

I Can Meet with Dead Scientists #Chapter 51 - 49 Zhang Sudden Trending Topics - Read I Can Meet with Dead Scientists Chapter 51 - 49 Zhang Sudden Trending Topics

Chapter 51: 49 Zhang Sudden Trending Topics

Inside the laboratory.

Upon hearing that there was an issue with the nucleophilic substitution, Xu Yun asked calmly without furrowing his brow:

"Xiaozhao, there are many reasons for the substitution reaction to fail, what specifically happened? Is it that the substances aren't reacting?"

"There is a reaction..."

Xiaozhao scratched his head in confusion, a bewildered look in his eyes:

"Logically, the balanced equation should be fine, but there's no product being formed, hmm, not even a crude product..."

"How much bipyridine?"

"3eq%."

"I see, hold on for a moment."

Upon hearing this, Xu Yun immediately picked up pen and paper and started calculating on the table, his expression unfazed.

He wasn't trying to appear deep, he genuinely felt this issue was not a big deal—back in his previous life, he participated in many large-scale physics research projects, some of which cost millions within mere seconds (including equipment depreciation), and a slight mistake could lead to complete failure.

This project altogether has a budget of less than a million, with just fifty thousand cash on hand initially, it would be strange if he felt nervous.

A moment later, Xu Yun gently tossed the pen aside and looked at Xiaozhao:

"Cut 4eq%, increase bipyridine to 4eq%, 170 degrees... no, try refluxing at 180 degrees for 3 hours."

Xu Yun and his team had prepared thoroughly beforehand to minimize light exposure, thus not needing to consider the decomposition of iodine substituents in raw materials.

The issue with no product formation in the substitution reaction most likely lay in the ring.

After dealing with Xiaozhao's problem, another girl in the project group, not Tang Yiqiu, Zhou Peiyao raised her hand:

"Senior, the epoxy ring opening also has issues!"

"Don't worry, explain in detail..."

Thus, during the first half of the day, Xu Yun mainly dealt with team dynamics and balancing compound equations.

After all, except for Qiu Sheng, the other five assistant members were all below third-year research students.

For instance, Xiaozhao was a second-year research student, Li Yi, Zhou Peiyao, and another male student were first-years, and Tang Yiqiu was merely a senior undergraduate.

They could handle problems on paper with ease, but when it came to practical experience...

Almost zero.

So, Xu Yun simultaneously guided and corrected them while time ticked by.

"Sigh—"

A few hours later, Xu Yun let out a long breath looking at his watch—it was 11:30 AM.

This session's prelude consisted of 22 steps, and by noon, the project group sluggishly progressed to the nickel acetate/sodium borohydride catalytic hydrogenation step, with a completion rate of about 36%.

At this rate, progress might reach around 60% by the end of the day.

If they're lucky tomorrow, the prelude work could potentially be completed entirely.

The laboratory usage period is two weeks, meaning Xu Yun has approximately 12 days for the main synthesis challenge.

This is faster than expected—considering the task reward was the formula for Fifth Generation Imidacloprid, while Xu Yun is currently working on the fourth generation, every step beyond cyclization requires his own efforts.

After quickly scanning the lab and confirming each stage was entering the observation period, Xu Yun softly coughed and said:

"Alright, everyone, pause your tasks and go have some lunch before continuing.

Old Qiu, you take the lead on lab duties and stay here; I'll take the juniors outside to Mei Guang for a meal, and swap with you afterwards."

As the project group's deputy and one of the only two PhD students on site, Qiu Sheng was the most suitable candidate for lab duties, thus nodded neatly:

"Understood, you guys go ahead and eat, leave the lab to me."

Once the duty roster was set, the group followed the lab rules to change into casual wear and, led by Xu Yun, headed towards Ke Da's Mei Guang.

Mei Guang stands for Food Court, a well-known spot near Ke Da for gathering delicacies.

In his past life, Xu Yun attended a regular undergrad curriculum; one of his classmates had an uncle who opened a barbecue restaurant near Mei Guang, whereas her boyfriend studied in the botanical field. Thus, weekly, he and his roommates would steal a few rabbits from the lab and invite their girlfriends and their roommates to the barbecue, eventually leading to six out of eight of them forming couples...

