Scholar 271

Chapter 271

He had just flown into Boston and did not have a plan for the day. Therefore he planned to wander around and listen to a few reports to get familiar with the style.

Lu Zhou placed his suitcase near his bed and went to the toilet to wash his face. He then went downstairs and walked to the conference venue, which was near the hotel.

Lu Zhou had been to many conferences by now, yet he still could not help but be impressed at the MRS Autumn Conference.

The MRS Conference was ginormous, and it was on a completely different level than mathematics conferences.

Dozens of venues, hundreds of topics, tens of thousands of participants…

Every year, at this time, all of the hotels and motels near the venue would be booming. Since the meeting was free, some people would come just to see the action. The organizer was not responsible for their accommodation.

In a sense, the MRS conference model was similar to the Federal Mathematics Society conference held in Princeton.

Every venue was divided into two parts, an oral report, and an academic poster.

Most of the big names did the oral report, which contained many high-quality theses. Not only was this part the essence of the conference, but it was also the “battlefield” for schools like MIT, Harvard, and Cornell.

Especially for those cutting edge areas, the discussion would often be extraordinarily “fierce”, so physical conflicts was not unusual.

As for the academic posters, the requirement threshold was relatively low. As long as one had a thesis that was submitted in a journal, one would get a poster booth in your corresponding topic.

As such, there was a high disparity in skill level. However, most people were enthusiastic when discussing topics, so it was generally restrained.

Lu Zhou walked through the venue and looked around. Everyone looked very friendly, and they were taking photos and smiling…

In short, it was not as intense as what Professor Chirik had described.

Lu Zhou felt relieved.

When he got off the plane, he was wondering if he should buy a self-defense weapon, but now it seems that was unnecessary.

However, to be safe, he still wore his “nitrogen shield” watch that the system gave him.

Even though he probably would not need to use it.

…

Lu Zhou walked around in the poster areas and wandered into the lithium battery section.

When he passed the first lecture hall, a report was going on.

Lu Zhou looked at the poster outside the lecture hall. The report was about the legendary lithium-air battery. Suddenly, he had a look of interest in his eyes.

It looked like the report had just begun. The professor on stage was still preparing the PowerPoint. Lu Zhou walked in and found a seat to sit down.

Strictly speaking, lithium-air batteries could not be considered in the field of materials.

However, just like the concept of photovoltaics, the main problem was the material, so it naturally became a materials science problem even though it was actually more of an energy problem.

Soon, the report began.

A very neat looking professor stood on stage. He looked as if he was in his 50s.

From the PowerPoint, his name was Sarrot and he was from Cornell University.

“Ladies and gentlemen, I am honored to be standing here. You must all know that not long ago, Professor Lu Zhou from Princeton University published a paper in Nature Chemistry on PDMS materials, which solved the most critical problem in lithium batteries!”

“If this was the Spring Conference half a year ago, you might laugh at the concept of lithium-air batteries, but I promise you that this new era has arrived!”

Professor Sarrot stood on stage and wrote various chemical reactions on the whiteboard.

Some people listened intently while some people sneered.

Sitting in the back row, Professor Kerr from Columbia University crossed his arms and waited until the Q&A session. He could not help but ask in a satirical tone.

“How do you solve the reaction between the lithium anode and nitrogen in the air? What about water vapor? Even the cleaners know how vivacious lithium is. In my opinion, you’re not building a battery, you’re building a rocket.”

He researched lithium-sulfur batteries, which was the main type of batteries. Although it had a lot of downsides, it was a lot more reliable than lithium-air.

Some people in the lecture hall laughed, but Sarrot did not care.

He cleared his throat and replied, “Professor Kerr’s question is good. Interns in our laboratory often asked this question. However, formal researchers usually don’t ask this question because we are too busy thinking about how to solve this problem.”

The people that were laughing stopped.

The people that were not laughing started to laugh.

There was a drama now.

Sarrot did not give Kerr a chance to refute as he continued to speak, “We all know that Kerr is in the field of lithium-sulfur batteries. But, honestly, I’m also curious how he plans on solving the shuttle effect caused by the dissolution of polysulfide intermediates into the electrolyte and diffusion from the positive electrode to the negative electrode through the separator. Even a retard would know that you can’t stick the negative and positive poles together.”

Kerr was furious.

Sarrot continued to speak, “I’ve talked with Professor Lu Zhou from Princeton about this issue. Theoretically speaking, it is unrealistic to separate pure oxygen from the air, but through a wonderful mathematical model, we can infer many potential products that can accomplish our goals.”

Sarrot paused for a second. He then continued with a sturdy tone, “I’m saying that if we can find a diaphragm that can be used to screen the passage of oxygen molecules, then we can perfectly solve the problem of lithium-air batteries.”

“And this research project is exactly what we are trying to solve!”

Lu Zhou: ? ? ?

When did I talk to him?!

Once Sarrot finished speaking, no one was laughing in the venue.

Professor Kerr and the other professors had a dignified look on their faces.

A few men wearing suits started to whisper.

These people did not look like researchers. Lu Zhou heard them talking about “investment”, “costs”, and “feasibility”.

He knew that he could not stay silent anymore.

Someone was bullsh*ting about his knowledge.

Someone was defrauding investors!

Lu Zhou coughed and stood up.

When Professor Sarrot saw Lu Zhou, he did not recognize this Asian man. He squinted his eyes and asked, “Sir, who are you…”

“I am Lu Zhou,” said Lu Zhou. He coughed and said, “I am here to testify that I have said no such thing.”

Lu Zhou had not even finished speaking before someone threw a shoe onto the stage.

Then came the pens, cups, even a computer. The lecture hall was a mess.

“Scammer, f*ck off!”

“Shove your PowerPoint up your ass!”

Before Lu Zhou spoke up, they were convinced by Professor Sarrot’s “Mathematical Model”. For half a minute, they had doubts about their life.

This doubt made them extra furious as they had been fooled!

Although Professor Sarrot was being attacked by the crowd, it was clear that he was used to it. He avoided the projectiles and packed up his stuff before he left the lecture hall.

The organizers who heard the news arrived in time and stopped the group of angry researchers.

The staff members looked helpless. Obviously, this was not the first time they had to deal with something like this.

Lu Zhou sat at the back of the lecture hall. He was dumbfounded.

Is this industry…

Really this ruthless?

Speaking of which, his report was tomorrow.

Lu Zhou suddenly panicked…

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In fact, everyone’s technology had downsides, and it was just a matter of how much.

Everyone wanted their own industry to adopt their solutions, to invest in their research, and to let their technology inventions thrive.

In the same way, although Lu Zhou's thesis saved the lithium battery industry, he also destroyed many researchers' jobs. A lot of people probably hated him.

As Lu Zhou stood on the podium and glanced across the audience, he was surprised to see that no one looked like they were out to get him.

At least no one in the front row looked like they were here to cause trouble.

Instead, their pairs of eyes were full of…

Hope?

