

Press Conference President of JST

April 25, 2019



Japan Science and Technology Agency



CRDS published

The Panoramic View Reports 2019



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The Panoramic View Reports 2019 were published by CRDS



- The Center for Research and Development Strategy (CRDS) released ***The Panoramic View Reports 2019***.
- Six volumes (a total of 2,400 pages) contain analysis about the evolution, state-of-the-art and future of R&D, and it is a product of the interaction of CRDS with more than 1,500 stakeholders.

■ Science and Technology Fields (4 volumes)

✓ Covering the whole vision of target research fields, trends of each of the 126 major R&D areas, and international comparison.	
Life Science and Clinical Research	Chapter1: Whole Vision of target research fields 1.1 Scope and structure of the panoramic view report 1.2 Current environment of each R&D field 1.3 Future prospect and course of action
Environment and Energy	
Systems and Information Technology	
Nanotechnology and Materials	Chapter2: Category of panoramic view and R&D areas

■ R&D Strategy of Major Countries (1 volume)

- ✓ Introducing basic policies, policymaking system, and investment strategies etc. of each country: Japan, US, EU, UK, Germany, France, China, Korea, and **India**.

■ Japanese Policies for STI (1 volume)

- ✓ Japan's basic policy, budget, major activities, and trends are described.

Integrated Version

July 2019 Edition (in press)

A comprehensive review of trends within and across scientific disciplines, with strong emphasis on relationship between science and society.

Provisional Table of Contents

1. Premise for the Panoramic View

- ◆ Global Trends and "Science and Society"
- ◆ National Science, Technology and Innovation Policies
- ◆ The International Landscape

2. The R&D Panoramic View

- ◆ Cross-Disciplinary Issues Raised
- ◆ Introductions to Field-Specific Reviews

3. Challenges for the Future



Case Studies from Research Analysis Report

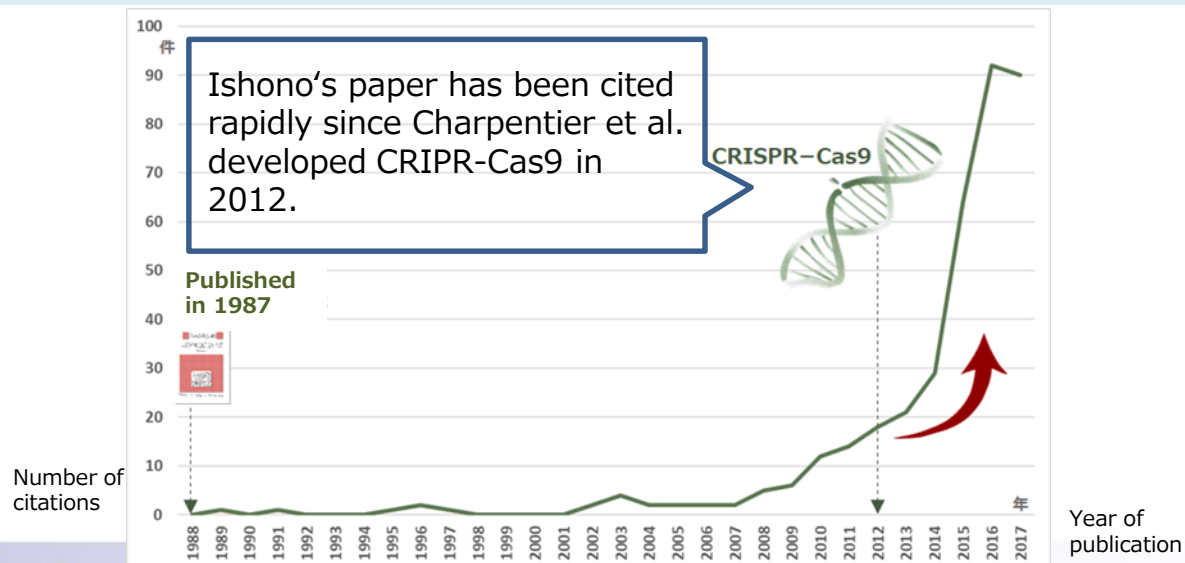


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Case 1 from Research Report

The development of CRISPR-Cas9
Awakening a “sleeping beauty”- paper by a Japanese researcher

