Scholar 451

Chapter 451: Evasive Answer

Winning the award made Lu Zhou excited for a while, and he was busy with various social events that came with the award. However, it didn't disturb his research schedule.

As he said, whether it was the Fields Medal or the Nobel Prize, the awards weren't the reason for research; it was only the icing on the cake.

There were greater, better things waiting for him.

Frick Chemistry Laboratory.

Lu Zhou gave Connie a USB and spoke while yawning.

"I've already completed the relevant mathematical model. I've made some predictions regarding the positions of the zero-dispersion electronic band structure. As for whether or not it is reliable, that would depend on your experiment results."

Box..

Even though this mathematical model wasn't something he was dying to complete, once he immersed himself in the interesting research, time quickly flew by.

Connie took the USB and looked at Lu Zhou with a surprised expression as he said, "You already finished it?"

"I'm just skilled…" Lu Zhou rubbed his eyebags and said, "When you're able to integrate the things I have taught you, plus once you develop an intuition toward numbers, I'm sure you can do the same."

Connie frowned and said, “But Professor Lu, your theorems are way too difficult.”

What he actually wanted to say was that if he ever reached that level, he would be able to win a Fields Medal as well.

“Because it’s difficult, that’s why you have to learn it.” Lu Zhou patted Connie’s shoulder and to encourage him, he said, “If one day I’m no longer at Princeton, you’ll have to be the one to pass on my theorems.”

Connie was stunned. “No longer at Princeton? Are you planning on leaving?”

Lu Zhou laughed and gave an evasive answer by saying, “Just a hypothetical situation. Regardless of whether or not I’m here, science and knowledge must continue to be passed on. You and Jerick have the best understanding of my computational materials theory. Compared to Jerick, you have more experience in experiments… Of course, his mathematics might be a bit stronger. So work hard, academia prospers because of communication. I can only create the knowledge; the work of spreading it depends on you guys.”

Connie nodded seriously and said, “I’ll try my best, Professor Lu.”

Lu Zhou nodded with satisfaction and patted his shoulder again. Without saying anything else, Lu Zhou turned around and left.

…

The research on superconducting materials was carried out step by step while Lu Zhou was still doing his other job.

The students didn’t take a long time to choose their graduation thesis topic. Even Hardy successfully chose a research topic by the middle of the month.

Although Hardy was a little too playful, he was still decently skilled.

Since he was able to step into the doors of Princeton, it meant that his talent and diligence were way beyond ordinary people.

For example, the Collatz conjecture that the three of them worked on…

Although Lu Zhou was the one that set the initial framework, Vera was the one that did the majority of the work. However, like what Vera said, she couldn't have completed it as smoothly as she did without the help from the other two students.

After looking at all of the students' proposed topics, Lu Zhou spent an afternoon chatting with his students one by one. He also gave his opinion on their research topic and which field they should focus on.

Qin Yue and Hardy should focus on analytic number theory, while Vera, who was almost like Lu Zhou, was an all-rounder.

Although this path was very difficult, with her talent and love for mathematics, it was worth a try.

Once the PhD students chose their topics, it was time for the master's students to also choose their thesis topic.

Under Lu Zhou's suggestion, Jerick chose applied mathematics, or more specifically, computational materials.

This field was full of potential, especially since the Nobel Prize in Chemistry this year was given to the "Theoretical Model of Electrochemical Interface Structure" thesis.

What surprised Lu Zhou the most was Wei Wen's decision.

This genius student, who once lost to Lu Zhou at the mathematical modeling competition, not only chosen his thesis topic, but he even finished writing the thesis itself.

Lu Zhou: “Actually I wanted to chat with you after you have chosen your topic to see if I can help you with anything, but it seems like you have your own plans… If so, show me your thesis.”

“Okay, Professor!”

Although Wei Wen was very proud to be the first to complete his thesis, he couldn’t help but feel a little worried when he gave his thesis to Lu Zhou.

After all, he didn’t consult his supervisor’s opinion when he chose his thesis topic.

However, Lu Zhou wasn’t a nitpicking person, and he was fine with Wei Wen making his own decisions.

Lu Zhou quickly finished reading his thesis and began to think. After a minute or so, he gave a simple evaluation.

“The study of coherent states of non-harmonic oscillators in a Hilbert space is a classic problem, both in quantum mechanics and in theoretical physics. It’s not that popular, but there are many places to dive into deep research. As for your thesis, there are some problems starting from the fourth section. I suggest you modify it before thinking about publishing.”

Wei Wen’s research direction was functional analysis. Right now, he focused on Hilbert space related problems. Lu Zhou guessed that his future research direction was probably mathematical physics.

Lu Zhou gave the thesis back to Wei Wen and spoke with a pleasant smile.

“Other than some minor issues, your thesis is well written. You can try to streamline it and submit it to PRL.”