Lu Zhou wondered if he was wrong. The report was about to begin.

Lu Zhou pumped himself up and walked to the podium. He plugged in his USB into the projector and signaled the staff members to bring out the three whiteboards.

Normally, a materials science report would not contain this much information, but his report was mathematically based.

Lu Zhou faced the quiet crowd and tested the microphone. He then spoke in a simple and concise manner, "I've made a fairly complete description of the properties and preparation methods of the modified polydimethylsiloxane film. I believe that most of you have read it before this report, so I won't go into details here."

Lu Zhou paused for a second before he then said, "Compared to the production process of the PDMS film, I believe that you are more interested in how I discovered it."

Many people in the crowd nodded.

Not everyone here was lithium battery researchers or in the industry of lithium batteries, some of them were big names in organic materials.

For people in different fields, they were not interested in the PDMS material itself. Instead, they were more interested in how Lu Zhou discovered this material using mathematical modeling.

Lu Zhou did not waste time on his opening remarks. He went straight into the main course.

“In the initial stages of deposition, lithium ions typically acquire electrons and deposit them on the current collector, which is considered to be a heterogeneous nucleation behavior. Because of this initial nucleation, the final lithium deposition pattern has a strong influence. So, my initial idea was to solve the problem of irregular growth of lithium dendrites by taking the initial stage of the nucleation stage as an entry point.”

“Using the SEM electron microscopy, I could see the root of the crystal nucleus in the electrolyte. We can see it as a spherical cap-shaped nucleus deposited on a flat substrate. It is like a three-dimensional spherical surface. We can set θ as the contact angle, r Is the radius of curvature, a is the radius of the contact surface, and γ is the surface tension…”

Some things could not be explained with words.

Lu Zhou picked up the marker and started writing on the whiteboard.

[Sv=(π/3)(2+cosθ)(1-cosθ)2]

[ΔGt=(ΔGf+zFη/Ω)Svr3+γSAr2+(γSN-γSE)πr2sin2θ]

[…]

The whiteboard was slowly being filled with equations.

The marker danced on the whiteboard as it produced lines of equations.

The mathematical model was the skeleton of the research.

Although Lu Zhou did not memorize every step, he understood every detail so he was able to recite it easily.

The researchers in the crowd stared at the whiteboard intently. They were scared to miss a single detail.

However, fewer and fewer people were able to keep up with his rhythm.

Professor Kerr already could not keep up. He sighed and looked around with a worried look.

He noticed that Professor Bawendi from Massachusetts Institute of Technology was still staring at the whiteboard, so he could not help but ask.

“Do you understand?”

Professor Bawendi did not answer this immediately.

After some consideration, he gave his answer in a relaxed tone, “Of course, it’s an interesting method.”

Professor Bawendi was studying quantum dot technology, not just chemistry, so he was well versed in condensed matter physics.

Anyone with a physics background was naturally good at mathematics.

When Professor Kerr heard Bawendi’s evaluation, he looked helpless.

He did not understand most of what was on the whiteboard.

He was not clueless in mathematics, but he had never studied it deeply. After all, materials science was an experiment based subject, and most data was collected, not calculated.

However now people were telling him that computational materials science was not just an assisting tool in materials science, but it was the main tool. He started to have some doubts about his life.

Perhaps he should take some time and learn mathematics.

Time slowly passed by.

Lu Zhou was in the zone. It was like he was back at the Princeton classroom, like everyone in the crowd was his students, and they were listening to his lecture intently.

Lu Zhou responded to those who were seeking knowledge and he explained his thought process.

[τs=πD(C0EZc/2j)2({ua+uc}/ua)…]

Lu Zhou wrote down the last line of equations and stopped writing.

He took two steps back and glanced at the whiteboard. He did not speak immediately.

The audience stared at Lu Zhou's sturdy posture and stayed silent. It was like they feared to interrupt Lu Zhou's thought process.

Five minutes passed…

Lu Zhou finally turned around and placed the marker on the podium.

"That's the jist of it."

“Next up is the Q&A session, if anyone has any questions, feel free to ask them.”

The crowd was still silent.

No one stood up, no one raised their hands, no one even coughed.

Even the most ruthless experts stayed silent, making people wonder if this was actually the MRS Autumn Conference.

The silence gradually ended.

Someone started to clap.

“Clap clap clap…”

Then someone else clapped.

Soon the venue was filled with thunderous applause.

As Lu Zhou looked at the crowd, he was stunned.

He was surprised that no one asked any questions.

He felt a little weird.

I guess…

I’ll pretend they all understood it.

The American Materials Society will release a thick stack of theses related to the topic. If they're interested, they can study it themselves.

I've already finished what I have to do here.

Lu Zhou gestured to the staff member that the report was over.

He was about to unplug his USB when he suddenly remembered something.

"Oh yeah, I nearly forgot. The PowerPoint presentation has not finished yet."

Lu Zhou was so immersed in his calculations that he had almost forgotten what he was here for.

He pressed the button on the laser power and went to the next powerpoint slide.

"There is not much else to say with regards to the modified PDMS film. In the past two and a half months, I've done six experiments. Here are the macroscopic conditions inside the battery and the SEM image of the cross-section of the negative electrode material, after a Coulomb cycle of 1000 to 2000."

This experiment was not difficult to do, but it was time-consuming.

In order to completely remove the concerns of the industry, this experiment was a must.

The PowerPoint presentation was on the second to last slide when Lu Zhou paused for a second. He then said, "I'm sure that a lot of people are interested in this."

Indeed, many people were interested.

When the businessmen sitting in the back saw the 2000 Coulomb cycle images, their eyes went eyes wide opened.

This was because the images contained “treasure”. “Treasure” that they have yet to explore.

That was the future.

And right now, there was someone pointing them to the future…

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Just like how Jack Ma said he did not like money, one could not do anything to attack that claim.

It was because the results were irrefutable.

Liu Bo stopped applauding. He sat at the back of the lecture hall and stared at the whiteboard.

“Interesting…”

Professor Li Rongen interrupted him before he could say anything else.

“Interesting your mom. Did you understand it? Explain it to me.”

Since Liu Bo was exposed by his boss, he could only smile and shut his mouth.

He was different from Qian Zhongming and Professor Li Rongen. He studied applied chemistry, and compared to those that studied condense matter physics, his mathematics was at a level behind.

Since his boss did not understand it, there was no way he could.

Qian Zhongming sat next to him and stopped writing. He stared at the three whiteboards on the stage for a long time.

After a while, he finally sighed and said, “Strong…”

Professor Li Rongen smiled and said, “Understood?”

“Understood half of it, so I guess not.”

Qian Zhongming shook his head. He then closed his notebook and stood up.

Professor Li, “Where are you going?”

Qian Zhongming, “I’ve got a few questions that I don’t understand, so I want to ask him.”

Professor Li shook his head and said, “Wait a few days. He might be too busy for you.”

Qian Zhongming was stunned. He did not know why.