This tradition lasted until Xu Yun graduated; however, he heard that once, a joker accidentally took out a rabbit that had been medicated, causing a group to fall sick and hospitalize, leading to stricter lab security at Ke Da ever since...

Talking and laughing, Xu Yun's group ended up in front of a grilled fish restaurant.

Unexpectedly, many single-serve grilled fish restaurants have emerged locally, costing less than thirty per person, friendly for office workers or socially anxious individuals.

Once inside, Xu Yun and the six others ordered their preferred flavors and sat down...

Scrolling their phones.

They had no choice – this is the modern standard of socializing where survival without phones is unthinkable.

Tang Yiqiu and Zhou Peiyao belong to the classic gossip followers; upon opening Weibo, they first lock onto the trending list:

"Huh? The Three Mice poster has stirred up controversy, I kind of liked their snacks..."

"The comments below say it's a poster from 2019, now being dug up to start a trend."

"Wow, so they've been causing issues since 2019?"

"Well, when you put it like that, I guess it's true..."

"Look at this, the web novelist 'Novice Fisherman' had his new work flop, passing out from hunger at home—isn't that tragic?"

Seeing the chatter among the juniors, Xu Yun couldn't help but smile slightly.

He actually quite enjoys the buzzing environment of a group chat; regrettably, after graduating, various pressures and real problems cropped up, eroding that flavor from colleague gatherings.

Truly miss those heartwarming, straightforward days...

Just then, Li Yi beside them abruptly uttered a long 'Huh?':

"Guys, check out the eighth trending topic, this is hilarious!"

Li Yi's remark immediately drew attention from everyone at the table. Seeing some hadn't downloaded Weibo, Li Yi simply flipped his phone, displaying the content:

"Look."

Sitting closest, Xiaozhao quickly leaned over, looking and repeating:

"#Newton's Portrait, Anta#? Eh, what's this trending topic?"

Li Yi chuckled:

"A famous United Kingdom collector just passed away, donating his collection to the British Museum. Today, a ceremony was held, inviting media for a visit.

In there, there's a portrait of Newton said to be drawn in 1701; but someone spotted a pair of sneakers on the table behind the portrait."

"Sneakers?"

Li Yi nodded emphatically, grinning wider:

"Yes, it seems to be this year's winter collection from Anta. Now, some claim Newton was Huaxia's transmigrator, others criticize Anta for malicious marketing. But the problem is, Anta withdrew from BCI during the Zhuzhou Cotton incident, and the

broadcasting party for the ceremony is BXC, logically impossible for them to collaborate on this."

Zhou Peiyao mused, asking:

"Could it be fabricated by domestic marketing accounts?"

Li Yi shook his head:

"Impossible, students from the institute studying abroad confirmed this, and I heard foreign media are going crazy. Regardless of the outcome, John Bull's image has taken a major hit, wouldn't you agree, God Xu?"

Facing Li Yi's query, Xu Yun mechanically nodded, feeling a thousand ears spring in his mind:

Sneakers in the portrait, could this be the easter egg from the reward?

The occurrences in the dungeon...

Actually reflected in reality?!

Chapter 52: Chapter 50: The Mysterious Appearance of Sneakers

Inside the grilled fish restaurant.

After casually brushing off Li Yi, Xu Yun leaned against the corner wall and pulled out his phone, opening Weibo directly.

Sure enough, after scanning just a few lines of the trending topics, he saw the hot topic Li Yi mentioned:

#Newton's Portrait, Anta#

The trending rank had already dropped to eighth, below '#Slow Motion in Snow#', and ahead of '#Stilt Walkers Box Office#'.

Xu Yun couldn't help but shake his head slightly.

In the end, Weibo still leans more towards entertainment, coupled with the brand name which might cause some users to dismiss it as an ad, resulting in this topic that would surely shoot to top 1 in the physics community, being lukewarm on social media.

Then Xu Yun scrolled through a few more screens, selected a primary media post to open, and found that the blog content consisted of two pictures sourced from some foreign media, accompanied by a large paragraph of Chinese text.