When Wei Wen heard his suggestion, he was stunned. With a stiff expression, he looked a little distressed.

“Will PRL accept it?”

PRL was the acronym for “Physical Review Letters”, a legendary top physics journal.

Publishing in PRL didn’t necessarily mean that one was an expert. However, a PRL publication was worthy of being celebrated on any university’s official website.

Lu Zhou raised his eyebrows and smiled as he said, “Scared?”

Wei Wen quickly calmed himself down and shook his head. “Nope.”

Lu Zhou nodded with approval. He then smiled as he said, “It’s not easy to produce results in the field of theoretical physics. It’s even more difficult to convince others your results are important. However, one thing you should know is that you should always believe in yourself. You must believe your research is correct and good enough. Only then, can you convince others.”

Wei Wen: “… I understand.”

Lu Zhou looked at Wei Wen’s distressed expression and knew what he was worried about.

Therefore, he spoke in a relaxed tone, “Of course, if PRL rejects your thesis, I’d suggest you try Physics Today as it’s slightly easier. Whether it’s PRL or PT, as long as your thesis is accepted, I’ll let you graduate. I hope you can concentrate on your research and don’t let the pressure of graduation get to your head.”

Physics Today had a similar style to PRL, and it accepted all types of physics thesis.

Honestly, it was a bit difficult for Wei Wen to submit to PRL.

But PT was a lot more realistic.

Wei Wen sighed in relief and looked determined.

“I will try my best!”

Chapter 453: 101K!

Recently, there was an uproar in the mathematics world.

First was Sir Atiyah and the Riemann’s conjecture, then it was Schultz and Shinichi Mochizuki.

Recently, Peter Schultz and Jakob Stix recently co-wrote a thesis regarding Shinichi Mochizuki’s 1.5 inequation proof. They also said that Shinichi Mochizuki’s proof process required a lot of corrections.

Of course, in Mochizuki’s opinion, Schultz didn’t discover any problems.

As for the reason, he would explain it in a thesis.

Compared to Sir Atiyah’s abysmal thesis, this fight was obviously a lot more popular among the mathematics community.

Box..

After all, it was rumored that there were fewer than 20 people in the world that could understand Mochizuki’s 500-page book that caused quite a bit of controversy in 2012.

One was the founder of the “anabelian geometry”, “Teichmuller theorem”, and the disciple of Mr. Faltings while the other was the founder of the “PS theory”, and the winner of the Fields Medal.

The confrontation between the two seemed epic, and it dazzled the outsiders who were watching the fight.

Unfortunately, compared to number theory, Lu Zhou wasn't well versed in algebraic geometry, much less the extremely unpopular anabelian geometry.

The abc conjecture wasn't something Lu Zhou wanted to pay a large amount of attention to. He set notifications on for the development in this topic and left it aside. He put all his energy into his superconducting materials research.

Although the mathematical model was complete, he still needed to be at the laboratory.

Any theorems that were based on calculations were open to being questioned. Computational materials could only guide experiments, it wouldn't determine the final experiment results.

Lu Zhou didn't stay in the laboratory just to produce results as soon as possible. It was also to perfect his own theories through the knowledge gained from experiments.

Time quickly flew by; it was already the end of October.

A quiet celebration was heard in the scanning electron microscope room at the Frick Chemistry Laboratory.

Why was it quiet?

Because the instrument and samples at the laboratory were too "fragile", plus their experiments were full of metaphysics where even the tiniest vibrations could affect the final experiment results.

"It's a N-shaped doping! We did it!"

Connie clenched his fists as he excitedly looked at the image in the scanning electron microscope. He recorded the data and said, “I knew it. As long as you participate in the research project, anything is possible!”

This sudden compliment was as unexpected as the experiment result. Lu Zhou was almost embarrassed by it. He said, “That’s an exaggeration, I only provided a mathematical model.”

Professor Chirik was standing next to them, just as cheerful. However, he had been around a lot more than Connie.

Therefore, he smiled as he joked, “No need to be humble, your mathematical model was undoubtedly useful. If we used traditional methods to find this sample, we’d be lucky to produce any in-progress results by the end of the year.”

Compared to the Jinling Institute of Computational Materials and Sarrot Laboratory, their focus was mainly on theory and finding the electronic band structure close to zero dispersion…

According to Lu Zhou’s mathematical model, the positions of the two energy bands were at the negative and positive doping ends of the graphene Dirac point. This was proven by the experiment.

What was the reason for all this?

There were many reasons.

Finding the zero-dispersion energy band meant finding the Mott insulator.

When they applied a small voltage to the two-dimensional structure material and added a certain amount of electrons to the Mott insulator, a single electron combined with other electrons in the graphene would allow them to pass through a place that couldn’t previously be accessed.