Professor Li did not explain. Instead, he stood up and said, “Let’s go, it’s time to eat. I’ll take you guys to eat some Boston lobsters. As for the University of Jin Ling’s Professor Lu, go and visit him after a few days.”

This was correct. Although Lu Zhou was technically a professor at Princeton, he had an honorary professor title at the University of Jin Ling. Who could say that an honorary professor title was not a professor?

As for the other point, Professor Li was very perceptive.

At the moment, Lu Zhou really did not have time to discuss some computational materials science problem.

The moment Lu Zhou walked out of the lecture venue, he was surrounded by people.

“Professor Lu Zhou, do you have time right now? I want to discuss the mathematical model you just presented.”

“Hello, I am the CEO of Digilen. Are you interested in taking the role of a material development director? We can give you a million dollar salary, and 5.6% options…”

There were people asking him academic questions, people offering him jobs, and even people begging to become his apprentice.

A sweet lady, which was rare in the field of materials science, grabbed Lu Zhou’s hand.

“God Lu! Are you teaching this class at Princeton? Can I apply as your PhD student? I’m graduating this year. Can I get your WeChat?”

Lu Zhou looked at the master’s female student and said, “Of course Princeton has a computational materials class, but I’m a mathematics professor. I mainly teach number theory.”

The girl’s eyes widened and she said, “Are you not planning to teach a computational materials science course? You can undoubtedly become the leader in this field.”

Lu Zhou said, “Although my research direction includes functional analysis, complex analysis, and harmonic analysis, I’m only doing computational materials science as a hobby. Before I perfect my knowledge in this area, I’m not taking any students.”

Lu Zhou knew he was humblebragging, and both the PhD and master’s students in computational materials could not help but roll their eyes.

F*ck sake!

What do you mean it’s your hobby?

Why don’t you go fly as a hobby?

After half an hour, Lu Zhou finally got rid of the crowd.

He dragged his tired body back to his hotel and took a shower. He then changed into some fresh clothes before he went downstairs to the first-floor lobby.

Although the MRS organizer provided meals for all of the presenters, they clearly had a more special arrangement for Lu Zhou.

All of the invited speakers and important guests were arranged at the five-star hotel next to the venue. This meant that the dinner was invitation only.

The reason for this was so the big names could eat in quiet, and it separated the academic community and the businessmen from the general public.

After all, no one wanted to be interrupted when talking about multi-million dollar deals.

So far, the industry was tempted, but past lessons have taught them to be patient.

However, Lu Zhou estimated that their patience was running out.

At the hotel buffet, Lu Zhou placed a lobster onto his plate. He then found a comfortable place to sit down. Suddenly, a major player walked up to him with a smile.

“Hello, Professor Lu, I am the CEO of Umicore from Belgium, Marc Grynberg. Can I sit here?”

Lu Zhou smiled and nodded.

“Sure.”

Grynberg sat across from Lu Zhou and handed him his business card.

“Thank you, here is my business card.”

Lu Zhou took the business card. He looked at it before put it into his pocket.

After all, Umicore was an industry giant. Lu Zhou had heard of this company. This Belgium chemical giant began to produce cathode materials after purchasing the patent for lithium iron phosphate in 2011 for millions of dollars.

Then within a year, they signed a giant cooperate contract with 3M. With the help of 3M’s customers, they surpassed Nichia to become the world’s largest lithium battery cathode producer.

Lu Zhou knew why a positive material company wanted to talk with him.

Right now, the anode material of lithium-ion batteries was mainly composed of artificial graphite and natural graphite, which had nothing to do with lithium materials.

Precisely because of this, the giant company that produced cathode materials was keen on the research and development of lithium batteries.

In 2015, Umicore reached a strategic cooperation agreement with the Argonne National Laboratory for lithium battery research and development. Umicore had always been ambitious toward lithium batteries.

If the industry eliminated graphite anode materials, which had been used for more than 20 years, and switched to the more advanced lithium anode materials, it would allow a company like them, who were experts in lithium material production, to get into the anode material market.

No matter what, they could not fall behind their rival company, Nichia.

As such, Mr. Grynberg did not want to wait a single day. As soon as the report finished, he rushed to visit Lu Zhou.

It would be best for him if he could purchase the patent with a premium.

Of course, getting the patent authorization ASAP would be nice as well.

After all, getting the patent earlier would mean major orders from customers like Panasonic, BYD, LG, Sony, and etc.

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“It doesn’t make any sense to talk about this,” said Lu Zhou as he gently put down the fork and knife. He then said with a relaxed tone, “How high can you offer? $10 billion? $20 billion? The lithium negative electrode industry only just began, no one knows how big the market can get. Even if I wanted to sell the modified PDMS film patent, I wouldn’t do it right now.”

$10 billion was obviously impossible. Lu Zhou was only exaggerating.

Perhaps the lithium-sulfur batteries in the laboratories were worth this price, but the lithium anode material definitely was not.

After all, the global annual output value of lithium-ion battery anode materials was only $10 billion USD, and this was because graphite materials were expensive.

Grynberg was given a hard time by Lu Zhou.

Lu Zhou obviously did not want to negotiate with him.

However, he could not just give up like this.

“But have you thought about substitutability?” said Grynberg. He smiled and said, “We all know that technology develops very fast. Maybe in a few years, another potential material appears. Are you sure that by then, you’ll still be able to sell your patent at a higher price?”

Lu Zhou smiled at Grynberg’s prediction of the future, but he was not concerned about it.

“I’m willing to take this risk.”

Grynberg: “…”

Seeing that this Belgium dude stopped talking, Lu Zhou started to peel the lobster.

What a joke.

Do you not know how much the industry spends on negative lithium electrodes?

After decades of burning money, this problem still hasn’t been solved. Do you think that in just a few years someone can come up with a better solution than mine?

It’s not impossible, but it would be damn close.

Seeing that Lu Zhou did not budge, Grynberg sighed and asked, “Okay then, let’s put buying off the table. What price are you willing to authorize the patent?”

When Lu Zhou heard this question, he had a smile on his face.

He had been waiting for this.

He had been thinking about this question two months ago. He even did some investigation on the lithium battery market.

The total estimated global demand for lithium battery anode materials in 2016 was 138k tons. From current statistics, the actual demand this year should be in line with expectations.

Although this data corresponded to graphite materials and not lithium anode materials, it was a good estimate and reference.

After all, the lithium anode materials had cost and performance advantages. The speed at which the industry eliminated graphite anodes could be much faster than Lu Zhou had imagined.

For Lu Zhou, the biggest way to maximize profits would be to earn a certain patent fee percentage for per ton of material.

Taking the increase of demand into account, in five years, he could earn a nine-figure USD salary.

The downside was that the system mission would not wait for anyone.

If Lu Zhou used this patent authorization method, his asset growth this year would only be the $400,000 USD salary from Princeton.

Therefore, he came up with a new idea.

It could guarantee both short term and long term gains.

