**Ask me anything**

**Quantum creativity**

**Erik Bakkers** is professor of advanced nanomaterials and devices at the Eindhoven University of Technology (TU/e) in the Netherlands. With a PhD in nanoelectrochemistry from the University of Utrecht, Bakkers spent over nine years working in industry at Philips Research Laboratory, where he led a team focusing on nanowires. In 2010 he joined TU/e, where he now runs the Center for Quantum Materials and Technology.

**What skills do you use every day in your job?**

I think one of the main skills that I use on a daily basis in my life and work is creativity – mainly to solve a lot of problems, but also to stimulate people. The role of a PhD student can be quite tough, and it’s my job to keep them motivated. Creativity is also important in science – we have to think about new research topics, and try to look ahead to estimate what will be important in the field within a few years.

As a researcher, your scientific skills and knowledge are very important, so a good background and a firm foundation will always be useful. But there are some soft skills that are also important. For example, if you work in research you have to collaborate with many people. Often you have to keep them interested and motivated, especially when things may not be working as expected, and people are frustrated. Sometimes you have to convince others that something is a good idea, when it’s maybe not obvious, so good communication skills are important.

**What do you know today, that you wish you knew when you were starting out in your career?**

That’s a really interesting question, and my answer is that I do not regret any step in my career so far. Of course, there have been difficult moments. But it would have been a pity, I think, to have avoided them thanks to prior knowledge. I think this is also the beauty of life – it’s good to learn to solve your own problems, and try to shape your future without knowing everything in advance. Otherwise it’s a bit like watching a movie for the second time! My advice to students is to do what you like the most. Don’t worry about careers and salaries, these will come automatically, if you are enthusiastic and full of passion.

**What do you like best and least about your job?**

What I like best about my job is having the opportunity to work at a university with so many young people at the start of their careers. They are always enthusiastic and full of energy and I know they all have the potential to have brilliant careers. Helping them along the way is something I really like. The other thing I enjoy is the freedom to use and express my creativity, which is really the key to working and succeeding in academia.

I do not enjoy administrative tasks, especially when it is simply for the sake of administration, but I guess that is the same for everybody.

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