Throughout this entire process, Lu Zhou and the team had been measuring the resistance of the material while also reducing the temperature of the material. They soon discovered that whenever the

temperature dropped to 101K, the resistance rate of decrease suddenly reached a peak, and the value of the resistance also approached zero.

Obviously, this was what they were looking for.

Sometimes theory and application research didn't form a contradiction, especially in the field of materials science.

Of course, underlying these simple research were many profound theoretical problems; problems that Lu Zhou didn't even know how to explain.

For example, how could he explain the forbidden superlattice bandwidth near 1.1 degrees, or what kind of parameter should be used to describe the Mott insulator formed at this angle…

Maybe someone in the future would dive into these theoretical problems, or maybe their research partners would be interested in this type of follow-up work.

In short, when they changed the concentration of charge carriers by using N-doping, they also adjusted the superimposition angle of the two-dimensional materials. Finally, they found a "half-filling" structure by using the new angle.

When the temperature reached 101k, as they imagined, the material went through a superconductivity transition.

Although 101K wasn't a high temperature, relatively speaking, this was undoubtedly an amazing achievement.

Excited, Connie looked at Lu Zhou and asked, "Professor, what should we name this new material?"

Lu Zhou said, "… Are you guys sure you want me to name it?"

Honestly, Lu Zhou wasn't good at coming up with names.

He was quite self-aware about this.

However, these two obviously didn't know that.

It wasn't just Connie, even Professor Chirik smiled and said, "Of course, this should be done by you."

Lu Zhou didn't want to refuse their kind gesture. He thought about it seriously for a moment before he said, "Okay then… Let's call it SG-1."

SG-1 stood for Superconductivity Graphene 1. Although they could name it by a preparation method or a compound type, functional naming was easier to distinguish.

After all, there were countless ways in which two-dimensional materials could be superimposed on each other, not to mention the complex chemical processing methods; all of them produced a different N-doping graphene material…

Lu Zhou wasn't confident at first, but he was quite satisfied with this name.

Of course, being satisfied alone wasn't enough; he had to seek the opinions of his two partners.

"What do you guys think about this name?"

Connie: …

Chirik: …

When the two suddenly became silent, Lu Zhou hesitated slightly.

"… What?"

Chirik and Connie looked at each other and made a helpless expression.

Connie: “Nothing, SG-1 it is… It’s just such an exciting discovery, I thought you’d come up with a cooler name.”

Now that I think about it, this is Lu Zhou’s style.

Modified PDMS and HCS-2…

I knew I shouldn’t have let him be the one to name the material.

Lu Zhou: “…”

Chapter 454: Really Not Thinking About Going Public?

At the beginning of the year, the Pablo Jarillo Herrero’s team made remarkable achievements regarding the graphene superconductivity project, opening up a new platform for superconductivity research.

Which was, whenever the two graphenes superimposing angle approached 1.1K, the electronic band structure reached zero-dispersion, causing the band to transform into a Mott insulator when half-filling.

This research result caused a huge commotion.

Most people didn’t think a 1.1K superconductivity was anything worthy. However, in reality, this project was full of potential.

To know the reason why, it was necessary to clarify a basic concept, which was that superconductivity transition temperature was positively proportional to the material carrier concentration.

Therefore, in theory, as long as the concentration of charge carriers increased, the upper limit of the superconductivity material temperature could also be increased.

Box..

For example, graphene had a charge carrier concentration of only 10^11cm^-2 and transition temperature of 1K.

In contrast, the superconductivity transition temperature of copper oxide was around 100K, while the single-layer material charge carrier concentration was on the order of 10^14cm^-2.

Even if one didn't understand chemistry, one could still intuitively feel the superiority of graphene materials compared to traditional copper oxide materials in the field of superconducting materials.

There were many ways to increase the charge carrier concentration in graphene. Doping could be divided into N doping and P doping, and the doping material could also be divided into small molecule doping, metal doping, lattice doping, etc.

This was precisely why graphene had an advantage.

The two-dimensional material atom sheets could be stacked and combined in many different ways to form new structures. These new structures often had new properties, which meant there was a near-infinite amount of possibilities.

The disadvantage was that it was very expensive.

However, scientific researchers often didn't have to think about costs.

How to cut costs, manufacture, profit… These were some of the things that the industry had to consider.

However this time, Lu Zhou sincerely hoped that the industry could hurry up and find a way to effectively manufacture his research results.

The system didn't give him a lot of time.

He had to build a DEMO nuclear fusion prototype before 2025, so superconducting materials were a must.

After all, it was not like he could build a magnetic confinement fusion device as big as the European Hadron Collider. He needed the superconducting materials…

In the evening the experiment results came out, Lu Zhou invited Connie, Professor Chirik, and Professor Chirik's two assistants to drink at the best bar in Palmer Square.