Lu Zhou paused for a second. He then voiced his proposal, “I’m willing to grant you three years of use and agency rights for the modified PDMS patent, for $200 million USD. This is for use outside of China only.”

“In this three year period, you’ll receive an exclusive patent license for the global market outside of China. I’ll not make any additional authorizations to third parties. You’ll need to give me half of both direct and indirect income and bear all legal obligations and responsibilities.

When Grynberg heard the $200 million asking price, he somewhat disapproved it.

However, when he heard the second half of Lu Zhou's request, a look of excitement could be seen in his eyes.

In principle, the patent itself was exclusive and monopolistic. However, each country had different laws of interpretation and the exclusive right of IP was not unlimited.

In theory, even if Umicore gave Lu Zhou an offer that he could not refuse to buy the patent, they still could not monopolize the production and exclude other companies.

In addition to [Patent Law], each country also had its own [Anti-Monopoly Law]. This clearly defined the abuse of intellectual property rights.

Simply speaking, if a patent had "irreplaceability", and the market share of a company counted as a monopoly, then it may face antitrust investigations.

For example, if the lithium anode material had a huge advantage over graphite materials, then the modified PDMS film technology would undoubtedly count as "irreplaceable".

For a patent of this kind, refusal of authorization, price discrimination, price gouging, and etc could infringe anti-monopoly regulations.

As for the exact boundaries of the law, it would depend on various factors. To test the limit, an excellent team of lawyers would be needed to cooperate with the top managers of the company.

Lu Zhou was unable to do this.

However, Umicore was different.

Compared to him, this multinational chemical giant was much more familiar with regulations.

For its own benefit, they would certainly increase the licensing fees and extend its advantages in the anode material market while they remained within legal regulations of course.

In three years, Lu Zhou could receive a large sum of patent licensing fees, and Umicore could receive the market competitiveness it wanted.

This was in the interests of both parties.

Grynberg hid the excitement in his eyes and put on a hesitant face.

“Three years is too short, I could maybe accept it for five years. You should know that we got the Clariant Group’s LFP materials license for only $10 million USD…”

“You can’t compare it like that,” said Lu Zhou as he smiled and shook his head. He added, “LEP is only a cost-effective cathode material. Do you think that I don’t know that your $10 million USD is only a barrier of entry? For every ton of LFP you produced, you have to pay Clariant Group another $20 million USD.”

Grynberg was called out but his facial expression did not change at all.

He looked at Lu Zhou. As if he had made some decision, he only said two words.

“$400 million!”

Lu Zhou’s heart popped out of his chest when he heard this number.

$400 million US dollars!

It was not just about money for him. There was the 400,000 in experience points attached to it…

Honestly speaking, he was intrigued.

Lu Zhou took a deep breath and said, “Four years at most, that’s my bottom line. If after four years we can still cooperate well, I can consider renewing the contract at a new price. Otherwise, I’m sure that Nichia and 3M are definitely interested in negotiating with me.”

That last sentence played a decisive role.

Grynberg still wanted to fight, but he did not have the cards for it. After all, Lu Zhou did not need scientific research funding, and he was a well-known scholar in the academic community.

Especially when he thought that Nichia could offer a higher price, he loosened his shoulder and made a decision.

“Fine, you win. Four years it is.”

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After all, for a public company, a hundred million dollar deal was a big deal.

Regardless of whether the contract was ultimately signed, the moment the letter of intent was signed, the relevant information must be disclosed to the securities market.

The phone call Grynberg made was to the secretary of the board of directors.

Lu Zhou quietly finished his dinner and left the hotel lobby. He then went to the elevator and went straight to his room.

His footsteps were light as he was in a good mood.

After Lu Zhou went into his room, it was like he had been awakened from a dream. He had just only just realized what he had done.

“$400 million USD…”

As Lu Zhou sat on the bed and looked at the cooperation letter of intent, he could not calm down.

He had never expected that within one night, he could jump from the middle class to financial freedom.

When he was a child, even though he had dreamed of winning a five-million-dollar lottery, he did not even dare to dream of hundreds of millions…

What should I buy?

Another assistant?

A small computer for Xiao Ai?

Ask my dad to buy a few houses in Beijing?

Or…

Post it on Weibo first?

Thankfully his intelligence prevailed.

Lu Zhou took out his phone but in the end, he resisted the urge to share his joy with his fans.

It was better to be humble when it came to money.

Lu Zhou took a deep breath and calmed himself down. He then went to take a shower to cool off his hot brain.

As for what to spend the money on, he would decide when the contract was signed…

After his shower, he laid in bed.

He thought he would be able to fall asleep easily after the busy day. However, as he rolled around in bed, he realized that he was not tired at all.

Without him knowing it, the sky started to light up.

Lu Zhou's alarm went off, and he just realized that he did not sleep all night.

Actually, Lu Zhou did not know that he was not the only one who stayed up all night.

Many people were like him.

The reason had to be traced back a few hours ago.

In the early hours of Washington time, the head office of Umicore in Brussels, Belgium, suddenly disclosed a $400 million USD patent cooperation plan on its official website.

This news disturbed the dreams of many investors.

Although the media had repeatedly reported on "major research results" in the field of lithium anode material, not a single chemical company had begun industrializing lithium anode materials yet.

This time, Umicore suddenly took the lead to obtain the anode material patent license.

The sensitive stock market reacted immediately.

This day finally came.

…

MRS was still going on the next day. Lu Zhou was still sleeping in bed, but the conference continued.

However, a few hundred miles away from Boston, Wall Street was going crazy over the lithium battery sector.

Almost all of the companies involved in lithium batteries had a few points increased on their stocks.

This situation was not only contained in the lithium battery industry. It even affected the futures market of lithium materials.

Lu Zhou underestimated the market's enthusiasm for lithium batteries and the influence of Umicore.

When it came to market value and fame, Umicore could not compare to the likes of BYD, Sony, and Panasonic. Much rather less the $100 billion USD tech companies like Samsung and Apple.

However, in terms of influence, these chemical giants with hundreds of years of history were not inferior to them.

The reason was simple.

Tesla was created in five years. Apple or Microsoft was created in 20. However, if their technology fell behind, they could easily be replaced by a new high-tech company.

However, for those enterprises upstream of the industrial chain, even though their prospects were relatively small, their risks were also relatively small.

After all, no matter what kind of technologies were invented, there would always be a demand for chemical raw materials.

However, Lu Zhou had nothing to do with the capital markets.

At least for now, he did not have the energy to pay attention to it.

Lu Zhou slept until the afternoon. When he woke up and looked at his phone, he saw numerous missed calls.

There were calls from Professor Chirik, from China, and some unknown callers.

Just as Lu Zhou was contemplating which he should call back first, another phone call came through.

Lu Zhou picked up and placed his phone next to his ear.

“Hello?”

“It’s me.”

Lu Zhou instantly recognized the familiar voice, but he asked in an uncertain tone, “Professor Li?”

Laughter traveled through the phone.