"According to Al Jazeera BXC, renowned British collector Belém Brisson passed away last Monday due to liver cancer, and his will stipulated that all 80-odd items in his collection be donated to the British Museum."

"The donation ceremony began yesterday at 8 PM Yanjing Time, with over 50 media outlets present to interview and broadcast, and about 200 people attending in total..."

"The Newton's portrait causing heated discussion is item number 34 in the collection, and a reporter from Al Jazeera found while taking photos that the portrait depicted a modern-style pair of sneakers on the table behind Newton..."

"This immediately raised doubts among some attending media, with one journalist suggesting on the spot that the portrait might have been modified in modern times, but British Museum curator Puzemeslo Mills stated that as one of the world's four great museums, the British Museum has conducted precise age analysis on each piece. He could guarantee this portrait was done by the well-known late 17th-century painter Aswede, and he produced an authentication report on the spot."

"Several internationally renowned experts analyzed the portrait on site and unanimously agreed it was an original by Aswede. The expert group included two well-known scholars from the Huaxia Academy of Fine Arts, @Central Academy of Fine Arts Chen Yiping @Gu Guangtao of the Central Academy of Fine Arts..."

"But Puzemeslo Mills also admitted that in numerous prior identifications, the museum had never noticed this pair of sneakers that appeared overnight in the portrait, as if by magic."

Xu Yun then clicked to enlarge the pictures in the blog and looked more closely.

The subject of the drawing was an older version of Old Niu, with a significant difference in demeanor and appearance from Little Niu, yet the youthful shadow of a young man who loved to reason was still faintly discernible in the brow and facial features.

Old Niu in the image was wearing a luxurious green outfit, holding a Holy Book in his arms, and sternly gazing forward.

Behind Old Niu, one could see a fireplace, lounge chairs, and other furniture items. On the table to his right hand, a modern sneaker was faintly visible.

Xu Yun was very familiar with these sneakers, which he had purchased for 328 yuan from a physical store back then, the same pair that Little Niu snatched away.

It was obvious.

Through some special force, some of his experiences in a parallel universe were reflected in the local history.

Unexpectedly, this was probably the Easter egg reward.

What can I say...

After experiencing rebirth and space-time travel, Xu Yun was quite comfortable with this kind of situation.

So instead of feeling shocked, he felt a hint of happiness in his heart, or rather, an excitement from knowing the truth alone.

While Xu Yun's thoughts were fluctuating, several junior and senior students nearby were expressing their own views.

"I think the chance of coincidence is quite high."

The speaker was the last boy among the five who hadn't been introduced, named Ren Yongcun, a classmate and roommate of Xiaozhao, currently in the first year of his master's program:

"The 17th-century brogue shoes I remember had laces, right? Maybe Old Mr. Niu, on a whim, modified a pair of shoes after some sneakers? After all, a portrait is not a photograph, and under certain circumstances, it coincidentally matches Anta's design."

Upon hearing this, Tang Yiqiu shook her head and pointed at the photo:

"Senior Brother Ren, we're all science students, we shouldn't be too emotional in our thinking. Honestly, how big do you think the chance of this happening is?"

Look here, the shoe surface has a small patch of black between red and white, identical to the Anta shoes, this situation is just too hard to describe as a coincidence."

"Exactly, exactly."

Zhou Peiyao puffed up her cheeks in agreement and then pointed at Tang Yiqiu's bowl:

"Qiuqi, can I have one of your beef balls? I don't have them in my side dishes, I'll trade you a triangle dumpling for one!"

"It's Qiuqiu..... ah, no, it's Yiqiu."

Tang Yiqiu softly retorted and helplessly handed a beef ball to Zhou Peiyao:

"Senior Sister, be careful, I ordered extra spicy, you might not be able to handle it."

Zhou Peiyao gleefully stuck her hand into the hood of Tang Yiqiu's down jacket, rubbing it constantly:

"Got it, you're from Jiangxi, even brush teeth with chili water."

"..."

