



May 21st, 2020

The University of Tokyo

JSR Corporation

## University of Tokyo Department of Physics and JSR Corporation start comprehensive collaboration

The University of Tokyo, Graduate School of Science, Department of Physics (President [The University of Tokyo]: Makoto Gonokami, hereinafter referred to as "the Department") and JSR Corporation (Representative Director, CEO: Eric Johnson, hereinafter referred to as "JSR") agreed on a comprehensive collaboration, and announced the start of a joint research program from April 1st, 2020.

Through this comprehensive cooperation, the Department will deepen the understanding of the functions of various materials that have deeply penetrated our society, and through this inquiry, reveal universal truth and novel academic fields. Consequently, JSR will bring forth novel high-performance materials to society through this fusion of academia and industry. Additionally, this unique comprehensive collaboration includes a fellowship, and will be the first such endeavor for both parties, in the more than 130-year history of the Department and over 60 years for JSR.

### ■ Details

#### 1. Establishment of collaborative creation hub for fusion of physics and chemistry

In this comprehensive collaboration, JSR will conduct joint research by establishing the "JSR-UTokyo Collaboration Hub, CURIE" as a collaborative creation hub in the Faculty of Science Building No. 1 on the University of Tokyo Hongo Campus. Aiming for the creation of great achievements through research and development from the fusion of physics and chemistry, "CURIE" was named after Marie Curie, who was awarded the Nobel Prize twice, once each in Physics and in Chemistry. In addition, the name stands for qualities considered important in research and development: Curiosity, intelligence, and emotion.

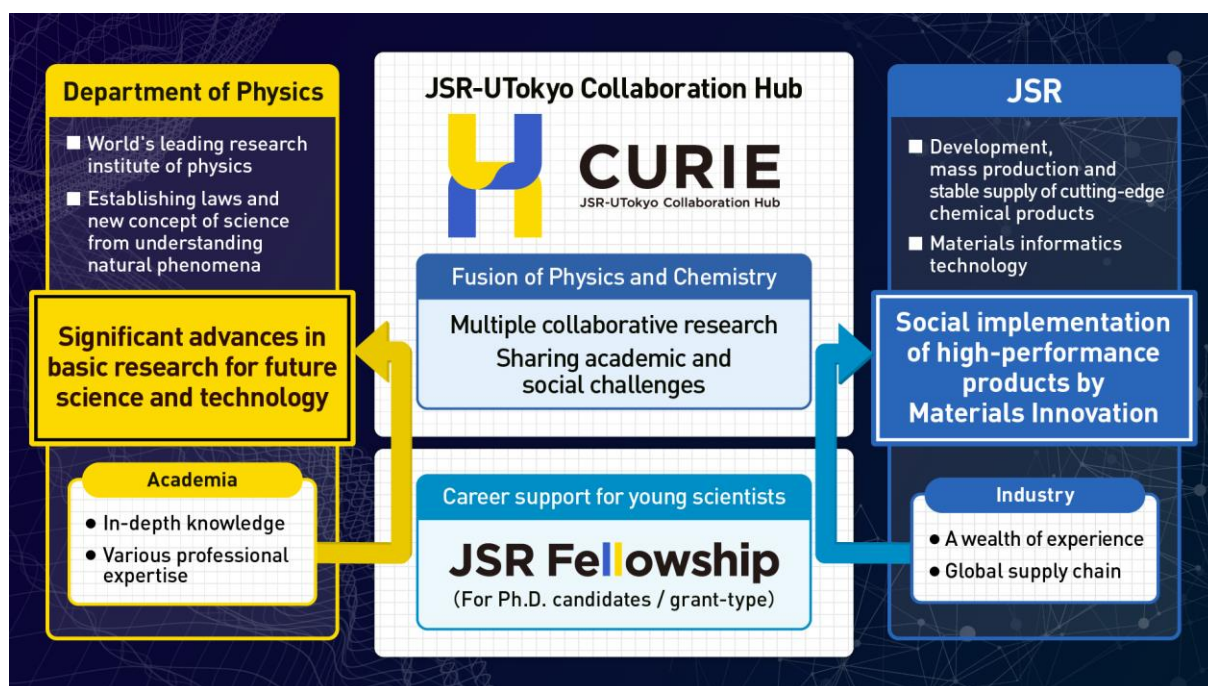
#### 2. Cultivation of global experts – Founding "JSR Fellowship," a grant-type fellowship for Ph.D. candidates

The collaboration plans to promote joint research aimed at the fusion of chemistry-based practical science and physics, by establishing the "JSR Fellowship," a grant-type fellowship for Ph.D. candidates. The purpose of this fellowship is to cultivate experts who will contribute to the advancement of science and industry through physics that is not just limited to theory and experiments, but comprehensive in scope, which will become increasingly important in the future.

### 3. Creation of new technologies and materials by fusion of science and engineering

Through this comprehensive collaboration, JSR will gain a deep understanding of the functional expression principle of products and promote the development of products with extremely high differentiation performance by combining physics and chemistry. In addition, the Department will transmit to the world the achievements that will become the foundation of next-generation science and applications by exploring various phenomena and pursuing science from a physical perspective in this collaboration.

#### ■ Department and JSR



[Comment of Nobuo Kawahashi, President, COO, and CTO, JSR Corporation]

The whole JSR Group promotes digital transformation, through various collaborations in research and development. We have recognized the need to understand the laws and principles based on the natural sciences to further improve the performance of our products. The Department of Physics is the largest physical science research institute in Japan, and one of the largest in the world, covering all fields from elementary particles to light, physical properties, the universe, and even biology. We believe the Department is the best partner with whom to develop science that leads to the dramatic improvement of the functionality of JSR products, and are glad to announce the start of this collaboration. Although it will be a future-oriented comprehensive collaboration of chemistry and physics, we aim for social implementation of products with higher performance by achieving our company philosophy of Materials Innovation through this collaboration. At the same time, we plan to contribute to society by nurturing talented experts who will develop Japan's industrial future through the JSR Fellowship.

【Comment of Prof. Shinji Tsuneyuki, Director of Department of Physics, The University of Tokyo】

For over 130 years, the Department of Physics has endeavored to understand the essence of natural phenomena and the origin of matter, thereby establishing universal laws or concepts of nature. The research activities of the Department have found usefulness nowadays in various situations in both academia and industry. In this respect, the new comprehensive partnership program is strongly expected to produce unexpected breakthroughs leading to the creation of novel research fields. This is because the partnership program differs from normal research activities in that it is carried out between communities with distinct cultures and completely different research areas, mindsets, aims, and techniques. In addition to collaborative research, the grant-type fellowship established by JSR is greatly appreciated. We expect the fellowship to be a pioneering model of support programs for graduate students. Through the comprehensive partnership program, we aim at producing visible, highly impactful results in various fields of science, including materials science and, very importantly, developing young minds eager to contribute not only to basic research, but also to addressing and resolving social problems.