“Haha, it seems that you haven’t forgotten me yet.”

Lu Zhou smiled and said, “How could I forget? Did you change your phone number?”

Lu Zhou could never forget Professor Li. If it was not for him, he would not have finished his system mission back then. It was an unknown number so he did not know what was going on.

Professor Li smiled and said, “I didn’t change numbers. I’m on a business trip so I’m using a temporary number.”

“Business trip?” said Lu Zhou. He had a weird expression on as he asked, “You’re not in Boston, right?”

“Of course I’m in Boston, I even listened to your report yesterday. It was quite wonderful,” said Professor Li. He then teased, “How was it? Partying all night last night? Did you rest well?”

Lu Zhou coughed and said, “What do you mean partying? I went to bed last night… I just can’t fall asleep. Oh yeah, where are you now?”

Professor Li smiled and said, “I’m downstairs sitting in the hotel lobby. It’s almost dinner time. If you’re free, let’s grab dinner together. If you’re still tired, we can meet up tomorrow.”

Lu Zhou smiled and said, “Of course I’m free, I’ll come down right now.”

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It seemed that he would have to wait until next time to talk about the patent.

“Let me introduce you, this is the leader of our energy-related department, Lu Kaimin…”

“Titles aren’t needed, I came here as myself. Just call me Mr. Lu,” said Mr. Lu as he shook Lu Zhou’s hand. He then smiled and said, “I’ve heard a lot about you, Professor Lu Zhou. You’re even younger than they say you are.”

Lu Zhou was surprised by the enthusiasm of this big name, but this was not unusual for him. He shook hands with him politely.

“You’re too kind, Mr. Lu. Nice to meet you!”

Professor Li said, “This is our head of chemistry department, Dean Li Shuwen.”

“Hello hello…”

It was time for dinner.

The squad found a restaurant near the hotel.

Even though the restaurant was not a high-class restaurant, but the standard was not low either. It served authentic Boston dishes.

During dinner, Lu Zhou learned that Dean Li was here to attend the MRS Conference.

As for why the head of the energy department, Mr. Lu, applied to come was for an academic visit.

During dinner, Lu Zhou, Professor Li, Mr. Lu, and Dean Li started to talk about lithium batteries.

Soon, they started to talk about the problem of the patent.

Mr. Lu said, “So, I heard Professor Lu authorized the negative electrode materials to Umicore?”

Lu Zhou nodded and said, “Yeah, is there a problem?”

“No, professor, I just have a little suggestion. Please don’t misunderstand me,” said Mr. Lu with a smile. He then said with a serious tone, “The thing is that we support your legal rights and interests of the PDMS in China. We hope that no matter what company you choose, you won’t sell the exclusive rights to a foreign company.”

Making such an abrupt request was a helpless move.

China was the world’s largest consumer for electric vehicles. Without the breakthrough of lithium battery technology, it was foreseeable that the domestic lithium battery industry would enter a booming stage.

The positive electrode materials were easy to deal with, the LiMo2 patent had expired a long time ago, so they could use it however they want.

However, the key to lithium battery technology was the anode material, not the cathode material. If the patent of the anode material was in the hands of a foreign company, then it would undoubtedly hinder the development of domestic battery companies.

The reason why Mr. Lu pointed out foreign companies specifically was not because of trade discrimination. The reason was clear in the case of the drug artemether, which had become a classic intellectual property right example. It was even on the website of National Knowledge Bureau.

The technology was created by Chinese people, but the drug patent rights were controlled by foreign companies. This kind of injustice was unacceptable.

Of course, the energy department did not want Lu Zhou to simply license the patent at a low price to domestic companies. After all, the intention of patent law was to protect innovation, let resources flow into the research and development field, and to encourage the society to create wealth through IP rights.

However, in this case, the state hoped that he would be conscious of his technology's "irreplaceability", and to avoid giving international companies the tools to monopolize the domestic market.

After all, the existence of the WTO and the deficiencies in relevant domestic laws gave huge power to the domestic anti-monopoly investigation of international capital.

Compared to other departments, this type of in-person conversation was undoubtedly more euphemistic.

Lu Zhou obviously knew what Mr. Lu meant. He had even guessed it back at the hotel lobby.

"You can rest assured that the cooperation between me and Umicore does no involve the Chinese market. As for the patent authorization in China, I'll authorize all companies intending to produce anode materials at a fair price."

“Since you put it like this, I am relieved,” said Lu Kaimin with a smile. He then said, “Professor Lu, don’t worry, the country will not let you down!”

Lu Zhou smiled and said with a relaxed tone, “Don’t tell me you came all the way to Boston for this, Mr. Lu. You could have just called me.”

Lu Kaimin shook his head and said, “It’s not just because of this. An unexpected situation happened. Actually, my original purpose of meeting you was to ask you something.”

Lu Zhou said, “What?”

Lu Kaimin said seriously, “In the 13th five-year plan from the Chinese government, the energy department plan was to increase the battery capacity to 500Wh/kg by 2020. But now it seems that with this breakthrough in lithium batteries, this goal can be easily completed. However, the world is improving as well, so we cannot be satisfied. Therefore, I’d like to consult your opinion on the next development strategy.”

Lu Zhou said, “I’m a mathematician. I might not be suitable to give you any advice. You should ask battery engineers for your future country development plan.”

Lu Kaimin insisted and said, “I don’t agree with this. Who said that mathematics professors’ opinions don’t have value? Just like our collider, Mr. Qiu’s opinions are important to the country. We need to integrate everyone’s opinion and wisdom to create a suitable plan. Professor Lu, please enlighten us on the future of lithium batteries.”

But it’s still totally different…

Lu Zhou was a little helpless.

He did not know how to explain to Mr. Lu that although Qiu Chengtong was a mathematician in differential geometry, he was in mathematical physics as well. Qiu Chengtong was basically a scientist. It would not be surprising if Qiu Chengtong won a physics award one day. After all, he was one of the founding fathers of modern string theory.

Furthermore, although Lu Zhou had been titled an “industry benchmark” or “father of computational materials science”, his research was not in the field of lithium batteries. Most of his calculated data only had theoretical value.

Lu Zhou knew that he was far less knowledgeable than battery engineers.

However, Mr. Lu was persistent, and he had to say something, “… Then I’ll just say a few words, don’t take it seriously.”

Lu Zhou thought and said, “In my opinion, the lithium-sulfur battery is a type of lithium battery with good potential. The Li-S theoretical specific heat capacity is 2600Wh/kg. Of course, there are many problems, like the shuttle effect, or the poor electronic conductivity of sulfur.”

Lu Kaimin then asked, “What about lithium-air batteries? Are they reliable?”

Lu Zhou immediately knew what Mr. Lu was thinking.

Preparing in advance on future technology could give them an edge against western countries.

After all, whether it was lithium, sodium, magnesium or the legendary silicon, companies like Sony and Samsung had already laid out patents in advance.

In a situation like this, even if one developed the technology, one would still be bounded by other people’s patents. It would be wise to choose a key research and development direction.