Obviously, their drinking was funded by the research fund.

After all, the research fund was funded entirely by Lu Zhou anyway.

Professor Chirik sat next to Lu Zhou and ordered a cocktail. He asked, "Honestly, why are you suddenly interested in superconducting materials? Superconducting materials obviously isn't as profitable as batteries."

There wasn't anything wrong with the research topic. No matter how unpopular a research topic was, there was still someone engaged in that topic. However, Lu Zhou's previous research was on electrode materials, so when he suddenly migrated to superconducting materials, Professor Chirik was genuinely confused as to why he would do that.

After all, while the field of superconducting materials wasn't necessarily unpopular, it definitely wasn't a highly profitable field.

Lu Zhou smiled and said, "If I said it was for humanity's future, would you believe me?"

“You’re drunk.” Chirik looked at the bartender behind the bar and said, “Hey, give him a Bloody Mary.”

“Don’t listen to him, change the Bloody Mary to a Tequila Sunrise. You can drink that tomato juice yourself.” Lu Zhou paused for a second and said, “Okay, honestly, it’s actually because my experiment needs a larger constrained electromagnetic field. The traditional copper oxide superconducting material has already reached the engineering limit of electromagnetic field strength; therefore, I need to find new materials.”

Professor Chirik said, “Is it for the sake of theoretical physics?”

He had heard about Lu Zhou and the story of 750 GeV.

Lu Zhou picked up the glass of Tequila Sunrise from the bar and slowly took a sip before he replied ambiguously, “I guess.”

“Okay… Doing research to do more research, I guess this counts as a reason,” Chirik said as he shook the glass in his hand and made a helpless expression. He slowly raised his glass and said, “Cheers to your passion for research.”

“Thank you.”

They both raised their hands and gently tapped their glasses together.

Bars on Palmer Square were pretty boring. Other than the small town’s residents, the guests here were basically all Princeton professors and students.

Scenes that happened in American movies were rarely seen here unless one went to a more popular bar.

Connie said that if they wanted to have more fun, they had to go to Philadelphia.

However, Lu Zhou said the alcohol was enough to relax his tired brains.

It was worth mentioning that although the atmosphere here wasn't intense, everyone was very enthusiastic.

Professor Chirik couldn't handle the alcohol and stumbled off to the toilet. A young pretty Asian chick seemed to have noticed Lu Zhou sitting alone, so she walked over and sat next to him. While smiling, she asked for his number.

However, Lu Zhou quickly realized this was one of his past students. Also, Lu Zhou had left his phone number and email on the lecture hall blackboard multiple times.

Obviously, there was no way she didn't know his phone number.

He didn't know what she wanted. She probably just wanted to amuse herself.

The chick looked surprised after being exposed by Lu Zhou, so she quietly walked away.

The group of drunk men hung out until the early morning before they crossed the road and returned to their respective homes.

The next day, Star Sky Technology in North America sent a team of lawyers from Philadelphia to help with the patent application.

They could only publish the thesis after receiving their patent number.

If this process was reversed, then they likely wouldn't be able to pass their patent application as the material would no longer be novel.

In order to receive the patent number as soon as possible, the CEO of the North American branch, White Sheridan, personally came to Princeton.

When Sheridan received the completed material patent application from Lu Zhou and looked at the patent description, he couldn't help but ask.

"Really, are you not thinking about going public?"

Lu Zhou: "Public?"

Sheridan earnestly persuaded him by saying, "That's right, just by patent income alone, other than the one-time buyout fees, our yearly profit is less than US$100 million. However, if we are publicly listed on Nasdaq, with our potential in the lithium-sulfur batteries market and future energy industry, you'll become a multi-billionaire in less than a year."

Lu Zhou had to admit that it sounded pretty appealing.

However, when he heard about being a multi-billionaire, he laughed. He then said nonchalantly said, "The market value is all fake. I'll think about it if I can turn it all to cash, but if I can't, I'd rather not have to report to the board every time I want to set up a new project."

His original intention of Star Sky Technology was to facilitate his research work, so it wouldn't make sense for him to violate that intention.

As for being a multi-billionaire…

Honestly, Lu Zhou already had no idea how to spend the couple hundred million in his bank account.

"Okay then… But I think there would be any investors that will stop you from doing experiments even if you only own 1% of the shares."

Sheridan made a helpless expression.

There weren't many people that were as stubborn as Lu Zhou.

However, he had nothing to complain about.

After all, even though Lu Zhou had a strong desire to control the company, the salary was quite generous.

The salary alone was enough to dispel his additional ideas.

Chapter 456: Invitation To The Nobel Prize Dinner

After mid-October, the weather in Jin Ling started to grow colder as the days passed by. Although winter hadn't arrived yet, it was just as cold.

