



# Patrick Feng

**Research Chemist  
Class of 2000**

**By Reid Nakamura**

To become a research chemist, Patrick Feng has been in college and graduate school for the past ten years.

He graduated from Waiakea High School with the class of 2000 and later earned B.S. and Ph.D degrees in Chemistry from Colorado State University (2004) and the University of California-San Diego (2009), respectively. He recently started a research position at Sandia National Laboratories in Livermore, CA where he works with nanoporous metal-organic materials for applications in energy storage and chemical and radiation detection. Patrick's graduate research involved the study of magnetic phenomena in anisotropic metal clusters. He also studied the coordination chemistry of radioactive metals such as Uranium and Thorium during his time in Colorado and San Diego.

Research chemists concern themselves with the investigation, manipulation, and application of chemical processes. They work to improve appliances and procedures in a variety of fields including medicine, energy research, materials science, environmental and atmospheric research, and technology. The breadth of this field allows research chemists to work for many different companies in many different fields depending on their area of expertise. Patrick's dissertation research is concerned with the synthesis and classification of molecular clusters that exhibit special properties due to their size and composition. He uses his knowledge of chemistry and quantum physics to study these particles and develop a better understanding of their unique behaviors. The conclusions drawn from this work could lead to improved data storage as well as other computing technologies.

Patrick enjoys his work because he feels that discovering new things about the natural world is very fulfilling. He enjoys doing things that have never been done and making things that have never been made. He enjoys the frequent use of complex thought processes and problem solving skills, while being continually amazed by the intricacies and elegance of the natural world. The most tedious and his least favorite part of the job is the maintenance and repair of the instruments he uses. Because these instruments are so complex, the people who frequently use them are the only ones who can repair them.

Waiakea High holds many fond memories for Patrick. He remembers learning inside and outside of the classroom from electronics teacher, Mr. Myles Masuhara, having his interest in chemistry piqued in Mr. Mark Kloetzel's class, and having fun with his friends on the soccer field. He even considers Hilo's rain a fond memory. While in school, Patrick was a dedicated member of the HAM radio club, math league, JV/Varsity soccer, and chess club.

Many of his current interests outside of the lab stem from his past experiences in Hilo, including surfing, mountain biking, and fishing. Patrick has also adopted numerous 'mainland' activities such as rock climbing, snowboarding, and mountaineering.

"You have succeeded in life when all you really want is only what you really need." ---Vernon Howard

"Simplicity is the ultimate sophistication." ---Leonardo DaVinci