Even then, leaping too forward on research was not advisable…

Especially for something like lithium-air.

Lu Zhou shook his head and said, “It’s difficult, very difficult… Simply put, spending money on researching lithium-air batteries is just a scam.”

The energy density of lithium-air batteries was attractive, and it was easier to develop one's own core technologies compared to lithium-sulfur batteries. This was because people have been studying lithium-sulfur batteries for many years.

Without mentioning the giant company IBM, even the former energy minister appointed by Obama, and comrade Zhu Xiwen who won the Nobel prize, were almost fooled into researching lithium-sulfur batteries.

Lithium-air batteries had even worse problems.

It was not just the issue of lithium dendrites. The problem was a series of complex side oxygen separation reactions. Solving any of them would not only affect the battery industry.

With the current technology, no one even knew where to begin tackling the problem of lithium-air batteries.

Lu Zhou knew clearly that someone would put his name and thesis into a PowerPoint to defraud investors to fund lithium-air battery research.

Although it was not technically fraud, Lu Zhou still hoped that China would spend money on projects that were more realistic.

Even though those projects were less exciting.

Chapter 277

Dean Li and Mr. Lu started to tease Lu Zhou about "getting a girlfriend" and "Chinese or white girl".

After talking with Mr. Lu, Lu Zhou suddenly realized that his anxiousness had calmed down.

It was not that he was suddenly fulfilled.

Rather, he found out that his academic reports were not only valuable in the academic community, but also in the industry.

The rise and fall of a company, the development of a country, and even the future of the world were influenced by his thesis.

He did not even need to publish a thesis.

It was no exaggeration to say that he only had to lift his finger and type “Lithium batteries are good” then upload it onto his Weibo and by the next day, a batch of research funds would instantly be poured into this direction. If he did a PowerPoint presentation, then the stock price of a company could go up a lot… Of course, experts would ridicule his PowerPoint presentation if it was not legit.

Although his work was minuscule compared to the world, the effects were visible by the naked eye.

In contrast, $400 million USD did not seem so exciting anymore…

Emm…

Fine.

Just a tiny bit exciting.

…

The next day, the MRS Conference continued. Lu Zhou paid attention to many interesting reports.

This was a good opportunity to learn the cutting edge research of this field. Anyone that wanted to get into the industry would not miss this chance.

It was not just exchanging academic ideas.

Lu Zhou met many interesting people at the reports, and there was one who was especially legendary.

The person was D.E. Shaw, the leading expert in computational chemistry.

He became a professor at Columbia University when he was 30 years old, and he was an expert in the study of large scale parallel computing. In other words, he was quite famous in the academic community.

Columbia University was located in New York; the center of the world's elite businesses, million-dollar transactions every minute, extravagant girls and cars…

Anyone would be affected by living in this kind of environment.

David Shaw was no exception. After teaching as a professor for a few years, he could not stand it anymore. He decided to get into the major league on Wall Street.

Most people believed that like most professors, he would fail.

However, the end result stunned everyone. In less than a decade, he made a name for himself on Wall Street.

Through his massive parallel computing high-frequency trading company, David's quantitative hedge fund was worth $4.1 billion USD.

Obviously, by this time, he had already achieved what he wanted.

If this was the case, his legendary name would have remained on Wall Street, among bankers.

However, while he was at the peak of his career, he had a sudden realization.

Yes, this guy found out that he did not want a rich hedge fund manager lifestyle!

He found it meaningless.

While he was at the peak of his career, David took off his Patagonia fleece vest and put on a pair of jeans.

For a rich guy like him, he did not have to ask NIH 1 or the NSF 2 officials for research money. He had almost unlimited money and he could personally fund any academic research that he wanted.

Chemistry bio-tech supercomputer?

Did he rent one? Buy one?

Nope, he built one!

The starship of the molecular dynamics world, super-computer “Anton” was born.

Anton’s special purpose was to conduct simulations for protein bindings.

“… You’re a genius who studies mathematics, I’m a genius who studied massive parallel computing. We can work together to build a new framework for the entire computational chemistry industry. Think about it, 100 years later, people will mention our names in the computational chemistry hall of fame. We will be the founders of this field!”

At the dinner party hosted by MRS, David was talking to Lu Zhou.

Although most self-proclaimed geniuses were a manifestation of narcissism, David might be the only man on Wall Street who had the ability to do this. In fact, no one would even flinch when he called himself a genius.

Lu Zhou laughed and said, “Then 100 years later, a group of teenagers will complain about us being in a textbook.”

“You’re right, that’s the feeling,” laughed David. He then said, “How does it sound, interested?”

“I’m interested,” said Lu Zhou. He smiled and added, “If you have some more specific ideas, you can find me at Princeton.”

“No problem,” said David. With a smile, he added, “If you find some interesting mathematical model that you can use in a polymer experiment, make sure to find me in New York.”

Lu Zhou was intrigued. He said, “Actually, I’ve always been interested in supercomputers. I even plan on buying on myself.”

“This is a good idea, but it’s not cheap,” said David. He suddenly remembered something and asked, “Oh yeah, did you sign the patenting licensing agreement with Umicore?”

Lu Zhou said, “I signed the letter of intent. Why?”

David poured himself a glass of wine and said, “If I was you, I’d take some time to think about the tax issue.”

Lu Zhou frowned and said, “I have to pay tax?”

David said with a serious tone, “Of course! As long as this money enters the United States, you won’t be able to escape from the taxman… Honestly, the taxman always gets what he wants. Now that you’re a Princeton professor, I’m sure you have changed your visa situation.”

Lu Zhou nodded his head seriously.

Indeed, Lu Zhou had to pay tax on his Princeton salary. However, the $400,000 USD per year salary was after tax.

Lu Zhou asked, “Is there a way I can avoid it?”

David smiled.

“This is easy, just find an island and open an account there. My suggestion is to set up a patent management company in the Cayman Islands. Then hire some accountants. This is how Microsoft and IBM avoid taxes on IP. Many firms in Wall Street also does this…”

“… As long as the flow of funds occur between offshore companies, and the money never enters the United States, you won’t have to pay tax. The federal tax bureau won’t go after you…”

Chapter 278

Lu Zhou could have a “multinational company” without ever having to step foot on that small Caribbean island.

After the MRS dinner party ended, Lu Zhou returned to his hotel room.

“Can I outsource opening companies these days?” Lu Zhou looked at the business card that David gave him. He took out his phone and dialed the number.

According to David, this “AM” company was famous in the materials science field. It mainly served major universities and tech companies. It also helped with offshore company registration and IP related services.

Basically, they could solve Lu Zhou’s problems perfectly.

The phone quickly connected, and a female voice traveled through the phone.

“Hello sir, this is AM office. What business are you planning to do today?”

Lu Zhou stated that he needed an offshore patent management company to cooperate with overseas companies on intellectual property rights and to make certain “tax planning” requests.

