**Dear president and colleagues, it’s my great honor to be here today and present you our ideas of quantum dots and its applications.**

**And because the absence of my colleague Coco, I will do the presentation alone.**

**The presentation will be composed of four parts,**

**What is quantum dots**

**What is special about it**

**Why is our technology important?**

**And how quantum dots can be applied to our technology**

**Please allow me to first introduce you what is quantum dots.**

**OK. Let’s first think about this. Scientists can now precisely control every single atom. They make things lit up in certain colors and use that to do all kinds of things that used to be impossible.**

**OK. That may sound insane. But now we manage to do something very similar because of the discovery of quantum dots!**

**So, what is quantum dots? Just like the name, quantum dots are very tiny semiconductor particles. They can emit**[**light**](https://en.wikipedia.org/wiki/Light)**of specific frequencies, and these frequencies can be controlled by changing the dots' size.**

**To investigate further, we did a simple experiment of quantum dots, and here is the result:**

**So the first graph reveals the relationship between the reaction time and the color of the quantum dots. The color here is represented in frequencies, and the smaller in frequency, the closer it is to red, so this graph basically shows this:**

**As we can see, as time pass by, the color becomes redder.**

**The second graph shows the relationship between dot size and reaction time. So according to the graph, we can see that there is a positive relationship.**

**And the third graph shows the relationship between dot size and frequency, it is an inverse relationship. This graph actually put the first and second graph together, showing us that as time goes by, the color gets redder, meaning the frequency gets lower because the dot size gets bigger.**

**Then the fourth graph shows the relationship between energy and frequency. They are exactly proportional because we used the formula E = hf to calculate the energy.**

**The last graph is about dot size and energy. Because energy and frequency have a positive relationship, and frequency and dot size have an inverse relationship, so the graph is downward sloping.**

**So what makes quantum dots unique?**

**Well, there are so many things that can make you think it’s unique:**

**The fluorescent effect, meaning that they can fluoresce under UV light and that color is actually quite stable!**

**Size! They are really small so they can penetrate into small points!**

**And most excitingly, the property that the color changes according to the dot size!**

**So using these special properties, we are planning to do something interesting.**

**The field we are looking into is military camouflage.**

**Well, let’s first look at a set of pictures.**

**The first tank was found in 1950s, and the second one is what US tanks look like nowadays.**

**Yes, a lot has been improved now, like the** augmented reality in its sighting system, more advanced digital fire control system, defense system, etc, etc.

However, as we can see from the graph, we can still easily recognize the tanks using our naked eyes.

**So, how will the technology of quantum dots help with that?**

**Well, as we mentioned before, the color of quantum dots can change according to the dot size. If we apply this property to military camouflage, like tanks, then the tanks can change colors according to the background color.**

**OK. So here is how it will actually work:**

**First, billions of tiny cameras will be used to capture every single segment of the surrounding of the moving tank in a really shot period of time.**

**Then, those captured images will be sent into a controlling device in the tank, and these images will be arranged, like the images captured from the left side of the tank will be displayed on the right side of the tank, so we can as if see through the tank to the view on the left side. For the displaying, the tank covering system is composed of billions and billions of quantum dots that is also connected to the controlling device, so it can change color accordingly, and blend in with the surrounding, no matter where is it, in dessert, grassland, snow, etc.**

**Thus, when the enemy is looking at the tank, it looks as if the tank is the background.**

**And if this kind of technology is successful, we can further move on to apply that kind of technique on other military facilities, like airplanes, guns, trucks, etc, etc.**

**This kind of application has broad prospect. What is more important is that it is really crucial to military force and concerns the future development of our country.**

**So what is quantum dots, what is special about it, and one possible application of quantum dots, that’s our presentation.**

**Thank you for your attention.**