I Can Meet with Dead Scientists

#Chapter 61 - 58: A Chance Encounter in the Library (Seeking First Subscription!!!) - Read I Can Meet with Dead Scientists Chapter 61 - 58: A Chance Encounter in the Library (Seeking First Subscription!!!)

Chapter 61: Chapter 58: A Chance Encounter in the Library (Seeking First Subscription!!!)

"Fifteen-photon entanglement?"

By the small path.

Upon hearing this term from Academician Pan's mouth, Xu Yun's pupils immediately contracted, and he exclaimed in a rare loss of voice:

"Director Pan, fifteen photons? Has the technical reserve of the Quantum Information Laboratory reached this point?"

Photon entanglement is a core indicator of the basic capability in quantum information processing. The more entangled photons are manipulated, the exponentially greater the quantum information processing capability becomes.

This thing has an academic name, called multi-photon entangled states, which involves the concept of quantum teleportation.

If you don't understand this sentence, that's okay. There's a more straightforward explanation:

Quantum teleportation can be regarded as an infinitely microscopic sci-fi teleportation array.

Yes, it's like those teleportation arrays where you stand in a drawn circle, and after a burst of green light, you're transported to another place.

Its principle is to transmit bit information to another location through the entangled relationship of photons via a classical channel—that is, under the premise of conforming to relativity.

A person or something that can be regarded as composed of countless microscopic particles is a macroscopic object. Therefore, as long as the technology is sufficiently perfected, theoretically, a person can be disassembled, transmitted, and reassembled.

But of course.

Quantum teleportation can only be said to be a prototype of a teleportation array, far from having the capability to transport macroscopic objects like a real teleportation array.

grams of carbon atoms is 1 mole, about 6.023*10^23 atoms.

If a person's weight is 60 kilograms, assuming it's entirely composed of carbon atoms, then there are approximately 5000 moles of atoms, which is about 3*10^27 atoms.

Describing the state of an atom considers ten degrees of freedom.

Therefore, describing a person requires a magnitude of 10^28 degrees of freedom—for those unfamiliar with the concept of degrees of freedom, you can replace this term with money, and currently, the frontier only has photons capable of teleporting fifteen degrees of freedom.

Assuming no third World War breaks out and the research direction is correct, humanity may need another 800 years to have a teleportation array consistent with standard cognition.

However, besides this, there is a singularity theory that believes the technological singularity will be reached by 2075. Currently, this viewpoint is under intense and sharp debate, and Lili is almost overwhelmed by it.

Currently worldwide, entanglements of five photons, six photons, eight photons, and ten photons were all first completed by Academician Pan's team.

It's also worth mentioning that photon entanglement is not a kind of self-amusement research like those so-called 'World Championship Cups' in certain mobile games, which actually only involve domestic participation. This project occupies considerable research resources in laboratories across various countries worldwide.

For instance, researchers like Alexei Kitaev, John Martinis, and Austrian physicist Peter Zoller, who won the Dirac Medal in 2006, all lead research teams in this field.

In our country, it's called quantum computational supremacy, while over in the United States, it's called quantum superiority, led by the renowned Google.

How could Xu Yun not be excited since Academician Pan's team is about to conduct the fifteen-photon entanglement experiment?

As someone who worked in the physics industry in a past life, he instinctively wanted to accept Academician Pan's invitation.

However, just as the words were about to come out of his mouth, he abruptly stopped himself.

The reason is simple: at the moment, he is indeed unsuitable to join such a team.

The technical barriers of the fourth generation of imidacloprid have already been overcome, and the fifth generation product is just ahead. Whether it’s the patent conversion of research results, or subsequent papers, even commercial derivatives, it’s not permissible for him to leave right now.

Not to mention the mysterious enclosed space, Xu Yun has a feeling that the next dungeon might not be far off.

Regardless of whether it’s the 1665 dungeon that opens or some other new space-time, Xu Yun, as long as he completes the relevant tasks, will surely receive new rewards when he returns.

If he joined Marshal Pan’s team, it would be nearly impossible for him to leave in the short term, and the subsequent progress could be greatly hindered.

So, after some internal struggle, Xu Yun simply explained the topic he was working on to Academician Pan and apologetically said:

"Director Pan, I’m afraid I can’t join your team this time."

"Fifth generation imidacloprid... this is indeed a good research direction."

After listening to Xu Yun’s words, Academician Pan nodded slightly and didn’t persist too much:

"Since that’s the case, I won’t force you. I’ll let you off this time; Elder Tian has indeed taken in a good disciple."

Tian Zhigang is 66 this year, and Academician Pan was born in the ’70s, so calling him Elder Tian is indeed appropriate.

After a few more brief exchanges, Xu Yun and Academician Pan parted ways and went their separate directions.

Watching Marshal Pan walk in the opposite direction, another premonition suddenly surfaced in Xu Yun’s mind: he might not see Marshal Pan for a very long time.

Then, after calming his mindset, Xu Yun turned around and continued walking towards the West District AED.

In the encyclopedia, AED generally refers to an Automated External Defibrillator, but on the Ke Da campus, AED refers to the West District of the Ke Da Library.

The Ke Da AED is as tall as 12 stories. The building's exterior is an L-shape, the entrance is a beautifully shaded archway, and one can often see a hugely fat three-colored pig cat named San Pang around. Additionally, there's Big Flower, who can solve Maxwell's Equations, and Big White, the West District's top dog who can derive basic elements. It's said the GPA of Ke Da's cats is all above 3.8...

Ahem, back to the topic.

The biological materials Xu Yun wanted to find were located on the 1st and 11th floors, so after swiping his campus card, he started looking for books on the first floor.

The location of the biology journals was adjacent to the shelves containing physics materials. When Xu Yun arrived, two girls stood shoulder to shoulder in front of the physics bookshelves, searching for specific information.

The two girls appeared to be roommates or classmates and seemed to have a good relationship. Upon seeing Xu Yun appear, they only gave him a simple glance and continued searching for the books they needed.

