

*Catalyst Profile*  
**Lucile Teague**

For Lucile Teague, who graduated from WCU in 1998, scientific research is all about seeing the unseen. Using scanning Kelvin probe microscopy, this WCU alumna has earned herself two U.S. patents by observing the optoelectronic properties of organic thin-film and solid-state semiconducting materials. Still, as complicated as it may sound, it all comes back to the imperceptible atom.

“I like being able to see what can’t be seen by the eye alone and to explore the basics of how things work,” said Teague in *Innovation*, a technology journal stationed out of New Mexico.

Though this mother of two has worked up and down the East Coast, and even in Dublin for a year, her fascination for the structure of molecules began at WCU. As a chemistry undergraduate, Teague grew to be comfortable in a lab environment—a place where being “hands on” was simply part of the process.

The small department also allowed for individualized attention from mentors Cynthia Atterholt, Roger Bacon, and William Kwochka.

“Learn and soak up all you can from your professors,” said Teague. “They are there to teach and do research with students, so take advantage of the time they spend with you.”

And during her four-year stay in Cullowhee, this former Catamount did just that. After learning the “basics” and putting the scientific method to work, she was honored with the “Outstanding Chemistry Student Award” in both 1997 and 1998.

From there, after being encouraged by faculty, she enrolled in UNC-Chapel Hill’s physical chemistry doctorate program. With help from the prestigious Francis P. Venable Scholarship, Teague researched the bond configurations of 1,3-cyclohexadiene, an organic liquid with flammable properties.

In 2003, she continued her lab work as a postdoctoral researcher at Trinity College Dublin and the University of Maryland. After leaving academia, the scientist took a job at the Savannah River National Laboratory testing the electronic properties of molecules.

Though she stayed at the South Carolina-based facility for well-over five years, Teague soon sought out something with an international focus. Thus, in 2013, she began as an engineer at GlobalFoundries, a semi-conductor foundry with hubs in Singapore, Germany and the U.S. In her current position, she uses microscopy techniques to analyze the failure of computer chips for companies like Intel, Micron Technology, and IBM.

While this alumna has dedicated her professional pursuits to observing the unseen, her progress in the technological sector is quite obvious. Having published dozens of articles

on crystal organic transistors and carbon nanotube films, she owes it all to microscope analytics and, of course, her legwork as an undergrad.

“Look at lab as part of the learning experience,” said Teague, reflecting on her first bouts as a researcher. “Find the answers and remember the fundamentals.”