In an office in the physics department at Jin Ling University, a strand of steam was floating on top of a vacuum flask.

Professor Li Rongen sat in front of his office desk drinking tea while he browsed through the conference information on his computer.

It would soon be the annual MRS Autumn Conference, and all the reports and theses that were to be presented at the conference had been released.

Regardless of whether or not one had time to attend this conference, anyone in the materials science would pay attention to a top-level conference like this.

Looking at the trend of thesis submission, there had been a growth in graphene research this year.

Box..

Among them, the most eye-catching was undoubtedly the study on graphene as a superconducting material.

101K!

This number caused a sensation in the materials science community.

Even though this thesis was posted on the official website after the deadline, according to the website rankings, it was one of the top three downloaded theses.

Li Rongen wasn't in the field of superconducting materials. He had a very shallow understanding of graphene as most of his research was centered around carbon nanotubes. However, this didn't prevent him from reading the thesis and understanding its finesse.

Professor Li Rongen read the thesis in its entirety before he put the thesis down. He couldn't help but exclaim, "Amazing."

Graphene superconductivity.

A few years ago, this concept was a distant dream. I didn't expect that in a few short years, this concept would go from the theoretical realm to the applied realm.

Not just that, but according to the thesis, 101K isn't even the limit of the superconductivity transition temperature.

Theoretically, as long as the concentration of charge carriers in the graphene increases, the temperature could also increase… Of course, even though this sounds easy, it definitely isn't easy to do.

Regardless, any researchers in the field of copper oxide superconductivity would probably start to have doubts about their life, right?

After all, they spent half a century to raise the critical superconductivity temperature to 125K. Then graphene came and blew copper oxide out of the water in terms of plasticity and engineering possibilities.

It seems that Professor Lu isn't satisfied with lithium batteries anymore.

First, batteries. Then, superconductivity, what's next?

Professor Li Rongen was only curious about one thing; what would this guy do next?

It seemed that Lu Zhou could conquer any research field he set his mind to.

Li Rongen wasn't the only one reading this report. His PhD and master's students who were next to him was reading it as well.

A PhD student named Zhang Fan heard his professor's exclaim. He couldn't contain the curiosity in his heart anymore, so he asked respectfully, "Professor, when you were doing experiments with God Lu, what kind of person was he?"

Professor Li Rongen heard this question and smiled.

"What kind of person? I don't know how to describe him other than he's a genius."

Professor Li Rongen began to think back to the past and continued to speak, "I won't tell you guys about his mathematical modeling competition results as you have probably heard of it already. In his second year, he built a mathematical model using experimental data provided by us, and he estimated the mechanical properties of the material based on the data collected by the Fourier infrared spectrometer. I'll leave it to your imagination to think about the level of technical skills required to do that."

It wasn't just Zhang Fan, the other two graduate students in the room also looked astonished.

Being able to do computational materials was nothing impressive as many materials science experiments would often use the first principle calculations. This was especially so after Lu Zhou's influence. Even people that weren't in the computational materials field would learn a bit about computational materials.

However, being able to do all this as a second-year student was frightening.

As for the Higher Education Society Cup…

For people like them, they'd be lucky to win a second-level national prize.

Zhang Fan couldn't help but think about what he was doing during his second year.

After a while, all he could remember was his ex-girlfriend's name.

Professor Li Rongen seemed to have guessed what his students were thinking when he smiled and shook his head.

"Don't be jealous. He's a mathematical genius. Soon after he won the Higher Education Society Cup, he solved a world-famous mathematics problem… It's called the Zhou guess or something. You guys haven't met him, so you don't know how strong his mathematical intuition is. Simply put, if I give you guys some data, it'd be a blessing if you could make me some graphs. However, Lu Zhou can make the data come to life."

The students looked at each other with confusion.

They obviously didn't know what Professor Li Rongen meant by making data come to life.

Zhao Qing, who had kept quiet this whole time, finished reading the thesis. He looked up from the computer screen.

"Professor, why do you think Professor Lu is researching superconducting materials? Does it have market application potential?"

Li Rongen: "It's not necessarily that he's researching this for market application, but if you want to know about the future potential, it's application prospects are much larger than you think."

Zhao Qing was stunned. He then asked, “Is the superconducting materials market that big?”

Professor Li Rongen shook his head and said, “It’s more than just superconductivity.”

Zhang Fan was also stunned. “It’s not just superconductivity?”

“Read the thesis again if you don’t understand. The existence of the Mott insulator means the graphene can be ‘opened’ and ‘closed’. What does this mean? Do I really need to explain it?”

Zhao Qing said: “… Semiconductor?”

Professor Li Rongen nodded with approval and said, “Correct.”

Due to graphene’s high charge carrier mobility, it had a broad application when used in electronic transistors.

