the *Accademia del Cimento*, shown in Fig. 1, in which are reproduced a burner, three crucibles full of melted metals, and a flying scroll with the motto "Provando e Riprovando" (trying and trying again), which refers to the experimental method. The motto can also be interpreted as "proving and reproofing", which is also very appropriate.<sup>1</sup> Giovanni Polvani, President of the SIF from 1947 to 1961, described in a very effective and elegant way the meaning of the logo:

*"Cimento in its pregnant meaning is at the same time the trial, the test, the effort, the risk, the peril, the experiment, the comparison, the thirst for knowledge, the extent to which the metal refines in the crucible. The crucible then is the mind, and the two words (provando e riprovando) of the enterprise, mirroring each other, show the route to attain, by trying and trying again, the "beauteous truth". It is the essence of the Galilei's method."*

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The link to the experimental method is very appropriate for the cold fusion research, the story of which has been particularly hard.

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<sup>1</sup>) It is worth mentioning that "provando e riprovando" is found, with this latter meaning, in the first tercet of the third "canto" of the *Paradise* in the *Divine Comedy* poem by Dante Alighieri:

*"That Sun, which erst with love my bosom warmed,  
Of beauteous truth had unto me discovered,  
By proving and reproofing, the sweet aspect."*

translation by Henry Wadsworth Longfellow of the original:

*"Quel sol che pria d'amor mi scaldò 'l petto,  
di bella verità m'avea scoperto,  
provando e riprovando, il dolce aspetto."*

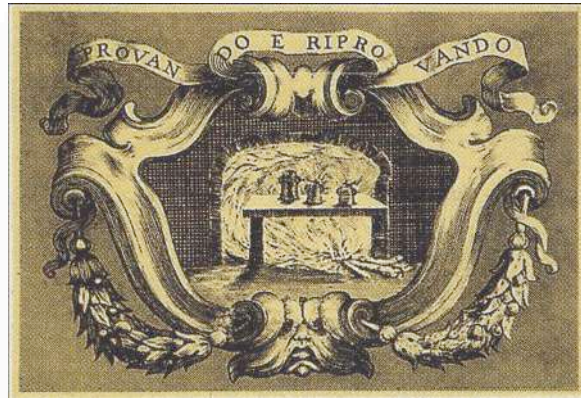


Fig. 1 – The logo of the Italian Physical Society

Here the beautiful truth, which Dante refers to, concerns the lunar spots and the influence of stars.

Cold fusion, first announced on March 1989, raised hopes of a cheap and abundant source of energy.

Enthusiasm turned soon to skepticism after replication failures of the original experiment. In November 1989, the majority of a review panel organized by DOE found that the evidence for the discovery of a new nuclear process was not persuasive.

In 2004, a second DOE review reached conclusions similar to the first, but with a smaller majority. Moreover, “the reviewers identified two areas (properties of deuterated metal and search for fusion events in thin deuterated foils) where additional research could address specific issues, and invited funding agencies to entertain individual, well-designed proposals”.

The interest in the field has been growing in recent years, as shown by the presence of a session on cold fusion at the APS meeting in 2007. A number of basic research areas interesting in itself and helpful in resolving some of the controversies have been identified. A number of researchers keep researching and publishing in the field. In brief, today cold fusion is back on the menu.

Since its first edition in 1990, the International Conferences on Condensed Matter Nuclear Sciences have provided a good forum for researchers to share their results and promote the understanding, development and application of the discipline. I am sure that also this edition of the Conference will be a success and hope it will pave the way for further sound developments.

I also wish everyone a pleasant stay in Rome.

**Enzo De Sanctis**

*Italian Physical Society (SIF) - Bologna*