

## **alpha-En Corp is focused on revolutionizing the Battery Industry with their Unique, Green and Cost-Efficient way to Electroplate Thin Lithium Films on Conductive Substrates**

***Interview with Jerry Feldman, Chairman & Founder and Thomas Suppanz, CFO***



**Jerry Feldman, Chairman & Founder**

**alpha-En Corp  
(OTCQB: ALPE)**

**Interview conducted by:  
Lynn Fosse, Senior Editor  
CEO CFO Magazine**

**CEO CFO: *Mr. Feldman, what is the vision behind alpha-En Corp?***

**Mr. Feldman:** Our vision was to create a battery which will be able to dramatically improve upon the existing batteries that we have in this world today. You have to understand that the lithium ion battery was developed or invented around 1970 by Sony and in the fifty years since then, there really has not been a significant improvement in the battery world. We feel that our lithium metal is one of the answers and that the technology that we are working with could be trailblazing.

**CEO CFO: *Has much research been done? Have people tried to make an improvement?***

**Mr. Feldman:** I imagine that for twenty years they have been trying to make improvements and the fact that we finally think we have an answer to some of the issues remaining is giving us hope for the future.

**CEO CFO: *What is your approach? What have you figured out?***

**Mr. Suppanz:** What we have patented and developed is a unique, green and very cost-efficient way to electroplate thin lithium films on conductive substrates. What that means in laymen's terms is that we can create a lithium metal anode which will be a critical component for next generation batteries. To quote Elon Musk, "Without lithium metal anodes there will not be a solid-state battery." Solid state batteries are believed to be the next step in the evolution of energy storage devices.

**CEO CFO: *How have you been able to make it green, clean and affordable?***

**Mr. Suppanz:** Larry Swonger, the inventor and our CTO happens to be a genius, is the short answer.

**Mr. Feldman:** Or very lucky!

**CEO CFO: *Could you give us something a little more concrete?***

**Mr. Suppanz:** Let us look at the incumbent process and then compare it to ours. The incumbent process is a very industrial type of process with extremely high temperatures, chemicals and one that emits gases and hence has a negative environmental impact. That is the way it is done now and that is the way it has been done for the last one hundred years. Because of environmental regulations you cannot manufacture meaningful amounts of pure lithium metal in the US. You can only do it China because of the lack restrictions there. The final product of this process is lithium metal

in ingot form, which can be rolled down to the desired thickness by battery manufacturers. This rolling down faces serious challenges once you reach 100 micron and below in thickness.

We take lithium carbonate as feedstock and at room temperature, without any gases or high energy footprint in one step we directly electroplate lithium in its purest form on a conductive substrate. We eliminate the high temperature input, gases, chemicals and rolling down which significantly lowers cost. It is a really clever and elegant way to improve upon the status quo.

**CEO CFO: *When did you know you had it right?***

**Mr. Feldman:** We really started our work at CUNY, which is in New York, under Professor Stephen O'Brien. In his laboratory we suddenly began breaking through to where we saw that we had a unique method that was safe and was able to answer many of the issues that the previous process did not answer.

**Mr. Suppanz:** We initially were a solution looking for a problem, if you will. When we started to tweak the process we began to realize, "Wow, we can actually use that to make a lithium metal anode!" We can also use that process to pre-lithiate anodes and to re-lithiate used cathodes as well as extract lithium in terms of a recycling approach. We have hired electro chemists to help us explore these applications.

**"We are a little company that, with some luck and some financial support, could literally change the energy world." Jerry Feldman**

**CEO CFO: *What is next? What are you working on right now? Would you tell us about the EnerSys connection?***

**Mr. Suppanz:** I will take the EnerSys connection first. This is our first industrial relationship that is meaningful in terms of dollars as well as future potential. We are working with them on a pre-lithiation project, which is actually the quickest path to revenue for our products. We are pre-lithiating anodes for existing lithium ion batteries to achieve up to 30 % performance improvement.

Remember, the lithium metal anode that we talked about earlier is for next generation batteries. However, the pre-lithiation application works for the current marketplace. That answers your other question, this is what we are pursuing right now. We want to get to revenue as quickly as possible and pre-lithiation is the way to go.

**CEO CFO: *What is involved in setting the process up at a particular location? What type of equipment, what type of changes might someone have to make to start using your process?***

**Mr. Suppanz:** Our process is intended to be a drop-in process in existing manufacturing lines. We will develop a prototype that connects via a handshake with existing manufacturing lines and that is an engineering challenge, but not a process challenge.

**CEO CFO: *How do you get a foot in the door with the right people? Is the industry aware now of what you can do?***

**Mr. Suppanz:** We have put out press releases and our phones began to ring. People are looking for us and looking for our solutions. One of the reasons why we are taking this interview is that we think you can help us spread the word.