Also, everyone knew that graphene had no bandwidth, which meant that the graphene electronic devices would remain highly conductive at any voltage and could not be completely turned off, thereby limiting their use in electronics.

However, the magic of the Mott insulator was that it added a voltage gate to the material which allowed the graphene superlattice electrons to rapidly pass through like there was no resistance.

Obviously, this created an “opening” and “closed” state.

If one only wanted to utilize this property of the Mott insulator, one didn’t need to achieve the superconductivity temperature of 101K.

Therefore, this thesis wasn’t only significant in the superconductivity industry, it also opened up a door to graphene semiconductors.

Not only would the energy industry be interested, but major electronics manufacturers would also pay attention to this area of research at the MRS conference.

After all, graphene was sold by the gram. Thus, to use it to transmit power was too expensive. However, it could be used in electronics.

Suddenly, the taskbar below the browser flashed.

When Professor Li Rongen saw the email notification, he opened his email.

He was stunned when he saw this email, but a gleeful smirk gradually appeared on his face.

“This kid didn’t forget me.”

It was the invitation to the Nobel Prize award ceremony.

He originally planned to watch it on TV, and he didn’t expect to have the opportunity to see it in person…

Chapter 457: Highly Rated MRS Autumn Conference

Professor Li Rongen wasn’t the only one that received an invitation.

Old Tang and Academician Lu also received one.

Once Lu Zhou sent out these three invitations, he suddenly found out that his worries were unnecessary.

His parents and Xiao Tong, his three professors from Jin Ling University, his five students, and Chen Yushan… It seemed like he had almost used up all of his invitations?

Lu Zhou spent a while thinking about the remaining two invitations, but he couldn't come up with an idea.

Professor Deligne would be attending the European Mathematical Society in France with Professor Fefferman.

Box..

As for Witten…

He might be interested in attending the Nobel Prize dinner, but unfortunately, he would be at CERN to participate in a very important international theoretical physics conference, so he didn't have time.

It seemed that everyone would be pretty busy during the few weeks before Christmas.

As for inviting his previous roommates…

There weren't enough spots left, and he didn't want to leave anyone out.

Lu Zhou couldn't come up with a good idea, so he decided to leave this issue aside.

I guess I just won't invite anyone else. It's not like I have to invite 14 people.

He had more important things to do.

Like finding a suitable method for the industrial manufacturing of SG-1…

The samples in experiments were created using a chemical vapor deposition method on a high-temperature carbon substrate. After that, the substrate was dissolved to obtain graphene.

However, this wasn't enough as this process only yielded the basic graphene material. In order to enable it to achieve superconductivity at 101K, it needed to be subjected to a series of processes, such as N doping.

Actually, these things should be figured out by the market. However, Lu Zhou didn't want to wait that long.

When engineers like Professor Lazerson finally opened up their minds and saw the value in this industry that had small profits but no competitors, it would be way past Lu Zhou's mission deadline.

For now, the most popular use of superconducting materials was for scientific research.

Fortunately, Lu Zhou had read some industrial design books in his free time, and he went to a few engineering lectures. Combined that with his engineering knowledge which was at Level 2, it wasn't difficult for him to absorb new knowledge.

He might not be able to design a production line from start to finish, but he could improve the laboratory preparation method and find a lower cost synthesis method.

Worst case scenario, he would just use the laboratory preparation method.

It would just cost a bit of money.

If he really created a DEMO fusion reactor, he wouldn't ever have to worry about money.

For that, he would be willing to burn a hundred million dollars… or even a billion.

It was almost the end of the month when Professor Chirik got on a plane to Boston and headed to the MRS Autumn Conference.

As for Lu Zhou, other than his SG-1 material experiments, he had been preparing for his seminar which would begin after the Nobel Prize award ceremony.

Interestingly, he had received a lot of invitations to accept awards.

The most famous one among them was the Breakthrough Prize in Mathematics. Apparently, it was sponsored by a Russian billionaire and the founders of Google, Facebook, Tencent, and other companies. There were also some less famous awards, ones that couldn't even be found online.

After all, Lu Zhou was the youngest Nobel Prize laureate, and both his age and achievements were something worth paying attention to.

Bragg first set the record when he was 25 years old. It took a century for the record to be beaten by one year. Who knew how many centuries it would take for it to be beaten again.

Lu Zhou didn't mind receiving a few extra awards, but there were so many invitations piled up in his mailbox that it gave him a headache.

It seemed that winning a Nobel Prize really increased his popularity.

After flying to Stockholm, he still had to fly to Paris. Lu Zhou really didn't have that much time to fly around the world. In the end, he decided to let Xiao Ai get rid of the invitations that weren't relevant to academia.

However, Lu Zhou later learned that the Breakthrough Prize in Mathematics was worth US$3 million…

He couldn't help but feel heartbroken to have lost US$3 million.

