

Dr. Emily Gabrielle Meekel's work on Metal Organic Frameworks

◇Date: December 6th, 2024

◇Place: Humanities and social science room, Toyama Chubu High School

◇Participants: 29 students in General course, Inquiry-based study of humanities and social sciences course, and Inquiry-based study of science and mathematics course

More than twenty students attended the Science Dialog held on December 6th. Dr. Meekel was invited to give us a lecture on her research at Kyoto University. She first introduced herself, and talked about how she became a chemist and came to Japan. Dr. Meekel is developing various kinds of crystals made of metal-organic frameworks that have useful properties. Metal-organic frameworks are porous polymers made of metal clusters connected by organic ligands. They can be used to store gas or applied on robots as flexible parts, depending on how the structures are designed. By touching the models of different structures, we were able to comprehend better the three-dimensional structures of metal-organic frameworks. The explanation on metal-organic frameworks was challenging, but there were also many parts that were linked to what we are learning in our chemistry classes. While talking about how to become a good scientist, one of the things she emphasized was patience. She told us that most experiments don't turn out as expected, and I think that it is a very important thing that can also be applied to our studying. Many students also asked questions and we were able to learn more about her study. I was surprised to hear that she wanted to use metal-organic frameworks in computers to store information. It was a very good opportunity to learn about interesting cutting-edge technologies that we have never heard of and think about our own career choices that can be made in the future.

(Written by 26H Li)

