As a jewelry student, my introduction to the element titanium was rather crude. After announcing in a previous class that I wanted to make a piece of jewelry from titanium, my professor took the liberty of bringing me her personal rectifier. There was not one powerful enough available in our college’s studio. This was the beginning of a several week independent study to learn how to work with titanium.

My first step became a search for information on and availability of this material. The amount of titanium needed for this project was less that 6” x 6”, yet it was very difficult to find. Only a handful of businesses are willing to sell this small of an amount and even then it is highly overpriced. As comparison, this small sheet of titanium cost almost the same as sterling silver. After finally receiving my titanium, I immediately resorted to traditional jeweler’s techniques to transform this piece into something beautiful. It did not go as expected. While making the general shape of my design, every tooth was broken off my sawblade within two strokes. After creating what I call the “sawblade massacre” on the floor around my bench, I finally had a decent shape cut out.

My next step was to attach a post onto my earrings. As a jeweler, I thought I could solder it, but I learned my lesson very quickly on this. Being particularly lucky, my studio had the availability of a laser welder. Not many colleges have this piece of equipment and even then it is only limited to specific departments. In my college, this meant that industrial design students could not just borrow the equipment for an hour. They actually had to be trained in a class. Therefore, the availability of the equipment, and the training on that equipment was limited. I was very lucky to have had both.

As an added expense to my project, especially hardened files were needed to smooth down the edges, and I had to order them just to work with the material. I then
proceeded to hand finish my small pieces of titanium. This was accomplished by using abrasive papers attached to a sanding stick. While this may have been a great technique for gold, it was a very time consuming and exhausting project with titanium.

It was now time for anodizing. With limited information found online, I mixed an electrolytic solution and went to town with my professor’s rectifier. None of my samples were of the quality level that I hold a piece of jewelry too. It is true that I did not know until a week afterwards that you have to etch the titanium before anodizing to optimize the color. As another week of experiments dwindled down, I learned to etch the titanium and finally had some decent results with anodizing.

All of this was to create one small pair of earrings. This is not a discouragement to independent studies. I am an ambitious supporter of them. Why is it that at least a few of these basic techniques were not dished before I embarked on my first journey with titanium? Why could my independent study not have been to a higher degree of working the material? Why was it so hard to find small quantities of and information about a material that has been around for over fifty years? Why did I have no classmates who were embarking on similar explorations with this very same material?

The answer to all these questions lies in communication. The titanium industry lies in deep contrast with the curriculum of design schools. Jewelry design and other design programs are set up as introductions to basic manufacturing techniques such as goldsmithing. With the growth of contemporary metals in the consumer market it makes sense that materials such as titanium would make their way into the curriculum at these schools; however, they are currently being surpassed by more traditional methods. While it is important to have these, a push by the industry itself would lead not only to more
young people being introduced to the material, but also an increased outlook on the future. By making that phone call to the head of a design department, you may learn that there are students who reciprocate your interest in titanium, but have no starting point. It is of mutual benefit for both institutions.

Another way to increase enthusiasm is to host national design competitions. Design students are always looking for new ways to promote their talent and what better way than to enter a prestigious titanium competition. What does this offer the company in return? It is a great way to ensure that the future of titanium products is headed down the correct path. Not only this, the company can actively seek promising students for future employment and thus new talent within.

Lastly, create a resource center for students or individuals looking for an affordable way to find titanium and general information on it. Finding scrap material is very difficult and most large companies laugh at the amount of titanium that a student would need. Students can be readily inspired by something as trite as a small scrap. That small amount, while insignificant to a large company, could be all that it takes to persuade a student to a lifetime of titanium creation. Online stores definitely cater to new generations, but an affordable alternative of small stock could be lucrative to all involved. In addition, the creation of an online forum specifically catered to students and individuals looking for basic information on titanium would promote its independent usage. A knowledgeable moderator would be necessary to support the site as well as answer specific questions.

While it is difficult for design students looking to break into the world of titanium, it is not impossible. Through the increased communication between industry
and education, there would be a significant increase in students intrigued by the material. Design competitions as well as an online resource center would generate interest among a younger generation. It is through these methods that titanium as a material can continue its usage in consumer products as well as push the boundaries of modern design.
Awakening the Sleeping Giant

Ashley Warsaw
Ti Sheet + New Files + Borrowed Equipment
Crown of Thorns
Earrings
Anodized titanium & Tahitian pearls
0.75” x 0.5” x 0.75” each
Gold versus Titanium
Thank you