All of That Experimental Excitement in One Building

An interview with researchers at the **Stewart Blusson Quantum Matter Institute** at the University of British Columbia:

George Sawatzky, Founder, Professor, UBC Physics & Astronomy
Alannah Hallas, Assistant Professor, UBC Physics and Astronomy
Douglas Bonn, Professor, UBC Physics & Astronomy
Sarah Burke, Associate Professor, UBC Physics & Astronomy

George Sawatzky

In order to develop new materials with new properties in new devices, you need expertise in many different areas. You need chemistry because these are materials which are composed of atoms. To be able to measure that, you need to develop new techniques. This requires really exceptional experimental capabilities. In addition, you need to be able to interpret the results that you get from these measurements, and that requires very high-level theory, and also an understanding of what you can do to actually improve those properties. One person cannot possibly have the top-level expertise in all of those various disciplines, so you really need a team of quite a number of people. There's very few institutes in the world that have this kind of breadth of interdisciplinary collaboration, I would say.

Alannah Hallas

I always knew that I wanted to one day build my own lab in Canada. That was a big priority for me. And I wanted to work in an environment that had

this strong possibility for collaboration. You take some of those best elements of being at a large conference, where there's so much excitement all around you, and you put them all into one building. If I find something cool in the lab, I can literally walk down the hallway to George Sawatzky's office and show him my data, and I know he's going to be excited, too.

George Sawatzky

I find it extremely exciting to work with young people and develop completely new ideas with experimental techniques. And these experimental techniques are developments in themselves. So it's a matter of trial and error, but starting from a rather deep theoretical idea as to where to go.

Sarah Burke

There's things that we're working on now that in five, ten years we're going somewhere exciting, but I hope new things will keep coming, and I want to be able to chase after those new things. And a lot of that will come from within this building. Being so collaborative means we get pulled in new directions all the time, but those are often way more exciting than the things that we can see. If I can see if coming, it's probably boring.