Xian Weiren naturally had no thoughts about two entirely unfamiliar schoolmates and started looking for books from the left side of the shelf.

"Insect protein... specificity binding receptors..."

Though there are electronic devices today to directly search and browse, Xu Yun still preferred the feeling of shaking the campus card lightly as a fan while looking through rows of books.

He wasn't really that hot; the breeze from the campus card was nothing special. He just liked fiddling with it in his hands, similar to those who enjoy spinning their phones.

The two girls were searching from left to right, while Xu Yun was searching from right to left, so soon, they approached each other back-to-back in the middle position.

The library was exceptionally quiet, and it's uncertain if it was out of book-searching irritation, but the voice of one of the girls wasn't particularly lowered and reached Xu Yun's ears clearly:

"Ningning, books describing Newton's life are hard to find, aren't they? This entire row is filled with theoretical books."

Xu Yun wasn’t the kind who liked eavesdropping on others’ conversations, but the word ’Newton’ spoken by the girl subconsciously reminded him of Little Niu from the dungeon.

Thus, he instantly perked his ears up and shifted his attention to the adjacent area.

Facing her companion’s complaint, the taller girl chuckled:

"Relax, relax, Yueyue, just accompany me for a bit longer. I’ll treat you to Miyue Ice City later..."

’Yueyue’ sighed upon hearing this, rubbing her hands as if acquiescing:

"Oh, all right, all right, let’s keep looking for a bit longer. Speaking of which, why are you so interested in Lord Niu’s life? Don’t tell me you truly believe those Anta shoes are from the same era as Mr. Niu? Didn’t Professor Lu say in the department group yesterday that it’s just a trickery using transition ester-like substances similar to hexagonal rings, purely to mock certain people?"

"I just want to find some data to confirm. After all, it’s quite coincidental, isn’t it?"

Strangely enough, upon hearing this sentence, an image as if one of the girls, with a gentle voice but firm expression, appeared in Xu Yun’s mind:

"Yueyue, isn’t it recorded in history that Yang Hui’s Triangle was brought to the United Kingdom by an Eastern merchant and just happened to fall into Newton’s hands? Otherwise, Yang Hui’s Triangle would now be known internationally as Pascal’s Triangle. It’s because of Newton’s endorsement that this triangle bears the name of a Huaxia person..."

Crash—

A crisp sound of a book falling to the ground suddenly interrupted the conversation between the girl and her companion.

Fortunately, this bookshelf’s location was rather secluded, so it didn’t attract much attention from others in the library.

Moments later, a voice filled with surprise and doubt emerged from behind:

"Excuse me, classmate, what triangle were you just talking about?"

...

Note:

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For friends who would like to tip, please do so between 20:00-24:00 as there's a crowdfunding monthly pass during that time, which means you'll earn an extra monthly pass!

Chapter 62: Chapter 59 The Real Easter Egg! (2nd update!!)

"Excuse me, could you repeat what you just said... something triangle?"

Hearing this, the two girls, who were already a bit surprised by the fallen books, were momentarily stunned and then looked up at Xu Yun.

The tall girl gave him a peculiar look and said:

"It's just Yang Hui's Triangle, what's up with that, fellow student?"

The other girl, named Yueyue, was a bit more observant, and her gaze lingered for a moment on the student card Xu Yun was idly twirling in his hand – the graduate student card and undergraduate student card are different colors. Although it wasn't clear if the guy in front of them was a master's or a doctoral student, alumni at that academic level theoretically shouldn't be unaware of Yang Hui's Triangle.

So, subconsciously, the girl felt that this guy in front of her was probably just looking for an excuse to strike up a conversation.

This sort of situation is quite common in the library. Some shy ones might pass notes or use homework as an excuse to get close, while others might directly hit up for WeChat.

There are also some top-performing students who are pretty cool. These people are mostly grad students who secretly note the other's reading materials and then apply to become a teaching assistant for that grade to get close.

Xu Yun actually knew such a top-tier person who published two Zone Two papers in his first-year doctorate and then went to become a teaching assistant for freshmen just to chase a junior female student.

However, tragically, on his first day as a teaching assistant, just as he stepped into the classroom, he saw the junior girl smiling brightly at him – sitting on her boyfriend's lap, that is.

What a sad story...

However, since Ke Da has always been rigorous in its academics, none of the boys or girls have ever done anything too over-the-top, which could be considered a normal teenage crush.

Only if someone is really harassed too much would they contact a teaching assistant or counselor to intervene.

Therefore, the girl named Yueyue just gently tugged her companion’s clothing, suggesting not to engage too much; any science student who uses Yang Hui’s Triangle as an excuse is probably a bit off somewhere.

But Xu Yun didn’t care about any of this; his mind was entirely drawn to what the other said:

"Are you saying... internationally, it’s also called Yang Hui’s Triangle?"

"Yeah."

"What about Pascal?"

Hearing the word Pascal, the tall girl’s brow couldn’t help but furrow slightly – anyone who can mention Pascal shouldn’t be unfamiliar with Yang Hui’s Triangle, right?

However, out of basic respect for her fellow student, she patiently explained:

"Pascal’s Triangle is Yang Hui’s Triangle, but he published it much later, so now internationally, Yang Hui’s Triangle is the name that’s commonly used."

The girl’s voice was soft, with long, slender eyebrows that moved a bit as she spoke, like willow leaves swaying in the summer breeze.

But Xu Yun’s attention remained unwaveringly fixed on the content of what she said, and the more he listened, the wider his eyes grew.

Several seconds later, he snapped back to his senses and quickly thanked the two girls.

Then he turned and left.

The two girls looked at Xu Yun’s figure running faster than a Western journalist, exchanging a bewildered glance:

"?"

After a while, the shorter girl said with a strange expression:

"Ningning, there’s a saying that Ke Da has always had many odd people, today we might have actually seen one?"

The tall girl shrugged and took her companion’s hand:

"Relax, relax, let’s quickly find our books, it’ll be closing time soon."

