

## **Honorary Chairman of DSL-2009: Prof. Hideo Nakajima**

Hideo Nakajima is a professor of the Institute of Scientific and Industrial Research (ISIR), Osaka University, Japan. He graduated in 1971 and earned his Ph.D. degree in Materials Science at Tohoku University in 1977 with Professor Hirano. Then, he was a postdoctoral associate of Physics Department at Rensselaer Polytechnic Institute until 1980 in the group of the late Professor Huntington. For 1980 to 1992, he was a research associate and an associate professor at the Institute for Materials Research, Tohoku University. In 1992, he moved to Iwate University as a professor. Since 1996, he has been at Osaka University in the Institute of Scientific and Industrial Research. In 1985 and 1993 he was a visiting scientist at Chalk River Laboratories, Canada. For 2003-2006 he was Chair Professor at Gyeongsang National University, Korea. He served as a principal editor of Materials Letters, Elsevier for five years until last year.

Professor Nakajima has received several awards and prizes: among these are awards from the Japan Institute of Metals, from the Japan Copper and Brass Association, from the Murakami Memorial Foundation, from the Iron and Steel Institute of Japan, from the Japanese Minister of Education, Culture, and in 2008 the Masumoto Hakaru Prize from Japan Institute of Metals.

His main research interests are diffusion and fabrication of porous metals. He has been carrying out systematic investigations focused on atomic diffusion in solids. In 1983, he succeeded in growing single crystal titanium and found fast diffusion of the transition metallic elements in titanium, discussing the dissociative mechanism.

In 1992, his group measured both constituent elements in  $\text{Ni}_3\text{Ge}$  intermetallic compounds and proposed the diffusion mechanism. This is the first measurement in  $L1_2$ -type intermetallic compounds. They also measured diffusion in icosahedral and decagonal quasicrystal with single grain and elucidated the diffusion mechanism. They measured Ti and In in TiAl single crystals and elucidated the anisotropic diffusion mechanism.

Furthermore, studies on fabrication of hollow nanoparticles have been carried out based on bottom-up ideas of the Kirkendall effect of controlling the vacancy clustering. He has published about 400 research papers and has 50 patents. Thus, Professor Nakajima and his coworkers have made significant contributions to the areas of atomic diffusion in metals.