- In bibliometrics, a Sleeping Beauty (SB) refers to a paper, the citation history of which exhibits a sudden spike of popularity after a long hibernation period.
- The development of CRISPR-Cas9 in 2012 triggered an awakening of the paper, "Repetition of nucleotide sequences" (J. of Bacteriology, 1987) by Yoshizumi Ishino from Osaka University at that time (currently from Kyusyu University).



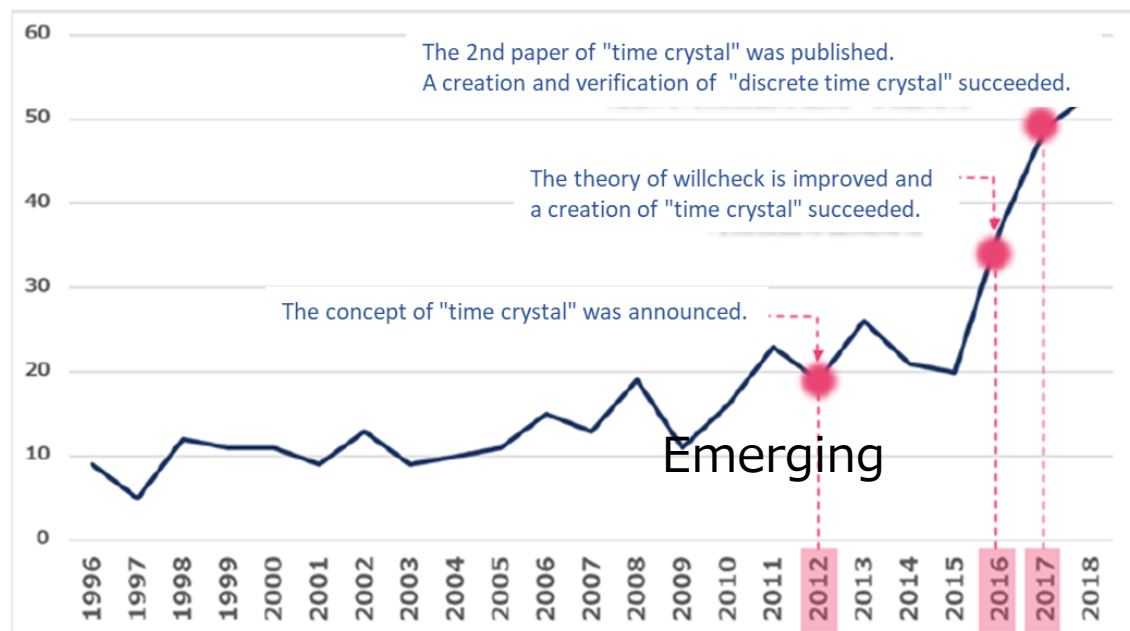
2017 Journal Impact Factor

Nature	41.577
Science	41.058
Cell	31.398
J. of Bacteriology	3.219

Case 2 from Research Report

Discovery of an emerging topic through citations A new kind of material: "time crystal"

Research Fronts
Activation of C-H bond
Upconversion Technology to convert low-energy light into high-energy light
Holographic universe theory The theory that the universe is two dimensional but it is projected in three dimensional.
Wireless sensor networks
Nanomaterials for space technology
Connected car
Topological insulator Material, the surface of which is a conductor, but which is an insulator on the inside
New magnetic material
Time crystal



The number of publications whose titles including "time crystal."

Time crystal: A new substance, the crystal structure of which continues to oscillate spontaneously and periodically