The story continues on separate threads.

Just as the two girls continued searching for the books they needed, Xu Yun quickly reached a quiet table, pulled out his phone, and swiftly typed in the words ’Yang Hui’s Triangle’.

Soon, the webpage displayed the encyclopedia entry:

"Yang Hui’s Triangle, a geometric arrangement of binomial coefficients in a triangle, appeared in the book ’Detailed Explanations of the Nine Chapters on Mathematical Art’ by Southern Song mathematician Yang Hui in 1261. Later introduced to Europe in the mid-17th century by silk merchants and discovered by Newton at the Cambridge University History Museum in 1665, leading to multiple mathematical achievements."

"Pascal also discovered this pattern in 1654, but his discovery was officially published posthumously in 1666 by the Gaul Academy of Sciences in related papers. In his only autobiography, Newton explicitly mentioned that the appearance of Yang Hui’s Triangle predated Pascal’s Triangle, and after becoming president of the Royal Society of Great Britain, granted Yang Hui’s Triangle its official and sole name."

"At the 1992 Geneva International Mathematics Conference, this geometric arrangement was officially named Yang Hui’s Triangle, making it the only internationally recognized, locally exclusive theorem associated with a local personal name."

"As of now, only a few ancient-school mathematicians in Gaul still insist on calling it Pascal’s Triangle, but in international meetings and paper reports, Yang Hui’s Triangle is used as the formal term."

Next, Xu Yun searched for the set of keywords ’Yang Hui’s Triangle#Silk Merchant’ and found no detailed content mentioning this person, just referencing the term ’silk merchant.’

Staring at the search results displayed on his phone, Xu Yun’s shoulders suddenly relaxed, and he exhaled a complex breath.

According to the search results, the appearance of Yang Hui’s Triangle did not significantly affect established theorems or results; it simply replaced Pascal’s Triangle’s original role in European mathematics history.

It’s like changing 1 + 2 = 3 to 1 + two = 3, which is just a simple substitution that doesn’t alter the outcome.

Additionally, Xu Yun’s traces of existence were also erased, replaced by a mysterious silk merchant from the East, with Yang Hui’s Triangle’s discovery location changed from Woolsop to the Cambridge University History Museum.

No mention of Li Feiyu, no word of Han Li, and no one spoke of Wind Spirit Moon Shadow Sect.

Everything seemed so natural, history remained unchanged, but the theorem’s name was switched to Yang Hui’s Triangle.

An acknowledged Chinese name that didn’t require sharing with others.

Clearly.

Compared to the sneakers in Newton’s portrait, Yang Hui’s Triangle was the real reward easter egg!

Originally, Xu Yun’s intention was merely to hope that the light of wisdom from the Huaxia ancestors would not remain obscured in the timeline of the 1665 dungeon, but who could have thought that his action would affect the present?

Even if Xu Yun’s ’achievement’ remained unknown, he didn’t feel any regret.

This glory was rightfully earned by the ancestors, and he just did a tiny bit of work.

Xu Yun sat quietly for a long time, contemplating, while determination gradually filled his gaze.

He didn’t know if he would have another chance to change the past, nor did he know if he could again stumble upon such reward easter eggs, but there was one thing he was very clear about:

He now had the opportunity to push the wheel of the future.

Though that task system seemed a bit mysterious, its capabilities were beyond doubt.

Traversing time and space and changing history is no longer something that cutting-edge technology alone can achieve.

The reward for a so-called novice task was so tempting, let alone formal tasks or possible difficult tasks.

Of course.

The reward from completing the tasks needs to be realized through Xu Yun's own effort, without sufficient knowledge reserves, no matter how good the rewards are, they're like two-dimensional paper figures, visible but untouchable.

Xu Yun then took a deep breath, calming his mood, and stood up again.

Although the prospects of the mysterious halo were extraordinarily appealing, his immediate focus was not to fantasize about those impractical futures, but to do what he should be doing, which is...

To deduce the receptor binding mode of the sodium ion channel.

....

Chapter 63: Chapter 60: The World's Strongest in 30 Minutes! (3rd Update!!!)

After organizing his thoughts, Xu Yun returned to the bookshelf to search for the books he needed.

Unlike before, the two girls who mentioned Professor Lu, possibly from the physics department, were nowhere to be seen. He didn't know if they had found the Newton materials they were looking for.

By this time, Xu Yun had somewhat realized that his earlier behavior was indeed a bit odd. Fortunately, Ke Da had a clear academic atmosphere. Otherwise, at some other universities, he might have metaphorically 'had his neck cut' before finishing his sentence.

Xu Yun then shook his head, pushed these thoughts aside, and spent half an hour gathering three books and several journals.

After completing the borrowing process, he returned to his own little nook.

Previously mentioned, mammalian sodium channels have 9 subtypes, namely NaV1.1-NaV1.9.

Currently, there are in-depth biological studies on six subtypes, with typical representatives in technical application being some Class I antiarrhythmic drugs.

For example, quinidine, lidocaine, and propafenone work by blocking sodium channels.

Similarly, when bitten by spiders, venomous snakes, scorpions, Enchanting Demons, and such, the toxins interact with sodium ion channels, resulting in adverse effects.

As for insect sodium channels...

The situation is more complex.

In reality, insects have only one or two voltage-gated sodium ion channel α-subunit genes, but two types of post-transcriptional modifications—namely, alternative splicing and RNA editing—lead to functional diversity of insect sodium ion channels.

In addition, the insect β auxiliary subunits TipE and TEH1-4 also play important roles in the expression and regulation of sodium ion channels.

Therefore, the binding formula Xu Yun needed to deduce was not merely about piecing proteins together; the binding speed to specific receptors was the main issue.

This is akin to the blue pill, where taking effect in two hundred minutes and two minutes are completely different concepts.

More specifically, the crystal structure and modeling issues of NDT-A needed to be considered.

Currently, many teams in the biology field are conducting research on insect sodium channels, but the results generally lack significant breakthroughs, being scattered and hard to form a complete modular chain.