The lady instantly knew what Lu Zhou meant. After hearing that Lu Zhou was serious, her voice became serious.

"… Can I ask what is your expected business range? For example, is the yearly profit less or more than one million USD?"

Lu Zhou thought for a bit.

"… Like more than $100 million USD."

The phone went silent for three seconds.

"Sir?"

Lu Zhou, "What?"

"Sorry, I didn't hear you properly, did you say…"

Lu Zhou, "Like more than $100 million USD. Is there a problem?"

There was a small commotion on the phone, followed by footsteps, and the sound of documents flipping.

Then the call was transferred to someone else.

"Hello sir, I'm Woolf Witt. I'll provide full consultation for you here. Please, may I ask what's your name?"

This voice was obviously more enthusiastic.

“Lu Zhou.”

“Okay, Mr. Lu Zhou,” said Woolf as he quickly filled in the customer information form. He then said, “Here’s the deal. If you want to set up a patent management company with a large amount of money, even though the Cayman Islands does no personally audit corporate accounts, the banks will require you to provide a company business statement.”

Lu Zhou frowned and asked, “Is it complicated?”

“No, not complicated at all. We can offer you three options.”

He started to explain the three options and Lu Zhou was starting to get a headache.

“Sent the three options to my email and attach a price. I’ll contact you myself. I don’t want to talk about it on the phone.”

Woolf quickly said, “Okay sir, your email is…”

Lu Zhou gave him his email and hung up the call.

…

The company that David Shaw recommended was very efficient.

Except for the blabbering agent named Woolf, there was nothing to complain about.

Since their business was centered on intellectual property, their customer base was mainly universities and research institutes. After AM got Lu Zhou’s name, they quickly found his background information.

After Woolf found out that Lu Zhou was a big name, he instantly gave Lu Zhou his full attention. Woolf spent the entire night writing out the three options and sent them to Lu Zhou's email.

When Lu Zhou woke up the next morning, he found the mail sitting in his inbox.

It was 12 pages in total. It had the three proposals and a quotation for the price of each proposal. In addition, it also had a model agency contract.

According to the solutions provided by AM, Lu Zhou only had to pay $500,000 USD in service fees to get a well-structured patent company. AM would also provide two years of legal support.

In America, as long as one had money, one could do anything.

Woolf considered all of the problems that Lu Zhou had not even thought of.

Lu Zhou did not hesitate, and he chose the least troublesome option three.

Since he still had not used his Crafoord Prize money, and that he had the Princeton salary money, he was more than able to afford the $500,000 USD.

Not to mention that he did not have to pay it all at once. He could pay the rest after the project was completed.

By that time, a couple hundred thousand would be nothing for him.

After AM received a $200,000 USD deposit, Woolf immediately set foot to Boston.

Although the contract did not have to be signed in person, Woolf wanted to show his sincerity to his customer. He brought the contract and his assistant along.

Lu Zhou saw Woolf outside the hotel. Woolf walked over and gave him a warm handshake.

“You must be Lu Zhou, I’m the agent responsible for your case… This is my business card.”

After shaking hands with Lu Zhou, Woolf continued to speak, “If you haven’t eaten yet, we can chat while eating. I know a good cafe nearby. Their tuna sandwich is the best.”

Lu Zhou took the business card and said, “You come here often?”

Woolf said, “Of course, I have many customers in Boston. I’ve been here over a dozen times.”

After some small talk, the two didn’t hang around the hotel for long. They found a quiet cafe nearby and began to talk about the specific details of the patent management company.

According to the contents of the contract…

AM would help him set up the patent management company in two weeks.

Then Lu Zhou would pay the rest of the balance before January next year.

There was no room for sneaky moves in a contract like this, and a formal office would not want to hurt its credibility. Lu Zhou briefly went over the cooperation rules and signed the contract.

Woolf spoke in a professional manner.

“Oh yeah, we noticed that your cooperation with the Belgium Umicore company is still in the stage of letter of intent. We must tell you that for a giant chemical company like this, they have a team of sneaky lawyers, so they might hide traps in the contact…”

Woolf cleared his throat and continued, “In order to eliminate all dangers, I sincerely recommend you to choose our team of lawyers to help you with the signing of the contracts. Our lawyers are experts in intellectual property…”

Lu Zhou put down the pen and said, “One thing after another, Jesus. Help me with the patent management company first, then we can talk about other stuff.”

Woolf smiled confidently.

“Rest assured sir, AM’s business ability will definitely satisfy you. Whether it is legal or accounting services!”

Chapter 279

Although this research result was not enough for an oral report, it was undoubtedly the best posters among young scholars.

As such, her work won the favor of the judges and stood out from many other posters.

On the podium, Professor Xu Lijun shook Lu Zhou’s hands.

The old professor then said with a smile, “Congratulations! After this MRS Autumn Conference, you’re the leading person in the field of computational materials science!”

“No way,” said Lu Zhou as he shook the old professor’s hand. He then smiled and said, “I’m only a mathematics professor, I still need more insight to carry forward the computational materials science field and make achievements.”

The two released their hands after the brief exchange.

Lu Zhou then turned around and took the award certificate and souvenir from the conference staff. He then handed it to the winner Wang Chen and shook hands with her.

The female master’s student excitedly shook Lu Zhou’s hands and said, “God Lu, do you really not plan on teaching a course in computational materials science at Princeton?”

Lu Zhou was stunned.

Why do I think she…

Looks familiar?

Lu Zhou carefully looked at her. He finally remembered that he met her outside the report hall.

However, he did not change his answer.

“Maybe in the future, but there are no plans for this in the short term.”

The girl said, “Then… I’ll apply to MIT.”

Lu Zhou said with an encouraging tone, “Yes, do it!”

Master’s girl: “…”

After the award ceremony, the conference finally came to an end.

Lu Zhou ended his two weeks long business trip and returned to Princeton campus.

At the same time, good news came from the AM office.

The company in the Cayman Islands had been successfully registered. It was named “Star Sky Technology Co. Ltd” as per Lu Zhou’s requests. Its main business of operation was intellectual property services and overseas investment, and the logo was three-interlaced Mobius rings.

Like this, Lu Zhou finally started his multinational company…

This company was somewhat different than the others. It only had US$100,000 in the bank account and did not even have an office. Lu Zhou was still in the process of hiring patent management staff. The only business partner they had was an accounting firm.

However, this situation ended in the second week of the MRS Conference.

Soon, Star Sky Technology quickly welcomed its first customer.

It was a customer worth $400 million USD.

“I did not expect you to be so fast. I thought it would have to be after Christmas,” said Lu Zhou. He was at a hotel in Philadelphia. As he read the contract handed over by Grynberg, he asked, “Only one copy?”

Grynberg said, “Christmas gifts have to be prepared before Christmas. Plus, the one in your hands is only a draft contract. I sent the electronic file to your email. I’m guessing you won’t sign it without looking at it, so I only printed one copy.”

Of course, no one would be that dumb.