Seeing the relationship among the junior and senior students getting closer, a slight smile appeared on Xu Yun's face.

Although the character of Li Yi's five was beyond question, those with bad reputation and no ability wouldn't have passed Xu Yun's initial review, but for a team to advance smoothly, individual capabilities alone weren't meaningful, their mutual understanding must also align—at the very least, they can't remain strangers throughout.

Originally, Xu Yun intended this meal as an icebreaker, guiding the atmosphere so everyone wouldn't be too reserved, something he had quite a bit of experience with, having attended many banquets and meals in his past life, he could pick up on some cues.

But he didn't expect that even before he spoke, this Weibo trending topic would give everyone an opportunity to become familiar with each other, where after several rounds of discussion and speculation, there was clearly a greater familiarity among the five.

Especially Zhou Peiyao, she was almost on the brink of getting romantically involved with Tang Yiqiu.

When there's time, I'll take them for a barbecue, and the group dynamics for this temporary project team will be more or less set in stone.

After chatting for a bit longer, once everyone was fed and watered, Xu Yun settled the bill.

As they walked out of the restaurant, Xu Yun was about to call everyone back to the lab, but before he could speak, he suddenly had a sense of foreboding.

He hesitated for a few seconds and then said to Li Yi, the only second-year master's student among the five:

"Xiaoli, take Xiaotang and Xiaozhao back to the lab first, I have some paperwork to deal with for Director Tian. Until I get back, listen to Old Qiu's instructions and feel free to contact me if anything comes up, I'll be back by 3 PM."

Li Yi nodded:

"No problem, God Xu, you go ahead, is there anything else you want me to pass on?"

"No, just be careful during the experiment."

"Got it!"

After parting ways with Li Yi and others, Xu Yun hurried back to his house, locked the door, and entered the enclosed space.

At that moment, the door representing the 1665 dungeon displayed the number.....

3/100!

Chapter 53: Chapter 51 Xu Yun's Speculation

"Strange..."

In the confined space, looking at the '3/100' knowledge points in front of him, Xu Yun was a bit puzzled as he rubbed his chin:

"Where did these three knowledge points come from?"

One must know.

In the past ten years, Xu Yun had been advancing his studies from the youth class to now pursuing a Ph.D. in biology and a master's in condensed matter, accumulating a total of 300 knowledge points, and not long ago, he opened three doors.

According to time calculation, a knowledge point is generated only every 12 days on average.

Indeed, the quality of the content learned in each stage over these ten years varied, so sometimes it generated faster, sometimes slower.

But no matter what, it shouldn't have resulted in this situation where three knowledge points appeared all at once.

Subsequently, Xu Yun checked the space once more, confirmed there were no other anomalies, and returned to reality.

He came to the desk, picked up paper and pen, and wrote down a few groups of words:

Organize project, Cyclic knowledge expansion, Newton portrait.

These three groups of words summarized his actions after returning from the 1665 dungeon:

Organizing a project was considered an enhancement of his research status, cyclic expansion was a new knowledge or idea gained from a rewarded formula, and the Newton portrait was a recent upheaval.

Then Xu Yun drew a line under the latter two groups of words.

From perspectives of probability and reasoning, the latter two seemed more plausible.

He then pondered and, touching his chin, analyzed:

"If nothing unexpected happens, the lab over there can officially attempt the synthesis of compounds the day after tomorrow. If it's the former cause, once the technical barriers are broken, the knowledge points should correspondingly increase. As for the latter..."

Xu Yun scratched his head, took out his phone again, and opened Penguin.

It's strange, in 1112 everyone liked to play on Penguin Space, most of them have now shifted to Moments, even one-on-one chats are mostly on WeChat, but uniquely, for group chats, everyone still prefers Penguin groups.

For instance, Xu Yun, apart from having a group called "A Close-Knit Family" on WeChat, almost all other group chats exist on Penguin.

At this moment, Xu Yun opened a Penguin group named 'Forehead Protection Association', established by several graduates from Ke Da.

This was a small group Xu Yun often frequented, with a total of over 70 members.

Among them, there were a bunch of big names, recipients of awards such as the Green Orange Award, 28-year-old associate professors, each with a resume like the protagonists of online novels.