However, this coincidentally provided Xu Yun with opportunities for multi-angled reference material. More importantly...

He still had a trump card up his sleeve.

At this moment, Xu Yun sat at his desk, gently spinning a small black card in his hand.

The card was about the size of a bank card, with a full metallic feel, and on it was the portrait of Little Niu, eyes sharp, confident, and flamboyant.

That’s right.

This was one of the rewards of a rookie task, a thirty-minute Little Niu—no, Experience Card!

According to Xu Yun’s intuition, as long as he activated the card with a mental note, he could possess Little Niu’s thinking ability at the age of 22 for thirty minutes.

How strong was the ability of Little Niu at 22 was briefly mentioned before, so it won’t be elaborated here.

"Tsk, it’s a pity it’s only half an hour, still a bit short."

Xu Yun rubbed his temples in mild annoyance and picked up paper and pen to make some arrangements:

"The expression of TipE definitely shouldn’t consume the Experience Card, and using action potential conduction in peripheral nervous system neurons is best avoided since there are plenty of relevant papers....."

"The binding sites have to use, there are over two thousand harmonized ones..."

Xu Yun thus wrote, deliberated, carefully considering, spending a full hour finally determining the key nodes:

First, the expression of TipE, the open conformation structure, and the derivation of the β1-β2 chain adjacent subunits should be completed independently.

Secondly, the binding sites of sodium ion channels with imidacloprid, the cytoplasmic region’s architecture should be handed over to Little Niu.

The summary of the final binding formula should then be compiled by himself.

Having confirmed these steps, Xu Yun immediately began the calculations.

Currently, most of the research papers on insect sodium ion channels were submitted to the "Annual Review of Entomology," so among the materials Xu Yun brought back, four were back issues of this journal.

Moreover, coincidentally, TIPE2 is a novel immune checkpoint molecule for NK cells, and Tian Liangwei happens to be an expert in NK cells, thus the first problem was not particularly difficult to solve, it’s just that no one had rerouted the receptor protein there.

It’s like online literature, where the unique styles of Chen Dong and Feng Huo are hard to imitate, but genres like sign-in articles or courtyard stories weren’t invented from nothing, it’s just no one thought in those directions initially.

Once someone discovered such a genre, numerous imitators would quickly appear in the recommendation list, the principle is the same.

Swiftly, Xu Yun locked onto an authoritative paper:

"DOI: 10.33086/jhs.v10i2.136.... Hmm, the author is a senior who graduated a long time ago? A Stanford associate professor.....

Grass bug receptors..... Subtype potential difference of 2.345, the American cockroach’s is 2.344, clearly a similar expression method, excellent, this is the one!"

Presently, Xu Yun’s comprehensive ability is roughly equivalent to an associate professor at Ke Da, which is above associate high, barely equivalent to a full professor in niche disciplines, yet still a distance from mainstream subject’s full professor level.

There are plenty of domestic full professor ’monsters’ around the age of 30, so Xu Yun had originally set his goal to strive for being a full professor at Ke Da by age 28, much like the path of the Nankai academician Cao Xuetao.

Of course.

Now, with the gradual manifestation of the halo effect, Xu Yun’s subsequent trajectory would definitely change, but as of now, his capability was still at the associate full level, making it not difficult to independently derive compound formulas with reference papers at hand.

Then Xu Yun, using data from this paper, successively derived three sets of data for the first node.

"Phew."

Then Xu Yun took a deep breath, solemnly picked up Little Niu’s Thought Experience Card, and mentally whispered.....

"Activate!"

Whoosh——

As the command was issued, the Experience Card instantly turned into a streak of flowing light and vanished into his mind.

Xu Yun’s temples cooled briefly, and in less than a moment, a profoundly mysterious feeling immediately filled his brain.

How to say.....

It felt as if everything became clear.

Xu Yun’s gaze accidentally skimmed over a Penguin group called ’Qidian Group Seven Premium Group’, where an author named ’The Tenth Small Horn’ had just posted a series of mysterious codes.

Even with just a quick glance, Xu Yun memorized all the numbers in that string of codes:

"magnet:?xt=urn:btih:....."

But he quickly returned to his senses and focused his attention back on the problem at hand.

At this moment, the numerous challenges that initially left him at a loss, Xu Yun, with just a bit more thinking, found several plausible deduction directions.

These deduction directions were not so exaggerated as to immediately reveal the results, but some key aspects already had solutions to break through.

This is the genius of Little Niu at 22, who laid down the cornerstone of modern mathematical physics in 18 months!

One might even say, for the next thirty minutes, Xu Yun's cognitive abilities momentarily ascended to the world's top tier, or even to the unprecedented level of...

The strongest!

After an initial half-minute of adaptation, Xu Yun immediately picked up pen and paper, swiftly calculating the binding formula problem.

"Action potential threshold at 130mV, it should be possible to reach 133mV..."

"The process of depolarization of the binding protein axon should have... hmm, five types, not sure which one Old Qiu and his team's receptor connects to, forget it, let's calculate them all....."

"Points stimulation of IL-12, IL-15, and IL-18... let's use the University of Pennsylvania's paper as a base for exploration, one of Teng School's, still Professor James Alwine's....."

Just like that.

Xu Yun flipped through and computed data at a pace akin to quantum wave speed reading, while time gradually ticked away second by second.

Three minutes.....

Five minutes.....

Ten minutes.....

Twenty minutes.....

By the twenty-sixth minute, Xu Yun's deduction reached its crucial moment.

The veins on his forehead bulged, breathing rapid, adjusting his posture, readying for the final sprint at the unsealed breach.

Three minutes later, in the final seconds approaching the time limit.

Xu Yun exhaled a deep breath and heavily wrote down a cell segment on paper:

MC38.

Afterward, he tossed the pen aside, a previously unfelt sense of fatigue surged up:

"Goodness..."

"Finally..."

"It’s done!"

Chapter 64: Chapter 61: Goodbye Tian Liangwei (4th Update!!)

