

*Studio Now*

I am preparing for the art fair in June and working to enlarge some of the pieces of the Cognition series.

*The explanation of my works*

<Cognition 3-1, 2022>

This piece is extended representation of 'Cognition -3.' I had one question in mind when seeing the motive of this piece. 'Every matter has its own color. Is this expression correct?'

Philosophy considers phenomenon and defines them as logic, but science tests them and proves the cause of them. In physics, light is an electromagnetic wave. And it has both wave and particle properties at the same time, and light acts at the same time as a wave that shows the shape of matter and changes in color, making matter recognizable. This work put meaning on waves (=color) that appeared when light penetrated matter rather than in the distinguished form, and what humans perceive in the process of recognizing waves (=color) through the sensory organ called vision is 'matter'? Or is it something else?"

## *Kim's Essay*

### Photographing Light

On December 23rd, 2020, a research team led by Professor Hrvoje Petek of Astrophysics at the University of Pittsburgh published a research paper called 'plasmonic topological quasiparticle on the nanometre and femtosecond scales' on Nature Online. The team researches on tracking and making image out of the activity on the surface of an object in a very short period of time and in this paper, they caught the momentum movement of light within 1 Femtosecond, (0.000000000000001second). Technically speaking, they succeed in converting electron forming after light hitting an object into an image and they say with this technology, there is a higher probability of being able to control light precisely. When I heard the news, I thought about the state of matter in a space where light does not exist. According to quantum mechanics, all matter is kept in shape by exchanging energy by light, so matter without light may have to be in the form of a wave. Nevertheless, what I am curious about is what a matter at a wavelength outside the scope of visible light in humans would look like and what state of matter if it is not in the form of waves would be. For example, since radio waves transmit matter, matter appears to be more of a plane than a three-dimensional. Infrared rays are a mixture of three-dimensional and flat surfaces, and sometimes appear to be indistinguishable at a specific part where matters overlap. However, both of the above examples derive results from different wavelengths in the states of matter reacted by light. Therefore, I look forward to the development of the above technology. If the above technology develops while I'm alive and they succeed in experimenting with the state of matter before the reaction of light, I can also infer about myself and the human state.

On the other hand, I am looking forward for the James Webb Space Telescope, which was launched on December 25 last year, to officially start its activities and discover the light immediately after the Big Bang. I am grateful to everyone for doing their best in their respective fields, such as the research team above and NASA, and sharing the results. Thanks to their efforts, I learned a lot about the nature of the world, and new information allows me to imagine more than I could ever imagine. Physicists can look at the flowers that artists see from more perspectives, Richard Phillips Feynman once said. As he said, I can recognize the meaning of the word "be light" written in Genesis 1: 1 of the Bible from a new perspective beyond the meaning of the word light that is commonly known.