Establishing Hamamatsu as a Preeminent Photonics City:

Photonics Declaration 2013 in Hamamatsu

Shizuoka University (Suruga Ward, Shizuoka City), Hamamatsu University School of Medicine (Higashi Ward, Hamamatsu City), the Graduate School for the Creation of New Photonics Industries (Nishi Ward, Hamamatsu City), and Hamamatsu Photonics K.K. (Naka Ward, Hamamatsu City) have today signed the Photonics Declaration in Hamamatsu for establishing Hamamatsu as a preeminent photonics city.

Resolutions by the representatives of the four organizations

Yukihiro Ito, President, Shizuoka University

Shizuoka University has a unique advantage in research on imaging devices, and photonics and electronics specializing in imaging devices, since its Research Institute of Electronics in Hamamatsu was founded in commemoration of the achievements of Professor Kenjiro Takayanagi, the pioneer of television system. Based on this advantage, we have an ambition: “free control of light beyond space and time”. We aim to establish photonics which achieves spatial and temporal resolution beyond human senses and freely manipulates the wavelength, phase and intensity of light.

Shizuoka University has also a mission of social collaboration: as the regional center or knowledge and science, we progress with regional communities, solve actual problems and make social contributions. Through our “photonics research”, we would like to build a prosperous society, human and social communications, a healthy life, and we challenge to make Hamamatsu as a “preeminent photonics city” not only for Japan but also for the international communities.
Satoshi Nakamura, President, Hamamatsu University School of Medicine

The founding philosophies of Hamamatsu University School of Medicine are to (1) nurture excellent clinicians and highly creative researchers, (2) promote original research and the innovation of medical techniques, and (3) play a leading role in local medical treatments by practicing medicine for the greatest benefits to patients, thereby contributing to the health and welfare of all mankind.

Since its foundation, the university has worked on making medical contributions with photonics and applying photonics technology to medicine in terms of both clinical care and research. In 1991, we established the Photon Medical Research Center, a unique research institute for conducting photonics-based medical research, evolved from a course sponsored by Hamamatsu Photonics. The Photon Medical Research Center has since been amalgamated with the Molecular Imaging Frontier Research Center to create the Medical Photonics Research Center.

Today, the university undertakes joint research based on this Center with domestic and overseas universities and private enterprises to emerge as a shining light in the world of photonics research. With its unlimited potential, the key areas of photonics application include medicine, health science and biology. We are committed to serving as the driving force in these fields in our drive to establish Hamamatsu as a preeminent photonics city.

Yoshiaki Kato, President, the Graduate School for the Creation of New Photonics Industries

The Graduate School for the Creation of New Photonics Industries was founded under the principle of providing human resources that could create innovative photonics industries, and has been offering the education in that scientific technologies and business management are coordinated/integrated to develop new-age entrepreneurs and business people filled with creativity and entrepreneurship.

Photonics is making an increasingly large impact on our living, healthcare, environment, and energy industries on a global scale. Many countries are launching full-fledged initiatives for creating photonics industries.

The intent which is manifestly stated in the Photonics Declaration in Hamamatsu resonates with the commitment of our founder Teruo Hiruma, who said, “This institute has been launched to explore photonics so as to build a sound future for mankind and civilization on this living planet, Earth, and contribute to establishing national pride, public happiness, and national vitality.” We are determined to work on establishing Hamamatsu as a preeminent photonics city in collaboration with many organizations and researchers in Hamamatsu, the rest of Japan, and the rest of the world.
Akira Hiruma, President and CEO, Hamamatsu Photonics K.K.

Hamamatsu Photonics has envisioned the development of a photonics research base for over 25 years. Twenty-five years ago, the company brought together world experts to launch an international conference on neuroscience and psychology, which continues to this day. Two years later, we established the Central Research Laboratory in Hamakita Research Park to conduct joint research and networking on photonics with domestic and overseas universities and research institutes at the world's highest level.