Besides their abilities, they were also quite 'upright' ideologically, frequently meeting offline for meals.

When Xu Yun opened the group chat, it was bustling with lively discussions.

[Wish you nine dots on the board]: "@Xiao Hong, you can't say for sure, foreigners have faked it more than once. Back then, they could even claim a dustpan was from tens of thousands of years ago, so fabricating a portrait is nothing."

[Xiao Hong]: "(facepalm) I'm not saying they won't fake it, I think even if they fake it, at least do it with Nike or Adidas, right? Making it Anta is just advertising domestic brands..."

[Pastoral Song]: "Could it be Great Britain preparing to pledge allegiance after Brexit, haha."

[He Jijia]: "Relax, relax, at least it's not the Queen in the portrait, otherwise that would be scarier, being alive over three hundred years ago..."

"...."

As Xu Yun expected, the group's speed in catching up with the gossip was not slow. They must be discussing Mr. Niu's portrait by now.

Seeing the flood of conversation, Xu Yun suddenly thought of the knowledge points, and tentatively typed:

"Guys, do you think there's a possibility that a Transmigrator brought the shoes back?"

After Xu Yun posted this, the group initially went silent for a moment, then several 'dumbfounded' emojis appeared.

[He Jiajia]: "Wang Mang: God Xu, I'm familiar with this!"

[Chen Chaoyuan]: "God Xu, you're late. We've already discussed this possibility, it's about as likely as the revival of the 'Otherworld Conquest Manual' I'm following."

[Xiao Hong]: "Got it, if a Transmigrator really exists, then your book can be revived, right?"

[Chen Chaoyuan]: "?"

Seeing the increasingly sidetracked chat, Xu Yun couldn't help but slightly shake his head.

Clearly.

Although the Newton portrait caused quite a stir within the circle, everyone's attitude toward it was somewhat ambiguous, preferring to believe in fraud over the existence of a Transmigrator.

And right then, a group admin suddenly appeared in the group.

[Chaoyang]: "@everyone, I've just about found out what's going on with the Newton portrait."

This person's avatar was a rising sun from the mountain, looking somewhat like someone who had seen through the worldly matters, yet he was one of the top figures in the 'Forehead Protection Association':

Huaxia's quantum genius, recipient of the Fresnel Prize, who became an associate professor at Ke Da at the age of 28, broke four world records in photon entanglement in the Physical World, known as Mr. Xiao Yang, Lu Chaoyang.

As soon as Lu Chaoyang @ mentioned everyone, a bunch of emojis popped up in the group.

Then Lu Chaoyang continued typing:

"I inquired with a friend at Churchill College, and the portrait is indeed real, but the original owner Belém Brisson may have drawn those sneakers on the portrait during his lifetime, then used certain special substances to temporarily cover the original traces—such as transient state esters of a six-membered ring, which are colorless and tasteless. During museum authentication, for protection reasons, chemical analysis cannot be performed on the artwork, only the year of its creation can be authenticated at most."

"These substances gradually decompose upon contact with air. Even if they didn't fully reveal during the ceremony, they would inevitably be discovered afterward due to the high foot traffic at the museum. It's just a matter of time before they were exposed."

[Su Yuyan]: "Technically feasible, but what's the reason? Why would he do that?"

[Chaoyang]:

"I personally believe it's Belém Brisson's satire on the BCI incident. I specifically checked this person's data; he had lived in Hu for more than a decade. His feelings and impressions of the local area should be quite positive, even having arguments on YouTube in 2018 with others over some smear remarks, indicating he's upright and not the typical Western admirer."

"Additionally, Newton is the founding father of Western modern physics. Adding a side profile of Anta shoes in his portrait symbolizes him standing on the shoulders of giants wearing shoes from the East, thus satirizing that Great Britain's foundation comes from the East, perfectly aligning with the 19th-century history. In my view, this standpoint is plausible."

"Alright, I'm done, slipping away now."

With Lu Chaoyang's statement, the entire group gradually fell into silence.

