



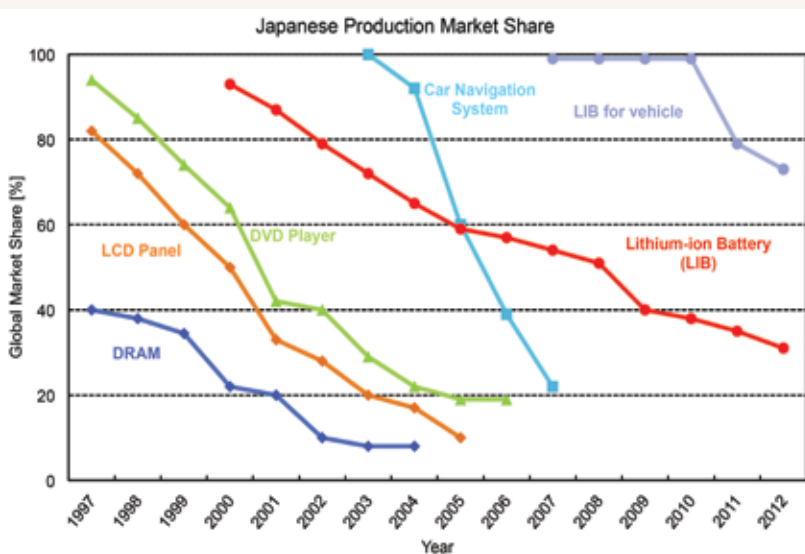
Science and Technology on a Global Scale and Society's Role

The 20th century was a time of advancement led by many discoveries and inventions that had their origin in the United States. At the beginning of the 21st century, the U.S. still led the world in science and technology growth. The advancement of the iPhone led by Steve Jobs involves a model for future innovations, and much can be learned from the achievements made in the United States. However, lately we have seen leadership emerging from many Asian countries in the technological sector. Significant developments in engineering and technology in Japan in the '80s (and even in the '90s), have been steadily supplanted by corresponding activity in newly-developing Asian countries such as Korea over the past ten years. Trends, drawn over a 15-year window, are illustrated in the accompanying graphic for six selected consumer products made in Japan for the world global market.

Nobel Prizes in the sciences—a good metric for knowledge development that has had impact—had been primarily awarded to Europeans and North Americans in the past; however the number of Nobel laureates from Japan has been increasing, amounting to a total of 19 winners as of 2013.

According to a recent interview with David Pendlebury, a U.S. Thomson Reuters analyst, the number of original Japanese research papers reached its peak of 9.4% in 2002, and then 5.8% in 2012. Recently, the number of original research papers published by China has become large. It is especially significant that the list of the top ten researchers cited in 2012 included three Chinese scientists. This suggests that the contribution of China is not only voluminous but high in quality. Envisioning a candidate from China for the Nobel Prize in chemistry or physics is no longer a stretch.

Thus, the leadership in the areas of science and technology in the 21st century may be geographically divided into three regions: Asia, Europe, and the United States. Given this backdrop, and the fact that ECS has been an international organization from its earliest days, it is reasonable to expect that the Society will play an even greater role as a forum for facilitating dialogue/collaboration in electrochemical and solid-state sciences and



engineering. For example, energy- and environment-oriented projects especially have become two of the most important issues for our planet, and the increasing interest in these two areas will have a synergistic effect on the development and growth of our Society.

ECS recognizes the importance of energy in the sustainability of our planet, and recognizes the role that electrochemistry can play. The successful Electrochemical Energy Summit series continued at the 224th fall meeting of the Society this October. This recent meeting, held in San Francisco, was a great success with more than 3,000 attendees, and included many important energy-related symposia. Looking ahead, in March 2014, ECS and the Chinese Society of Electrochemistry will hold the Electrochemical Conference on Energy and the Environment (ECEE) in Shanghai. As an organization that brings together scientists and engineers from Asia, Europe, and the U.S., and many other countries from around the globe, ECS will undoubtedly contribute to the health of our planet, now and in the future.

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