At ten in the morning on the third day, Xu Yun lazily opened his eyes.

After he had tinkered with the protein binding region and binding formula the night before last, he used the last of his energy to organize the relevant data, saved it in an electronic document, and then climbed into bed after freshening up.

To be honest, he had worked on quite a few projects. Whether it was for scientific research or crazily typing before midnight for the attendance award, he had never realized that mental labor could consume so much physical energy.

All he could say was that Mr. Niu was just too impressive, and his brain was a bit overloaded for a moment.

After finishing organizing the relevant materials, he considered the agreed time with Qiu Sheng and others was six days, so going to find them on the second day seemed a bit high-profile. Therefore, Xu Yun deliberately waited another day, planning to contact the laboratory this morning.

During this day of waiting, he did nothing, played a few rounds of melee combat— a long-awaited activity—and got beaten to a pulp by the arc of justice.

Alright, back to business.

After waking up, Xu Yun freshened up briefly, sat in the chair, and dialed the landline number of the biomedical laboratory.

A moment later, Qiu Sheng’s voice came through:

"Hello, who is this?"

"It’s the anti-pornography office. We received a report that a certain Qiu Sheng sends lewd pictures to the group daily."

"Get out!"

Listening to Qiu Sheng’s friendly and harmonious greetings over the phone, Xu Yun also laughed:

"Alright, Old Qiu, how’s your progress on the synthesis of the inducible agent?"

Upon hearing Xu Yun mention business, Qiu Sheng’s tone gradually became serious:

"It was synthesized up to 43% by early this morning. Thanks to the ideas you provided, everything is progressing smoothly. Just waiting for the reaction results. And how about your side?"

"The binding formula is sorted, and I’ve developed five models for axon depolarization."

"..."

On the other end of the phone, Qiu Sheng was silent for a full thirty seconds before saying:

"Come on, where did you buy the cheat? Get one for me too."

Without waiting for Xu Yun to speak, Qiu Sheng’s tone rose again:

"Five models in two days! Are you seriously hacking? Even Director Tian wouldn’t have managed this!!!"

Listening to Qiu Sheng’s excited tone through the receiver, Xu Yun wasn’t much bothered. Young people nowadays often use ’hacking’ to describe some particularly absurd situations:

"Alright, stop with that fancy talk. I just did some preliminary research a few days ago. I’ll send the organized materials to you guys later, and I’ll finish the product this morning. I have some personal matters today, so I won’t be going to the laboratory."

"Get lost, don’t expect any send-off!"

After hanging up the call, Xu Yun went downstairs to eat a bowl of Longjiang pork trotters rice. After settling the bill, he walked right for over fifty meters to a fruit store.

This fruit store is not large, about thirty square meters. Besides whole fruits, there are also quite a few fruit cuts packaged in plastic boxes.

The shop owner is a person from Zhongzhou, sitting on a small stool at the store entrance, got up quickly upon seeing Xu Yun, and asked enthusiastically:

"Student, would you like anything?"

"Miss, I'll have two boxes of dragon fruit cuts."

"White Fire Dragon Fruit or Red Fire Dragon Fruit?"

"White is fine."

"Alright, ten bucks."

"Prices have gone up, huh....."

Xu Yun muttered softly, but his hands didn't stop, quickly scanning to pay:

"All done, Miss, please check."

"Got it, sure!"

After paying, Xu Yun carried the plastic bag and took a ride to the Life Science Building in the West District, which is also the office location for the School of Life Sciences.

The inspection at the Life Science Building is much more relaxed than at the Medical Center Building. Xu Yun showed his credentials and was quickly allowed inside.

On weekdays, the building has a lot of people going back and forth. After waiting for an elevator but failing to squeeze in, Xu Yun didn't hesitate to walk up to the third floor and came to an office with a slightly ajar door.

"Knock knock knock——"

Soon, Tian Liangwei's voice came through.

"Come in."

Xu Yun gently pushed open the office door, glanced around instinctively to make sure his teacher wasn't receiving guests, then fully opened the door:

"Teacher, I'm here."

As the dean of the School of Life Sciences, Tian Liangwei stays at the Medical Center Building during weekends or when there are scientific research tasks. When free, he fulfills his dean duties by working in his office.

Of course, don’t think he’s just sitting idle or neglecting responsibilities.

In fact, at schools like Ke Da level, the dean of the school almost always has national research tasks to deal with, and few handle internal tasks.

The position that truly manages comprehensive work of the school is called the Executive Dean, which is one of the vice deans, but is the most empowered one.

Once inside, Xu Yun went straight to the desk, placed two boxes of dragon fruit onto the table:

"Look, the dragon fruit you wanted."

"You’re quite something, kid."

Tian Liangwei opened the plastic bag and took a quick look, glancing at Xu Yun:

"Did you use the grant money to buy it?"

Xu Yun waved his hand grandly, dismissively replied:

"Not at all. It’s worth just ten bucks, I wouldn’t be as shameless as that Li guy who wanted to use the grant for a three-buck toothbrush and even issued a three hundred buck invoice for expense reimbursement, embezzling money."

Tian Liangwei nodded in satisfaction, opened the plastic box, and picked up a piece of dragon fruit with a toothpick, placing it in his mouth:

"Spit it out, kid. You’re attending with so much dedication today, aren’t you coming to me defeated from an experimental failure to cry misery?

Confess honestly, what instrument did you break? I’m telling you, when selling yourself, the most I can do is offer a 20% markup, no more than that."

"Haha, well you guessed wrong this time."

Xu Yun took out a stack one centimeter thick of experimental reports from his briefcase, and placed it steadily in front of Tian Liangwei:

"Teacher, have a look at this."

Upon hearing this, Tian Liangwei immediately paused his action with the toothpick stabbing into the fruit, surprisedly glanced at his student.

Xu Yun's actions were straightforward in intention:

There were results in the laboratory's research, and there should be a phased result.

