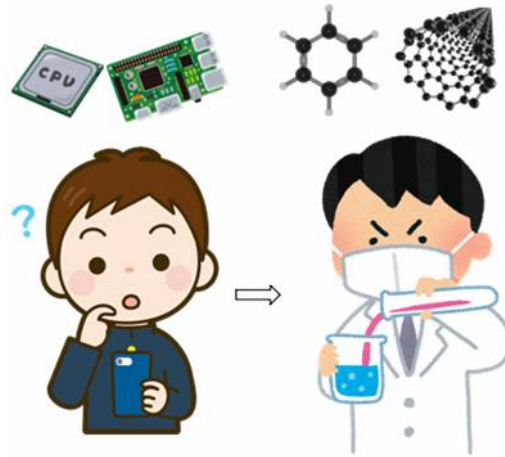




When people hear the word “researcher,” they often imagine someone who has loved science since childhood or someone with special talent. However, my experience was different. Unlike many researchers, I cannot point to a single teacher, scientist, or family member who inspired me. Instead, my interest in science grew little by little through everyday experiences and curiosity about the world around me.

The first time I became interested in science was when I got my first smartphone in junior high school. At that time, I was amazed that something that looked like a thin board could do so many things by using electricity. With a smartphone, I could talk to people far away, play games, watch videos, and search for information within seconds.

As I used the smartphone more, I began to wonder how it actually worked. I wanted to know how such a small device could perform so many complicated tasks. I also became curious about how engineers improved smartphones every year by making them faster, thinner, and more powerful. Because of this curiosity, I gradually started

searching for information on the internet about technologies, mainly about semiconductors. By the time I entered high school, I believed that I wanted to become a semiconductor researcher in the future.

However, my interests changed after I entered university. Once I started learning science in greater detail, especially when I learned the beautiful catalytic cycles of coupling reactions, I discovered that the field I truly wanted to explore was organic chemistry. Now, my research is completely different from semiconductors. Instead of studying electronic devices, I study molecules and chemical reactions.

At first, this change surprised even me. I had once imagined a very different future for myself. But university taught me an important lesson: research is not about following a fixed path forever. Research is about continuously exploring what genuinely interests you. As I studied different subjects, I realized that chemistry was the field in which I most wanted to ask new questions and discover new ideas on my own.

Although my research topic changed, one thing has remained the same since junior high school. That is curiosity. The desire to understand “why” and “how” is still the main force that drives me to study and conduct research. In many ways, the curiosity I felt when I first held a smartphone is connected to the work I do today.

Today, my research is in a field called structural organic chemistry, which focuses on the shapes and structures of molecules. Many people imagine chemistry as simply mixing liquids in a laboratory, but a large part of modern chemistry involves designing molecules carefully and understanding how their structures influence their properties.

In many areas of science, researchers often begin with a specific goal such as, “I want to create a material with this function.” Then, they design molecules that might

achieve that purpose. My approach is somewhat different. I am more interested in curiosity-driven research. Instead of starting with a clear application, I often begin by thinking, "This structure looks interesting," or "I wonder if this kind of shape is possible to make." Sometimes, unusual structures later lead to unexpected and useful properties.

One of the reasons I enjoy this research is that designing molecules feels like solving a puzzle. Actually, I designed cage-shaped molecules by connecting hexagonal units (benzene ring) together. I think about how different molecular "parts" can be connected together to create new and beautiful shapes. Some molecules look surprisingly elegant, almost like pieces of art created at the atomic level. Finding ways to build such structures is challenging because the molecules do not always form in the way I expect. However, when I finally succeed in making the target molecule after many attempts, the excitement is enormous.

Of course, experiments do not always work as planned. Very often, molecules do not connect in the way I expected, or reactions fail completely. However, this is also an important part of research. Instead of simply feeling disappointed, I try to ask "why" the experiment failed. By carefully thinking about the reasons, I can gradually improve the reaction and search for new solutions. When an experiment finally succeeds after many failures, the excitement is enormous. That feeling of discovery is one of the most rewarding aspects of being a researcher.

Another interesting part of research is communication. As my knowledge of chemistry has grown, chemistry itself has started to feel like a language. By learning this language, I can discuss ideas, reactions, and molecular structures with other organic chemists around the world. Even though we may come from different countries or

cultures, chemistry allows us to share ideas and understand one another through science.

For me, research is not only about finding useful results. It is also about curiosity, creativity, and the joy of discovering something new that nobody has seen before.

People sometimes think that researchers are born with extraordinary intelligence or special abilities. Of course, studying science requires effort and patience, but I do not believe that researchers are fundamentally different from other people. What matters most is not talent, but the willingness to stay curious and continue learning. Many researchers simply began by asking small questions about ordinary things in daily life.

For this reason, I want you, young students to value the interests you already have. You do not need to know exactly what career you want in the future, and you do not need to be perfect at science immediately. A simple question such as “How does this work?” can become the starting point of a much larger journey. The important thing is to keep exploring your curiosity and not ignore the excitement of discovering something new.

A part of the graph is taken from illust AC and いらすとや.

I used chatGPT to improve the language.