Although US$3 million wasn't a lot of money for him, but still, who didn't want more money?

Furthermore, this was free money.

However, since he had already refused the invitation, he couldn't do anything about it anymore.

…

On the last day of November, Lu Zhou applied for a long vacation away from Princeton to prepare for his to Stockholm.

Around the same time, a piece of good news came from Professor Chirik, who was at the MRS Autumn Conference in Boston.

Professor Chirik spoke excitedly through the phone.

"The report went very smoothly and the seats and aisles were completely full! You should have seen it in person!"

When Lu Zhou heard Professor Chirik's energetic voice, he couldn't help but smirk.

When he reported at the MRS conference on the modified PDMS, the aisles were also full of people.

He felt nostalgic just thinking about this.

Lu Zhou began to talk about the important part.

"Are there any companies that are interested in our technology?"

Chirik: "There is, but… it might not be what you expected."

Lu Zhou: “What do you mean?”

Chirik: “IBM wants us, and they’re very interested in our technology. However, it’s not because of the superconductivity but because of the semiconductor properties exhibited by the Mott insulator at a particular angle.”

A light bulb went off in Lu Zhou’s brain.

“They plan on using the SG-1 material in electronics?”

Professor Chirik nodded and said, “Seems like it. They’re doing research on carbon-based electronic devices. However, they only asked about some technical details and if we needed funding. I told them we don’t, so they left without saying anything else.”

Chirik sounded a bit disappointed.

When the IBM representative talked to him, he thought they wanted to pay for a license. Unfortunately, they didn’t do that.

Obviously, they had doubts about whether or not this material could actually be used on electronic devices. They needed to verify it by doing experiments in their own laboratory.

As for the superconducting material itself, some medical device companies that were involved in superconducting materials production expressed interest in this technology.

Lu Zhou noticed that his partner seemed to be a little upset, so he said, “There’s nothing to be upset about. The field of superconducting materials isn’t popular, so it’s normal if the market isn’t interested.”

“I know… I just feel as if this great technology isn’t being recognized by the industry…” Professor Chirik didn’t know how to describe this feeling, so he merely shrugged and said, “It’s just a little unfortunate.”

Lu Zhou: “Not being recognized by the industry doesn’t hinder the greatness of a piece of technology. Also, I can promise you that this technology will be used in a great project.”

Chirik: “Like?”

Lu Zhou coughed and said, “I can’t tell you now, but you’ll know what I’m talking about by 2025.”

Professor Chirik said, “Okay then, it seems like I’ll have to wait 7 years for the mystery to reveal itself.”

Chapter 459: What Do We Call Her?

Xiao Tong shook Lu Zhou’s arm and smiled cheekily as she asked, “Brother, do you miss me?”

Lu Zhou gently patted Xiao Tong’s hair and said with a smile, “I did. Of course I miss you, I miss you to death.”

Lu Zhou looked at his parents walking over and said, “Dad, Mum, when did you guys get here?”

Fang Mei looked at her son and said with a smile, “We arrived in the morning. Thankfully, your friends came to pick us up. Otherwise, we wouldn’t know how to get here. Make sure you thank them.”

Old Lu said, “Definitely thank them.”

Lu Zhou immediately looked at Chen Yushan, who was standing nearby. She was looking at Lu Zhou with a smug smile.

Box..

Although she didn’t say anything, Lu Zhou could almost read the expression on her face. It was something along the lines of “Look, am I not amazing?”.

Lu Zhou: "… How did you guys meet up?"

Xiao Tong looked at her curious brother and waved the phone in her hand as she said, "It's because of me."

Lu Zhou suddenly remembered that when Xiao Tong came to America to visit him, she became friends with Chen Yushan and Han Mengqi.

They probably exchanged WeChat details back then.

Chen Yushan looked at Lu Zhou who was reuniting with his family and walked over with a smile.

"Little Brother, long time no see, do you miss me?"

Feeling a little embarrassed, Lu Zhou smiled and said, "It hasn't been that long. Didn't we see each other last month?"

Xiao Tong said, "Bro, a month is a long time!"

Chen Yushan looked at Xiao Tong supporting her and sighed. She then said, "It's fine, I'm used to it."

Lu Zhou: "…?"

…

After having some small talk at the hotel entrance, the group went inside the hotel.

Lu Zhou and the rest of his family stayed in the rooms on the fourth floor while everyone else stayed in the rooms on the third floor.

Coincidentally, Qin Yue and the boys' rooms were at the right end of the corridor, while Chen Yushan and Vera's rooms were at the left end of the corridor.

The group walked out of the third-floor elevator and walked in opposite directions. Wei Wen seemed to be thinking about something while walking toward his room. He then asked, "Chen Yushan's little brother is Lu Zhou, should we call her older sister?"