Lu Zhou read the contract in its entirety. He then handed it over to the AM lawyer sitting next to him.

Reading this stuff was a waste of time, so it was better to give it to the experts. Since the lawyer from Umicore was also here, the two lawyers could discuss among themselves.

This was the final step of the patent authorization, so Grynberg was not in a hurry. However sitting here was boring, so he started to chat with Lu Zhou about the future of lithium batteries.

Since the problem of lithium dendrites was solved, industries such as mobile phones and electric vehicles had quickly started R&D on new products. Other major battery manufacturers were also accelerating their lithium battery research.

Even if they did not create lithium-sulfur batteries, and ended up with Li-MoS2 batteries, it could still change the entire industry and increased the battery density by several folds.

The company NEC bought the patent rights to Li-MoS2 batteries at a high price years ago, but it had since expired. Almost all other major battery companies were ready to jump on the bandwagon.

In a huge market like this, it was crucial for Umicore to obtain a patent license as soon as possible.

This was why Umicore was in a hurry.

They hated the idea of being sneaky and did not play any tricks on the contract.

The AM lawyers took all day to inspect the contract. After some arguments, the lawyers at Umicore confirmed their revision of the contract.

Although Lu Zhou knew he probably did not understand anything, he still read the final contract from beginning to end. He then took the pen and signed his name.

From now on, Umicore would receive a four-year exclusive license for the PDMS film technology outside of China as well as a secondary patent authorization from Star Sky Technology.

Star Sky Technology would no longer license this patent to third parties, and half of the proceeds from this technology would go toward Star Sky Technology.

As for what Umicore would do to their competitors with their excellent team of lawyers, it was none of Lu Zhou's business.

The reason why he signed the complete authorization contract with Umicore was that he did not want to spend time to handle negotiations and lawsuits from other companies.

If someone used his patent without authorization, Umicore would be angrier than him. Umicore would undoubtedly go after any competitor that infringed on their IP rights.

In addition, Lu Zhou could still receive half of the settlement from the lawsuit.

Grynberg looked at the two identical sets of contracts on the table. He finally had a smile on his face.

With the help of this contract, Umicore would have a significant advantage in the lithium battery industry.

For him personally, this was an excellent performance.

Grynberg put away the contract that belonged to him and reached out to shake Lu Zhou's hand.

"Happy cooperation."

Lu Zhou held Grynberg's hand and smiled.

"Happy cooperation!"

Chapter 280

Normally, the battlefield of the phone manufacturers was evenly matched.

However, after that Apple press conference before Christmas, this balance was broken.

[F*ck, four times battery?!]

[Nutty!]

[Apple is crazy!!!]

Even though new tech products had been coming out every year, there was not much difference between each generation of products. After all, due to the degradation of Moore's Law, CPU and GPU speeds were bottlenecked. Most phone manufacturers could not surprise anyone with their new iteration of phones.

However, the announcement of the 400% increase in battery life shocked companies like Huawei, Xiaomi, and Samsung.

A certain mobile phone user could not take it anymore. He could not help but make a post.

[Stop bragging about Apple, they don't even make lithium batteries. Lithium battery technology wasn't invented by Apple. I'm willing to bet that in a year, every phone will have a significantly increased battery life.]

This post would undoubtedly be attacked by Apple fanboys.

In fact, hundreds of Apple fans were criticizing this guy in the comments section.

However, the original poster took the attack well. He linked the Nature highlights and the Washington Times as well as various other media articles. He calmly made his arguments.

However, the original poster did not expect people to focus on something else.

[F*ck me, did I read it right? God Lu solved this? Isn't God Lu a mathematics professor?]

[Lithium dendrites… I was learning this stuff a month ago. It was solved half a year ago?!]

[Amazing, half a year ago this guy was bragging about changing Science using mathematics. I thought he was just bragging, I didn't expect his IQ to go beyond my imagination.]

[You're not the only one…]

Although Nature and Science highlights caused a sensation, and the Columbia TV station even did an exclusive report, all of the news was in the science section, so there were not that many tech people who paid attention to it.

After all, the more scientific the breakthrough, the less it was connected to customers.

Most people did not even know what lithium dendrites were. Their confused reaction would be, “Haven’t we begun using lithium batteries long ago?”

However, as the research result slowly spread to the industry and changed people’s lives, some curious people would eventually trace back to the roots of this change.

The sensation caused by the thesis half a year ago was contained in the academic community and the industry. However, this time, after major electronics manufacturers released their announcements, the news was spread to the general public…

…

Actually, it was not just Apple. A year ago, Warwick, Samsung, and other mobile phone companies had already begun new product line up plans. They just had not announced it yet.

However, after the MRS Conference, the lithium dendrites problem seemed to have been conclusively solved. This coupled with the enthusiasm of the stock market for lithium batteries caused the companies to start announcing it.

After Apple fired off the first shot, Warwick, Samsung, and other phone manufacturers began their next-generation product announcements as well. This year, everyone’s concentration was on one aspect of mobile phones.

That was the insanely long standby time.

It was not just phones, computers, cars, and other 3C battery using companies also jumped on the bandwagon.

As the head of the lithium battery market, 3C had experienced tremendous growth over the past few years. It had even grown to be one of the top three consumer terminals of lithium batteries.

Numerous tech companies made PowerPoint presentation type of press conferences. However, the automotive industry was different than tech. Due to a higher safety standard, their R&D cycle took more than a year to complete.

While the battery industry was undergoing huge changes, so did Lu Zhou's life.

He was now worth over $400 million USD. He could not live in student apartments anymore.

Lu Zhou was reluctant to buy a house last time but he was not so distressed about it this time.

After all, Citibank gave him a four percent annual interest rate for his large bank account. Princeton's salary was nothing compared to this.

The stubborn old white man finally gave in and handed the house keys to Lu Zhou.

Lu Zhou sat on the neat lawn of his new $300,000 USD house. He could not help but smile.

In addition to the 260-square meter size, the house had a front yard and garage as well. The surrounding neighborhood was quiet and peaceful. The neighbors were mainly foreign students or professors of the Institute for Advanced Study. Einstein's former house was close by.

Other than it was slightly too big, Lu Zhou was happy with the rest.

Especially the decoration of the house; he liked that the most.

Perhaps it was because the former landlord was a history professor, he had good taste in furniture. Particularly, Lu Zhou liked the fireplace in the living room as it gave people a comfortable feeling.

It would be a pity to rent this artistic house out. Lu Zhou finally knew why the old man did not want to rent.

The only major change Lu Zhou did was to the kitchen. Everything else remained more or less the same.

Although he mainly ate at the Ivy Club, he still liked to cook for himself.

Lu Zhou looked at the kitchen being refurbished by renovation workers and suddenly, he had an idea.

It was almost Christmas.

Most Chinese people treated Christmas like Valentine's day.

As a tall handsome loner, he had yet to celebrate this holiday before.

Maybe he should tidy up his new house and invite a few friends to have a housewarming party.