Press Conference

President of JST

October 23, 2014

Japan Science and Technology Agency

Drs. Isamu Akasaki, Hiroshi Amano, and Shuji Nakamura Win the Nobel Prize in Physics 2014

Background for Invention of Blue Light Emitting Diodes (LEDs)

Around 1973 Dr. Akasaki officially started blue LEDs research.

1985 He succeeded in developing high-quality single-crystalline gallium nitride (GaN) films (low-temperture buffer technology).

R&D funds: 1985-1986 Research on properties, control and design of mixed crystals

1987-1989 Research on prototype fabrication of high-quality GaN-based blue LEDs

→Staff of JRDC (now, JST) visited Dr. Akasaki at his lab to encourage him to utilize our Contract Development Program.

1987 Dr. Akasaki launched the "Manufacturing technology of GaN blue light emitting diode" project in said program.

JST began providing grant funding for Toyoda Gosei Co., Ltd. (until 1990)

1995 Toyoda Gosei commercialized blue LEDs.

Dr. Akasaki's Professional Background

1952 Joined Kobe Kogyo Corporation (now, Fujitsu Ltd.)

1959-1964 Research Associate, Assistant Professor and Associate Professor, Department of Electronics, Nagoya University

1964-1981 Matsushita Research Institute Tokyo, Inc.

1981-1992 Professor, Nagoya University

1992-present Professor, Meijo University, Professor Emeritus, Nagoya University

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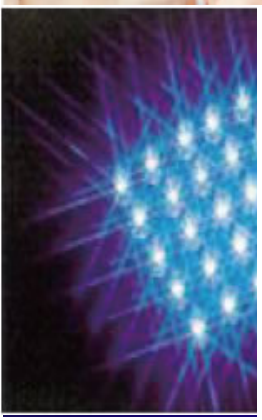

Relationship between JST and the three Nobel laureates

1987-1990	Dr. Akasaki	JST's Contract Development Program (now, A-STEP program) "Manufacturing technology of gallium nitride (GaN) blue light emitting diode" project (Participating Company: Toyoda Gosei Co., Ltd.)
1993-2000	Dr. Akasaki Dr. Amano	JST's Contract Development Program (now, A-STEP program) "Manufacturing technology of GaN short wave semiconductor laser" project (Participating Company: Toyoda Gosei Co., Ltd.)
2001-2006	Dr. Nakamura	ERATO Research director, the "NAMAMURA Inhomogeneous Crystal project"
2007-2010	Dr. Amano	JST's Risk-Taking Fund For Technology Development Program (now, A-STEP program) "Manufacturing technology for LED moth-eye structure" (Participating Company: EL-Seed Corp.)
2013-2018	Dr. Amano	JST's Super Cluster Program (Industry-Academia Collaborative R&D Programs) Aichi Core Cluster "Energy Innovation Cluster With Advanced Nano-Tools" "R&D of applications for power devices of GaN-based semiconductors" (Aichi Science & Technology Foundation, Nagoya University, etc.)

Recent State of Research Misconduct and JST's approaches

3. JST's approaches for preventing research misconduct

- ○ Major premise that the scientific community voluntarily cleans itself up and improves its prevention of any research misconduct
- ○ Based on this premise, encourage new researchers accepted to our programs to attend seminars and training on research integrity held by JST
- ○ Adding a new clause specifying that applicants are required to have completed research ethics courses at their organizations according to our application guidelines for research projects from fiscal 2015
- ○ Distributing the video "The Lab" for the purpose of enriching research ethical education

3.1 Record of JST's Workshops on Research Integrity

(NOTE: fiscal 2013 data)

1. Educational activities for new principal investigators, companies, and secretariats selected for JST's programs

Since FY2012

JST conducts the seminars and training about research integrity and acts of dishonesty. JST require researchers to submit a declaration to JST.

Number of seminars: 95
Number of attendees : 2,799

2. Educational approaches for participant researchers in JST's programs

Since FY2013

Researchers and staff members who participated in JST's R&D programs have had to complete study materials on research ethics via e-learning, such as CITI program courses. This approach is aimed at preventing these personnel from being involved in research misconduct in research (fabricating or falsifying research data, plagiarizing scholarly papers, etc.).

Number of registered researchers: 6,501
(applied to new projects of research.)

*JST has applied this approach to its ERATO and PRESTO programs since FY 2012.

3. Training courses for JST staff

Since FY2012

Lectures and seminars for JST staff by outside experts

Number of attendees: 128

3.3 Enrichment of Ethics Education in Research

1) Visiting universities and R&D institutes for training sessions (seminars etc.)

Since FY2014, this approach has been done at the requests of universities and R&D institutes.

- Chiba Institute of Technology
- Tsukuba University of Technology
- JAXA, etc.

2) Upgrading for the e-learning materials “CITI program courses”

For FY2015, it is planned to adopt study courses in science and engineering in addition to ones in life science.

3) Training sessions with the use of “The Lab” (an educational DVD)

JST will have completed an instruction manual for the DVD by the second half **of FY 2014**.

3.4 The Lab (Educational DVD on Research Integrity)

JST has added Japanese subtitles to the educational DVD “The Lab,” which was produced by the Office of Research Integrity (ORI) of the Department of Health and Human Services of USA.

[The Japanese version of “The Lab” is to be released soon.]

Science Agora 2014

Outline of Science Agora 2014

Science Agora 2014

How can we come together so as to build relations between future society and science ?

- **Dates:** **November 7(Fri) to 9(Sun), 2014**
- **Venue:** **Odaiba district, Tokyo (The Miraikan, etc.)**
- **Host:** **Japan Science and Technology Agency (JST)**
  - **Cohosts:** **Advanced Industrial Science and Technology, Tokyo Metropolitan Industrial Technology Research Institute, Japan Student Services Organization, Tokyo Academic Park, and Tokyo Rinkai Fukutoshin Group**
  - **Cooperation:** **Fuji Television Network, INC.**

*For the details on this program, please visit the following website:
http://www.jst.go.jp/csc/scienceagora/

Focused Approaches towards Agora 2014

1. Enriching Event Programs through the Participation of the Research Community

"Open House" to showcase JST's virtual research institutes; and discussion on underlying issues in the research community, such as the fusion of diverse academic fields, interaction with society, research ethics, and personnel development.

2. Diversifying the Sector of Participating Stakeholders who are Involved in Science

Media, publishing industry, industrial society, government & administration, general citizens, next-generation personnel, etc.