Hamamatsu Photonics deems itself as a world leader in specialized photonic devices, evolved from photoelectric conversion technology, such as photomultiplier tubes, for which the company has over 90% global market share, and opto-semiconductor elements for academic use in physics and space observation. The application of our photonic devices has created new products, new businesses and new industries, forming large-scale markets across the world.

Establishing Hamamatsu as a preeminent photonics city has been our longstanding dream. The fact that Hamamatsu hosts the head office of this company with world-class photonics technology, provides the city with a suitable environment for promoting the application of photonics industries. In order to establish Hamamatsu as a preeminent photonics city, Hamamatsu Photonics will continue to pursue the uncharted territory of photonics, work on the development of new devices, and work with various organizations to discover new applications, thereby contributing to the creation of new industries.

Establishing Hamamatsu as a Preeminent Photonics City:

Photonics Declaration 2013 in Hamamatsu

Photonics science and photonics industries
The development of photonics science and the resulting expansion of photonics industries throughout the 21st century will usher in an era of photonics, when light will play an even greater role for mankind.

Light has unlimited potential, and us humans have explored only a small part of it. The human race will continue its endless challenge for identifying the essence of light and manipulating it freely.
This challenge is the driving force for evolving both photonics science and photonics industries.

**Photonics science, photonics industry and Hamamatsu**

In 1926, television was born in the city of Hamamatsu. It was a great achievement that set off the prosperity of the electronics industry in the 20th century and heralded the rise of the photonics industry in the 21st century. The technology evolved into the photonics industry in Hamamatsu, where the research of photonics science was continued, fulfilling a major role in social development.

If light has no limitations, the industrial application of light should expand further to make even greater contributions to the happiness of mankind. If that is the case, what can Hamamatsu do as we approach the centenary of the development of television?

**Preeminent Photonics City, Hamamatsu**

Hamamatsu is an ordinary regional city, which is neither a political nor economic center of Japan. Yet, the world knows “Hamamatsu.” The world's attention is upon the city. Why?

That is because Hamamatsu is home to people who identify unlimited potential in the industrial application of light and continue to test the limits of photonics technology. Hamamatsu has numerous organizations that have made a number of achievements in research and development involving light. However, given the amount of issues faced by the Earth and human race, light should offer greater benefits, which we must take advantage of. This is why we wish to give a "new mission" to Hamamatsu and turn it into reality.

**Declaration**

Establish Hamamatsu into a Preeminent Photonics City, where brilliant minds from around the world would want to study and engage in R&D even just once.

Establish Hamamatsu into a Preeminent Photonics City that creates innovative photonics science and industries for the world:

- Wherein researchers explore how to weave and use light;
- Wherein fundamental and applied photonics research of the world's highest level is carried out;
- Wherein photonics products/technologies that the world desires are developed;
- Wherein students, researchers, doctors, engineers, citizens, entrepreneurs, businesses, universities and research institutes seeking to identify the essence of light and gain the ability to freely manipulate it, gather from around the world to inspire each other;
• Wherein venture businesses and small/medium-sized businesses will play a leading role in developing applied photonics industries and engage in energetic activities;
• Wherein the intriguing nature and limitless potential of light are communicated and educated to younger generations.

Shizuoka University, Hamamatsu University School of Medicine, the Graduate School for the Creation of New Photonics Industries, and Hamamatsu Photonics K.K. will work in close partnership in all actions that could lead to establishing Hamamatsu as a Preeminent Photonics City.

June 11, 2013

Future action policies
• Work toward establishing Hamamatsu as a Preeminent Photonics City, as stated in this Declaration.
• Take an initiative in actively working toward this goal.
• Preeminent Photonics City Hamamatsu will network with the rest of the world to achieve cutting-edge photonics research.
• Preeminent Photonics City Hamamatsu will constantly remain conscious about the industrial application of light.
• Preeminent Photonics City Hamamatsu will extend assistance in response to swift moves by venture businesses.
• Preeminent Photonics City Hamamatsu will coordinate with the measures of national, prefectural and municipal authorities to contribute to advancing Japan's basic research and applied research, and reinforcing its industrial competitiveness.

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