Qin Yue thought for a moment before he spoke in a serious tone, "We should call her auntie."

Wei Wen: "… Where did you get that from?"

Qin Yue said: "… Didn't you read martial art light novels?"

Wei Wen: "…"

Because the two were speaking Mandarin, Hardy was completely confused. However, when he saw the two talking in such a serious manner, he couldn't help but ask, "What are you guys talking about?"

Qin Yue said in a serious tone, "We're talking about how to call Chen Yushan."

Hardy was even more perplexed. "Then did you guys come to a conclusion?"

Wei Wen nodded and said, "We did, you can call…"

Wei Wen suddenly stopped.

He made eye contact with Qin Yue, and they both looked baffled.

How do we say this… in English?

On the other hand, Chen Yushan and Vera were quietly walking toward their respective rooms.

The two didn't talk much. However, Vera would, from time to time, secretly glanced at Chen Yushan.

She had to admit, Chen Yushan was really beautiful both in terms of her looks and her figure.

Especially Chen Yushan's big chest…

Vera couldn't help but feel frustrated every time she accidentally glanced at her.

She inherited the classic Slavic pale skin and blonde hair. However, there were two genes she didn't inherit.

One was the tall gene, and the other was the gene responsible for bigger breasts…

Chen Yushan noticed that Vera would occasionally look at her, so she tilted her head and smiled at Vera.

"What's up?"

"No, nothing." Vera accidentally made eye contact with Chen Yushan and panicked. She then quickly looked away.

Chen Yushan had to admit, Vera was very cute.

She looked at the frightened little girl and smiled as she said, "I'm Chen Yushan, can you tell me your name?"

“I’m… I’m Vera Pulyuy,” Vera said after a moment of hesitation.

“Vera Pulyuy? That’s a good name. Nice to meet you,” Chen Yushan said with a smile.

Vera: “… Nice to meet you too.”

Although Vera wasn’t good at communicating with extroverted people, she had a good impression of Chen Yushan.

She felt weird. Chen Yushan should be somewhat confrontational and aggressive. However, she didn’t do that.

Does this mean that she doesn’t see me as a threat at all?

Vera couldn’t help but feel depressed.

…

After putting his luggage in the hotel room, Lu Zhou took his friends and family to eat dinner with Academician Staffan.

After they finished their dinner, he received a call from Old Tang.

When Lu Zhou heard that they just got off the plane, he immediately sent him the address of the hotel.

Soon after, a taxi was parked at the hotel entrance.

When Academician Lu gracefully got off the taxi, he saw Lu Zhou standing at the hotel entrance. He then waved hello and walked over.

“Lu Zhou, meeting you isn’t easy.”

When Lu Zhou heard Academician Lu’s words, he smiled.

“Professor, it’s not that I don’t want to see you, but every time I go to Jin Ling University, you’re not there.”

Speaking of which, this really was unlucky.

There were always countless theoretical physics conferences around the world. Academician Lu was one of the BESIII representatives; therefore, he represented the entire Chinese theoretical physics community. He couldn’t just act like Lu Zhou, who would reject many conference invitations.

It was no exaggeration to say that every year, he’d spend an entire month either on a plane or at an airport.

Lu Zhou went to visit Jin Ling University a couple of times before. During those times, he managed to visit Old Tang, but he never got the chance to see Academician Lu. It wasn’t because the old man didn’t want to see him, but because he physically couldn’t.

Old Tang laughed when he heard Lu Zhou.

“I can testify. Every time Lu Zhou came to Jin Ling University, he would pay a visit to your office.”

When Academician Lu heard Old Tang, he felt a little embarrassed, so he gently coughed.

“It’s cold outside, let’s talk inside.”

The group walked into the Stockholm Grand Hotel.

As Professor Li Rongen looked at the grand hotel, he couldn't help but say, "I can't believe a mathematician became the first-ever Chinese to win the Nobel Prize in Chemistry. How are you feeling now? Are you nervous?"

Lu Zhou smiled and said, "I'm okay. The Crafoord Prize award ceremony is similar to the Nobel Prize award ceremony."

Academician Lu smiled and shook his head. "There's definitely a difference. Even the people attending are different…"

Old Tang looked at his former student for a long time. Suddenly, he broke into a smile.

"I'm honestly both surprised and honored at your achievements. I've been a professor for so many years, and even then, I never thought that one day, I would teach a future Fields Medal and Nobel Prize laureate. Furthermore, they're the same person."

Old Tang paused for a second before he continued, "The award ceremony is in a few days. By then, not only will you be representing yourself, but you will also be representing the entire Chinese academic community. I don't have much else to say since I can't help you much either. But we will be cheering for you in the crowd, so do your best!"

Knowing that Old Tang spoke from the bottom of his heart, Lu Zhou nodded solemnly.

"Yes, I will!"