Although Xu Yun's previously submitted plan looked somewhat feasible, Tian Liangwei's view was not very optimistic.

Anyone who has engaged in scientific research knows that project proposal documents often look like investment pitches, appearing quite different from the practical execution.

Some operate easily producing mistakes, while others appear feasible but do not yield quality results in practice.

Not to mention the distant ones, just take Ke Da for instance.

As a top university backed by the Chinese Academy of Sciences, Ke Da's entrance almost daily sees a bunch of folk scientists submit project proposals, slightly fewer than at the Science Institute.

Some project proposals are absurdly outrageous, but some can indeed justify logically.

Over ten years ago, perhaps under the residual influence of 90s Qigong and paranormal phenomena, the school leadership had some 'folk have extraordinary people' anticipation, actually providing experimental conditions for some projects.

But these projects, one after another, ended in oblivion.

Since then, Ke Da completely gave up hope, no longer accepting folk scientist projects.

Another mention of folk scientists, Ke Da once had a very outrageous incident:

Back in '13, a folk scientist tried to submit a project proposal but was rejected, so he sneakily dug a hole from Taihu Road—like a commando—from the beginning to end evaded multiple security checks, finally infiltrated into Tongfu Laboratory's building three, successfully sneaked into a project group's office.

The project group leader initially thought this folk scientist was delivering documents but was completely surprised when the man, like the famously dual-agent Pangolin, flipped his hat off and announced his grand invention on-the-spot.

At first, the leader was definitely intrigued and glanced at it, but almost died laughing:

This folk science boss had concocted a perpetual ghost machine, claiming through magnetic field ritual he could capture ghosts, then ’ghost power’ them to generate electricity, achieving perpetual motion.

Naturally, this folk science boss was eventually expelled by security, and his story became an infamous joke at Ke Da.

Alright, back to business.

Upon knowing Xu Yun’s research seemed to yield results, Tian Liangwei dispelled the thought of teasing further, picked up the experimental report, and began to read it earnestly.

"...1-bromo-2-pentyne..."

"Base number 22440484 vs 648..."

"Cyclization binding protein....."

Tian Liangwei studied very confidently, the whole report was read for nearly an hour, during which Xu Yun did not say a single word, just sat waiting in silence.

Another twenty minutes passed, and finally, Tian Liangwei moved his gaze to the last section:

"0.08 grams of fourth generation glue bait insecticide efficiency is about 70, effective cycle of dissemination 5.5-6 cycles, extermination time eight hours.....huh?"

Tian Liangwei suddenly looked up at Xu Yun:

"Xiaoxu, you’re already near completing the fifth generation?"

Chapter 65: Chapter 62: Patent Sharing (5th Update!!!)

In the dean’s office.

Looking at the surprised expression on Tian Liangwei’s face, Xu Yun hesitated for a few seconds and decided to keep a low profile:

"That’s right, initially, I just planned to attempt a breakthrough in the fourth-generation Imidacloprid. But by coincidence, I suddenly thought of a situation where two males would still need a female for a second round of transmission, which might lead to a halved coverage rate.

Moreover, I wasn’t very satisfied with the insecticidal efficiency of the fourth generation, so I thought about attempting to tackle the fifth generation, since the most critical fourth-generation barrier had already been overcome.

Unexpectedly, after two days of divided research, breakthroughs were achieved on both sides. The next step is simply to dock and synthesize the attractants."

Xu Yun attributed the insights for the fifth generation to inspiration during the research process, which is much more acceptable than claiming ’I intended to break through the fifth generation from the start,’ representing a kind of secondary derivative.

After all, as the saying goes, practice brings inspiration.

For instance, some designers experience a burst of inspiration halfway through their drawing, eventually designing a classic building; such examples are plentiful despite being easy to overlook.

While the wings are not yet fully grown, there’s no need to be too flamboyant, as the current achievements of the research team are enough to maintain his persona.

Facing Xu Yun across from him, Tian Liangwei pursed his lips and remained silent, his expression thoughtful.

To be honest.

Just discussing the achievements related to Imidacloprid, he wasn’t too surprised, as ultimately it’s just a form of nicotine insecticide. As an academician of the Academy of Engineering and a member of the Thousand Talents Plan, his perspective is naturally high.

There is certainly joy, but it does not reach the level of shock.

What truly surprised him was not the achievement itself, but rather Xu Yun’s talent and approach exhibited in this research.

Don’t be misled by the fact that there are a total of seven people in the research group; according to the experimental reports, the true core members of the group are only Xu Yun and Qiu Sheng, with contributions being about eight to two.

The involvement of others like Ren Yongcun or Zhou Peiyao wouldn’t significantly delay any results if replaced with other graduate students with similar performance.

Looking at Xu Yun in front of him, Tian Liangwei suddenly thought of Lu Chaoyang from the Physics College.

This youngest full professor of USTC, during his PhD, was the first to observe the real-time quantum leap and non-destructive measurement of single electron spins as the primary author, and published it in the Nature journal. (True story, not fabrication)

Both of them are extraordinarily talented, but if one were to compare...

Tian Liangwei slightly shook his head:

Lu Chaoyang’s discovery at the time solved a fundamental problem for spin-based quantum computing, whereas Xu Yun’s fifth-generation Imidacloprid might still fall short in comparison.

The value of the fifth-generation Imidacloprid primarily lies in its commercial potential, as its academic standing is relatively lower.

Yet even so, it remains a very commendable achievement.

Thinking of this, Tian Liangwei couldn’t help but lift his head to look at Xu Yun:

"Xiaoxu, how far are you now from the fifth-generation finished product? Do you need any additional support? If necessary, I can raise the funding level of your research group to a general project level."

Those who have managed national scientific research projects should know.

Research projects in domestic universities or official institutions usually allocate funds according to levels.

The lowest are the Youth Science Fund and Regional Science Fund projects, with funding roughly around 200,000 to 300,000, to which Xu Yun’s cash flow of 400,000 belongs to this category.

Above these are the general projects, which are the most approved projects each year domestically, with funding around 600,000.