**CEO CFO: *When you are talking with the right person at a given organization, do they understand immediately? Is there skepticism?***

**Mr. Suppanz:** These are high level, scientific employees that completely understand the technology and have twenty or thirty years of scientific background in battery development and technology, so yes, they know exactly what we can do and they understand the value proposition that we bring to the table.

**CEO CFO: *How are you able to engage with EnerSys? Would that be a typical engagement? What do you see going forward?***

**Mr. Suppanz:** EnerSys, a global leader in industrial energy storage solutions is a partner that we are proud to have. This is the result of the outreach of Kyra Paris, our Director of Military Affairs. She worked tirelessly with our scientists on

developing that relationship and after a year and a half we got there, so it is to her and the team's credit. Yes, this is the kind of relationship that we would like to duplicate with others and we are working towards that goal.

**CEOCFO:** *Would you be licensing the technology? Providing equipment? What do you see as the relationships as you grow and go more commercial?*

**Mr. Feldman:** All of the above. In other words, we see this as a licensed situation, but we also see this as a way where our company could have an equity in whatever future areas we go into, so that we are not just sitting and watching other people get all of the spoils.

**CEOCFO:** *What types of regulatory issues, if any, are there related to what you are doing?*

**Mr. Feldman:** At the present, very little. Our laboratory is in Yonkers, New York. We have been approved by the relevant authorities in the area and we have very little issue with any of the regulatory groups.

**CEOCFO:** *Development is always costly. Are you seeking funding, partnerships or investment right now?*

**Mr. Suppanz:** We are a public company, so our funding mechanism is equity based. So far, we completed Series A and Series B rounds mostly with friends and family. The structure is a convertible preferred, and we intend to continue down that road until we find a suitable industry partner that wants to be an investor and financial partner as well. We hope we get there quickly, but if it takes longer, then we will just go down the road of doing private placements which has worked well so far.

**CEOCFO:** *Over the next six months, what will you be doing day to day at the company?*

**Mr. Feldman:** Right now, we are keeping a very low profile, because we are engaged with large organizations and industry partners. We are focusing on doing research and development in their labs to develop specific products with specific needs and we do not intend to be out there promoting the company in conferences or other venues; we are just going to keep our head to the grind-stone and just do the blocking and tackling every day that we need to do to get to the finish line with our product.

**CEOCFO:** *What would be the range of products that you might be able to provide? Is it different size batteries, batteries for different usage?*

**Mr. Feldman:** Think of it this way. For the future next generation battery, we will provide a critical component called the lithium metal anode. That is probably three to five years down the road. For the current market needs, we have developed a pre-lithiation process for anodes, that will improve by up to 30% the capacity of lithium ion batteries that are in the marketplace right now. We are also doing experiments with re-lithiating cathodes as a new initiative.

We also have a recycling approach where we can extract lithium from ground up batteries that need to be recycled and we can use our processes to directly recycle that lithium from that slush and re-lithiate used anodes as another part of the recycling process. Those are the three silos that we are working on right now. There are other parts to our product family, but these are probably the most significant in terms of revenue.

**CEOCFO:** *Is one area more promising than others or do you see it across the board?*

**Mr. Feldman:** Right now, because the marketplace of lithium metal is still three to five years ahead, we feel that the pre-lithiation of the anodes is the most real market for us. That is because that is something that we can work with and have immediate results. You have got to understand that the lithium ion battery has literally taken over the world's batteries and by having pre-lithiation, as Tom mentioned, we can improve the existing batteries without much fanfare. We can improve the existing batteries by ten to thirty percent.

**CEOCFO:** *How do you deal with some of the frustration in knowing you have something that can make such a significant difference and it is a long haul to get it where it is used?*

**Mr. Suppanz:** Jerry has had a history of scientific development. To name two products, he identified the soft contact lens and brought that to market, as well as surgical staples. So he has been there, he knows the challenges of starting a company from scratch. He is a calm and steady leader and he steers the company through the inevitable ups and downs. Just having the experience of having been through these cycles is a very valuable asset to our company. That is why we still keep him around, actually, after all these years, for these qualities, right Jerry?

**Mr. Feldman:** They are very kind to an old man.

**CEOCFO:** *What is the takeaway for our readers? What should they remember about alpha-En Corp?*

**Mr. Feldman:** We are a little company that, with some luck and some financial support, could literally change the energy world. This is why we are breaking our butts right now, and many of the people in our group are making financial sacrifices to do it. Yet we know that if we succeed it will have a significant effect on the energy world.

**Mr. Suppanz:** The shift away from fossil fuels is for real. It is probably the biggest trend that I have seen in my life after semiconductors changed the way we do things thirty or forty years ago. This is happening. Batteries will replace fossil fuel to a very large extent. However, that change has geo-political consequences that will change the Middle East the world. We want to be part of that change and we want to be a significant enabler of these technologies and your readers should be cognizant of that. We are a very small company today, but we can be a very significant part of that change if we are successful.