



Preface

agriculture, medicine, informatics, human and environmental studies. Our laboratories and the graduate schools work together to provide excellent graduate education.

ICR strives to be the “central research center in chemistry” by achieving outstanding results in chemistry and related fields, and attracting motivated researchers in these fields. Chemistry is a fundamental science, which deals with materials, and its importance, including its contribution to physics and biology, cannot be overemphasized. One of our major strengths is our breadth and depth. In other words, ICR is multidimensional, and is constantly widening and deepening its research activities. We intend to use our strengths to contribute to pioneering research as well as to expand the boundaries of chemical related fields and further to promote research collaborations, which are not easy in conventional graduate schools. Moreover, we aim to utilize our strengths as an outstanding center in education in order to produce excellent scientists and engineers who can actively contribute to our global society on the basis of their broad and profound perspective.

ICR is currently executing Global COE Programs in collaboration with the Graduate School of Engineering and the Graduate School of Science. These Programs include “International Center for Integrated Research and Advanced Education in Material Science (starting from 2007)” encompassing chemistry and materials science fields, “Center of Excellence for Education and Research on Photonics and Electronics Science and Engineering (from 2007)” involving information science, electrical engineering, and electronics fields, and “The Next Generation of Physics, Spun from University & Emergence Developing Independent Researchers to Explore New Frontiers (from 2008)” covering physics, astronomy, and materials chemistry fields. In addition, ICR is making enthusiastic contribution to the “Joint Project of Chemical Synthesis Core Research Institutions (2005-2010)”, in collaboration with the Research Center for Materials Science at Nagoya University and the Institute for Materials Chemistry and Engineering at Kyushu University. This project is supported by MEXT through the Research and Education Funding for Inter-University Research Project. Furthermore, ICR is currently collaborating with domestic/oversea universities and research organizations (with 43 official international collaboration agreements) and is going to function as a Joint Usage/Research Center supported by MEXT (since 2010).

The strong collaboration basis so far constructed in-house and also with outside ensures our institute to serve as the core of global research propellers in chemistry-oriented fields. Thus, we respectfully request your continued support and encouragement.

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TOKITOH, Norihiro
Director

Institute for Chemical Research (ICR) dates back to 1915 with the founding of the Specialized Center for Chemical Research at the Faculty of Science, Kyoto Imperial University. The formation of the Specialized Center was greatly influenced by historical events. In 1910, Dr. Sahachiro Hata developed salvarsan, a highly effective drug for syphilis, while conducting research with Dr. Paul Ehrlich. The effectiveness of this compound eventually became widely recognized, and its commercial production began in Germany. Although Japan was importing this drug, the outbreak of the World War I ceased the importation, and forced by circumstances the Japanese government requested that the University of Tokyo and Kyoto University produced salvarsan. The fourth Chancellor of Kyoto University, Professor Mitsuru Kuhara, who also happened to be a chemist, received this request. Facilities for salvarsan production were built with an investment of 20,000 yen, which is equivalent to about 200 million yen in today’s market. Production went well, and as income was generated, faculty members, who had a passion for research in chemistry, gathered from across the University to form the Specialized Center for Chemical Research, which was later expanded and renamed as the Institute for Chemical Research (ICR) in 1926.

The newly established ICR soon began to produce outstanding research achievements: research on accelerators by Professor Bunsaku Arakatsu, research on synthesized petroleum oil production, and the development of vinylon, which is Japan’s first synthetic fiber. Almost all professors at the Institute, including the aforementioned, were also professors at the Faculty of Engineering or Science. However, over time, people began to recognize the importance of having professors dedicated solely to ICR in order to operate ICR with a clear responsibility, as well as the importance of the Institute’s contribution in training researchers by providing guidance to graduate students. Thus, ICR began accepting graduate students in 1962, and reorganization in 1964 saw the installation of the research division system where each division was led by one of our dedicated professors.

Since the founding of ICR in 1926, our basic principle has been to excel in the investigation of the basic principles of chemistry and chemical applications. Through several reorganizations, ICR currently consists of the following five research divisions: Division of Synthetic Chemistry, Division of Materials Chemistry, Division of Biochemistry, Division of Environmental Chemistry, and Division of Multidisciplinary Chemistry as well as the following three research centers: Advanced Research Center for Beam Science, International Research Center for Elements Science (IRCELS), and Bioinformatics Center.

Today, ICR spans 31 research fields (laboratories) with 113 faculty members and about 230 graduate students. Each laboratory belongs to one of the seven graduate schools which encompass science, engineering, pharmaceutical science,