Beyond the general projects, there are many categories, such as key projects, major equipment development projects, innovative research group projects, and major projects, etc.

The funding starts from one million or even ten million, with no upper limit.

Though Xu Yun didn’t quite understand why his teacher suddenly prepared to increase the funding level, he knew very well that Tian Liangwei had taken a considerable risk when establishing the research group, and since the current funding surplus was still substantial, he decided to decline this proposal:

"That’s not necessary, teacher. Our research group still has a cash flow surplus of 170-80 thousand. If you really want to help... just approve longer usage time for the lab so we can conduct a few more comparison experiments."

"How much longer?"

"A week, is that feasible for you?"

"No problem, approved!"

Tian Liangwei dramatically waved his hand, resembling a tycoon covering the bill at a lavish banquet:

"Submit an application to me for review, and I’ll get back to you within two days!"

Afterward, he paused slightly, motioning for Xu Yun to sit down, asking seriously:

"Xiaoxu, since your research group has indeed made a breakthrough, what are your plans moving forward? Like... patent application?"

Upon hearing Tian Liangwei mention tangible topics, Xu Yun also began to get serious.

He first poured a cup of tea for Tian Liangwei before pouring himself a little in a plastic cup, then spoke slowly:

"Teacher, to be honest, I’ve been considering this matter for the past few days, since even if the fifth generation doesn’t succeed, the fourth generation is good enough for commercialization.

Regarding patents, I’m planning to wait a bit longer. If I can break through the fifth-generation barrier, I’ll use the fifth-generation Imidacloprid to apply for an invention patent, as it takes a long time for drug invention patents to be reviewed, and I might need the school’s help at that time."

As is well known.

Currently, there are three main types of invention patents locally: invention patents, utility models, and design patents.

The difficulty, quality requirements, and validity period for these patents decrease in that order.

For instance, the first-generation Imidacloprid patent expired in 2011, which is why there are many off-brand Imidacloprid insecticides on the market now, characterized by low costs, non-standard production processes, and inconsistent efficacy.

These days, the new-generation insecticides from top brands apply for invention patents under this category.

The normal review period for invention patents is 2-3 years, but with the capability of a university like USTC, shortening the period is fairly simple.

Otherwise, with a top institution producing hundreds or even thousands of inventions in a year, if they were to wait according to standard timelines, a story like Conan's would have concluded by then.

As for why Xu Yun was confident that USTC would assist, the reason is quite simple:

As the provider of experimental equipment, USTC can hold a share of the derivative product's revenue rights from patents.

Xu Yun was already aware of this and had no objections:

After all, the total value of a laboratory's equipment is close to 25 million, and the depreciation during use is generally several tens of thousands. This kind of funding cannot be utilized without expecting some return.

Moreover, patents and accomplishments are two different things. The conversion of patent results must have the signature of the primary inventor. Normally, the rights to inventions made using the school's materials or performing the school's research tasks belong to the school, and the school has an obligation to reward the inventors.

However, this time Xu Yun was executing an autonomous project under the support category, not a pre-scheduled research task by the school.

Therefore, according to relevant requirements, the maximum share USTC could take is 30%.

Even though this 30% might look substantial, in the research domain—domestic or international—it is considered a very favorable proportion.

If you take the proposal to other organizations or private enterprises, typically, more than 60% might be taken away, and in some cases even 80%.

It's an inevitable phase in conducting research; even Elder Yang experienced it the same way at the Stony Brook Branch back then.

Besides, the School of Life Sciences would also take a small share of the school's portion for providing scholarships or grants for the disadvantaged within the department.

Helping some juniors or giving some less successful teachers opportunities to resolve their challenges is something Xu Yun is very willing to do.

"Xiaoxu, rest assured, there won’t be any problem with the patent. The school has channels ready. You can decide between the fourth or fifth generation patent applications, and the exact timeline depends on when you complete the final product; in any case, it won’t take very long."

Tian Liangwei readily promised and then took a light sip from his teacup, asking:

"Apart from the patent, there’s only one more thing..."

"Where do you plan to publish your paper?"

Chapter 66: Chapter 63 Journal Selection (6th Update, Promise Fulfilled, Seeking First Subscription!!!)

"A paper, huh?"

In the office, upon hearing Tian Liangwei’s inquiry, a rare hint of hesitation appeared on Xu Yun’s face.

After a brief silence, he finally decided to speak the truth:

"Professor, if there’s an opportunity, I’d like to publish in a Q1 journal."

"Q1, huh..."

Tian Liangwei tapped his forefinger rhythmically on the desk, not particularly surprised, and pondered:

"Xiaoxu, you should know that Imidacloprid, as a neonicotinoid insecticide, has its own substance name, although its patent already expired in 2011.

So if you want to publish a paper in a Q1 journal, the fourth generation is definitely not enough; the fifth generation is the basic requirement. Is that okay?"

Xu Yun lightly nodded, indicating his understanding.

When it comes to papers, most people immediately think of SCI and Nature.

But actually, the former and the latter are not concepts of the same category.

SCI, many people might mistakenly think it’s the abbreviation for Science magazine, but this is actually wrong!

SCI stands for Science Citation Index, which is a journal directory index operated by Clarivate Analytics, not a standalone magazine.

If a journal is included in this index, it indicates a certain quality; you can check if a target journal is indexed on this website.

Clarivate Analytics also relies on citation data from journals over the past two years to set an indicator called the impact factor.

Take 1992 as an example to calculate the impact factor for a journal that year:

X = The total number of times papers published in 1990 and 1991 were cited in 1992 for a given journal.

Y = The total volume of papers published in 1990 and 1991 for a given journal.

IF1992 = X (1990, 1991) / Y (1990, 1991).

Clarivate Analytics assigned divisions based on the high and low impact factors across different disciplines, known as the JCR divisions.

Journals ranking in the top 25% in their disciplines are categorized as Q1, 26~50% as Q2, and so forth.

