Preface

This is Proceedings of the 8th Meeting of Japan CF Research Society, JCF8, held at Doshisha University, 29-30 November 2007.

Japan CF-Research Society (JCF) was established in March 1999, with scientific presentations and annual general meeting JCF1 at Osaka University on 29-30 March, aiming at promotion of CF researches in Japan and sending the information to the world. The CF researches concern investigation of nuclear reactions that have been newly found and are considered to be taking place in the environment of condensed matter. The main goal is to develop science and technology to extract meaningful energy and extensive application of the CF phenomena. The CF researches are based on a variety of scientific fields and require collaboration efforts from nuclear physics, fusion science, radiation physics, quantum science and technology, accelerator and particle beam science, laser science, molecular dynamics, condensed-matter physics, surface physics, catalysis science, physical chemistry, metallurgy, electrochemistry, hydrogen science, thermodynamics, acoustics, and so on.

Following JCF1, we have successfully organized JCF meetings almost every year; JCF2 (Hokkaido University, 21-22 October 2000), JCF3 (Yokohama National University, 25-26 October 2001), JCF4 (Iwate University, 17-18 October 2002), JCF5 (Kobe University, 15-16 December 2003), JCF6 (Tokyo Institute of Technology, 27-28 April 2005), and JCF7 (Kagoshima University, 27-28 April 2006). For almost all meetings from and after JCF4, we have published electronic versions (via internet) of Proceedings in addition to their printed versions, which are written in English. This is because we strongly intend to be one of the key societies for international cooperation and information exchange.

The scientific area of CF researches in the world is now called Condensed Matter Nuclear Science (CMNS), since establishment of The International Society for Condensed Matter Nuclear Science (ISCMNS; http://www.iscmns.org/) in 2003. Accumulation of research efforts by researchers in the world since 1989 has revealed existence of nuclear reactions in condensed matter that are considered to occur by synergic effects of nuclear and condensed-matter physics under peculiar circumstances in the condensed matter. Concrete results obtained in latest reports are especially noteworthy. Clean deuteron-related fusion with ^{4}He ash and cold transmutation of host metal and/or added nuclei in metal-hydrogen isotope systems are regarded as actual consequences of latest CMNS studies, both in experiments and theories. JCF has been keeping close relation and collaboration with ISCMNS and researchers in the world.

Papers submitted to JCF8 have been peer-reviewed by JCF Editorial Board chaired by Professor Hiroshi Yamada, Iwate University. One or two referees were offered to review each paper submitted, who made extensive reviewing to give constructive comments, questions and recommended corrections, if any. After receiving the revised versions, the papers have been accepted for publication. This book/file, Proceedings of JCF8, does not necessarily contain all contributions presented at the JCF8 meeting. Some authors are permitted, if they wish, to make their contribution as "A note without reviewing" within 2 pages. Program and Abstracts of all the presentations are available on a JCF webpage http://dragon.elc.iwate-u.ac.jp/jcf/JCF8/.

We thank all participants of JCF8.
March 2008,

Akira Kitamura (Prof., Kobe University), Director-in-Chief, JCF
Hiroshi Yamada (Prof., Iwate University), Chairman, JCF Editorial Board

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