

As I began my planning for the summer of 2011, my main criterion was to find a position where I could work on interesting new technologies that relate to my chemistry curriculum. I asked my colleagues about programs they had done in the past, and many of them mentioned RET as one that had been very valuable. I researched RET at BU and found that it not only met my need to find relevant technologies, but it also provided lots of support with pedagogy. Win-win!

My summer research focused on surface plasmon resonance (SPR). Coming into the experience, I had no idea what SPR did or what a plasmon even was. Needless to say, the learning curve was steep. However, after the first 2 weeks I felt like I had enough of the basics to be a contributing team member. I learned that SPR can be used to detect virus particles with great sensitivity. Long-term, the application could be used to quickly test people for different diseases, a process that is currently both costly and time consuming.

An unexpectedly fascinating aspect of the project was that it involved aspects of physics, chemistry, and biology. Students frequently complain that they don't see how the fields relate. Now I have a concrete example of how important it is to be versed in many different sciences.

We also spent a good deal of time in the optical processing facility (OPF). The OPF required us to get decked out in bunny suits (see right and below) and we learned how chips are made (not the potato kind, the kind that we find in electronics). The students really enjoy hearing about this experience and it gives me another connection to the real world.



I came away from my summer with the RET program as a teacher who has a much broader knowledge base and found new ways to engage his students in the applications of chemistry content.