Besides Clarivate Analytics, the Chinese Academy of Sciences also categorized journals, with its full name being the Huaxia Academy of Sciences Literature and Information Center Journal Partition Table, dividing journals into four categories as well.

But their approach is pyramid-like, with the top 5% of journals in Q1, 6%~20% in Q2, 21% to 50% in Q3, and the rest in Q4.

The categorization by the Chinese Academy of Sciences mainly considers impact factors but does have some human adjustments.

To make a vivid analogy:

Publishing an SCI can be likened to climbing a mountain. There are many mountains, some tall, some low.

The mountain at your doorstep is a mountain, a small hill is a mountain, the Five Peaks are mountains, the Himalayas are also mountains.

SCI journals have numerous divisions, corresponding to different mountains; whether publishing an SCI is difficult largely depends on which mountain you aim to climb.

Q3, Q4 SCI journals are akin to mountains that are hard to climb in small counties or prefecture-level cities; Q2 are regional famous mountains; Q1 are the Five Peaks, imposing and grand.

As for Nature sub-journals, they’re roughly akin to climbing the Himalayas, whereas Nature, Cell, and Science are undoubtedly the Everest, also called CNS.

The above explains the detailed relationships between papers. Once again, more useless knowledge added. JPG.

Currently in China, most people use the division by the Chinese Academy of Sciences, although many only come into contact with top Q3 or at most Q2.

Additionally, when talking about papers, one cannot avoid another topic:

The price of ghostwriting papers.

Those frequently on Weibo witnessing gossip know that two major things happened in the paper world these recent years:

One is the exposure of massive local SCI fraud, the other is that following an incident involving a certain Zhai actor, plagiarism checks became more stringent, forcing some graduate students to publish SCI to avoid repeating themselves and their papers.

Moreover, with escalating research competition, the difficulty of publishing papers has increased, consequently boosting SCI paper prices.

Currently, ghostwriting domestic core journal papers costs around 8k; trash SCI scoring 1 or under 1 costs 30k+; 2 points around 60k+; above 3 points exceeds 100k.

As for above 5 points, a minimum of 200k!

Hence why some people are said to run paper companies; they indeed make money....

Returning focus to the present.

After understanding Xu Yun’s goal or resolve, Tian Liangwei earnestly offered advice:

"Xiaoxu, if you intend to submit to a Q1 journal, first clarify one point — that the main journals of Cell and Nature are clearly off limits. No objections, right?"

Xu Yun nodded, accepting:

"Understood, the academic value of Fifth Generation Imidacloprid is considerably lower than its commercial value; I’ve known this from the start."

Upon hearing this, a satisfied expression appeared on Tian Liangwei’s face. It’s crucial in academia to have a clear self-positioning:

"In that case, let me recommend some journals to you: Nucleic Acids Research, Trends in Biochemical Sciences, EMBO Journal, or Current Biology."

With pen in hand, Xu Yun listened and noted down while his professor spoke, drawing a line through EMBO Journal after the professor finished:

"Let’s skip EMBO Journal; although it’s an established journal, it primarily focuses on the DNA field, which somewhat misaligns with proteins..."

Tian Liangwei remained silent; his was merely a suggestion, with the final choice for Xu Yun to make.

Next, Xu Yun crossed out Trends in Biochemical Sciences:

"Trends in Biochemical Sciences is quite good..... But its review cycle is too long, and professor, I remember its editor mentioned something rather unfavorable last year?"

Tian Liangwei was startled at first, then slapped his forehead, frustrated:

"My memory, how could I forget that? Quickly remove it, remove it; if we submit to this journal, our book might be 404 on the first day of listing!"

Upon hearing this, Xu Yun couldn’t help but sigh softly.

In recent years, due to well-known reasons, some academic journals have gradually adopted certain biased perspectives, the entire international academic environment becoming somewhat oppressive, with various local-targeted remarks or conspiracies emerging one after another.

Why do some journals involve themselves in these matters instead of focusing on academia?

Subsequently, Xu Yun brought his thoughts back and focused on the two remaining journals, appearing hesitant:

"Current Biology is indeed a good option; its IF has been consistently rising since 2016, and the review speed is very fast.

As for this Nucleic Acids Research... Professor, if I remember correctly, it seems to be an invitation-only journal?"

Tian Liangwei nodded, stating:

"That’s right, IF13.8, highly authoritative and influential, but mainly supports invitation submissions, publishing only 70+ articles annually.

However, Xiaoxu, if you decide to submit to this journal, I can put in a word for you."

Xu Yun instantly sported a "You actually have overseas connections" expression looking at his professor.

Seeing Xu Yun’s slightly surprised look, Tian Liangwei proudly lifted his chin, tactically sipping his tea:

"What’s so surprising about that? Your professor—my H-index is still 77, you understand the significance of a biomedical professor’s H-factor 77?

Honestly, let me tell you, when visiting abroad, editors must receive me at the airport and accompany me for meals."

After showing off his credentials briefly, Tian Liangwei’s expression returned to normal:

"I know the editors of Nucleic Acids Research and several external reviewers; one is even a top scholar from our Huaxia. Invitation submissions and reviews aren’t a problem."

Upon hearing this, if Xu Yun still didn’t grasp Tian Liangwei’s intention, he might as well stop pursuing academia, given the exceedingly long standard paper review times:

"So, professor, should I prepare the paper according to Nucleic Acids Research’s requirements?"

Tian Liangwei nodded, saying:

"Personally, I suggest you submit to Nucleic Acids Research; after all, it’s always easier when you know people. For now, you can start preparing the relevant fourth generation papers. If you make breakthroughs in the fifth generation, you can directly supplement it in the later sections, saving some effort."

After clarifying the journal matters, Tian Liangwei chatted briefly with Xu Yun, who then sensibly took his leave.

....

Working tirelessly until now, the original 5 updates + 1 update for guessing Hook correctly, present to you 6 Chapters!!

I forgot to mention, every 300 monthly passes add one update.

So...

Requesting monthly passes!!!