In terms of affection, Lu Chaoyang was one of the top figures in the group and related fields domestically, with quite reliable connections.

Logically, the scenario he depicted was also close to reality. Both Belém Brisson's intention and his concealment methods withstand scrutiny, more so than Transmigrator or fraud theories.

Seeing this, Xu Yun couldn't help but sigh.

The Weibo heat fell from seventh to eighth, which basically represented the maximum heat the Newton portrait could achieve. Meanwhile, Lu Chaoyang's words could represent a conclusion within the circle.

In other words, the topic's heat pretty much ends here.

To verify whether the Easter egg is related to knowledge points, either another Easter egg needs to be discovered, or...

The physical sneakers need to be unearthed.

Little Niu... or Old Niu's portrait was drawn in 1701, over 300 years have passed; it's almost impossible for the shoes to be preserved in their original form.

"If there's time before it gets dark, I want to dig out your eyes~"

As Xu Yun was pondering, his phone suddenly rang, switching from the QQ group to an incoming call interface.

Xu Yun pressed and slid the green call button, and after a moment, Qiu Sheng's voice came from the receiver:

"Old Xu, the substitution reaction was successful, two hours earlier than we expected. If nothing goes wrong, we can start synthesis tomorrow morning!"

Chapter 54: Chapter 52 Beginning Synthesis!

"Old Qiu, what's happening?"

As soon as Xu Yun returned to the lab, he asked Qiu Sheng, who was holding a test tube:

"It's been just over an hour, right? The substitution reaction is completed already?"

"Exactly, let me put this down first."

Qiu Sheng carefully placed the test tube down, walked over to another table to pick up a paper report, and handed it to Xu Yun:

"To be precise, it was one hour and twenty-seven minutes. The activity of 5-epoxy-1-hexadecene seems much higher than we anticipated."

Xu Yun glanced at the report and nodded:

"This kind of curve... It seems to be an issue with the temperature setting, probably related to when I asked Xiaozhao to increase the temperature."

Old Qiu, my expertise isn't in chemistry; does 5-epoxy-1-hexadecene have that much difference in activity between 180 degrees and 170 degrees?"

Qiu Sheng pondered for a while, then shook his head:

"I'm familiar with 5-epoxy-1-dodecene, but hexadecene... seems not well understood domestically.

and 170 degree environments are fairly common, but adding a substitution reaction complicates things; after all, carbynes... are more studied now in material science."

Xu Yun pondered and nodded, falling silent.

Carbynes refer to chains formed by carbon atoms clustering together, linked via double bonds or alternating single and triple bonds.

Carbynes have been shown to be more than 200 times stronger than steel, with twice the tensile strength of graphene, considered the toughest material on Earth, 40 times stronger than diamonds.

It was proposed in 1885, but it wasn't until April 21, 2016, that the University of Vienna created a carbon chain composed of 6400 carbon atoms.

From a mass production perspective, it is indeed a relatively new product.

Epoxy carbyne is somewhat more complex, and Xu Yun didn't anticipate it as a final product.

The introduction of this substance is mainly intended for the epoxy end alkyne to react with 1-bromo-2-pentyne under copper iodide catalysis to form epoxy diacetylene.

Finally, hydrogenation catalyzed by nickel acetate/borohydride sodium produces the target pheromone (3Z, 6Z, 9S, 10R)-9,10-epoxy-3,6-docosaene.

Thus, 5-epoxy-1-hexadecene is an intermediate in the entire reaction; Xu Yun's initial thought was merely hoping it could serve a stabilizing bridging role.

But given the current situation...

This thing seems to exhibit some reactive chemical properties under specific circumstances?

Xu Yun silently noted this situation in his mind, planning to consult more knowledgeable colleagues, while telling Qiu Sheng:

"Alright, let's continue."

Qiu Sheng nodded repeatedly, followed Xu Yun back to work.

Perhaps after lunch, compared to the relatively dry cooperation in the morning, the afternoon project group worked smoothly like clockwork.

After a whole night of working overtime, the group finally synthesized the target pheromone in the early morning, nearly ten hours ahead of Xu Yun's original estimate.

.....

A night passed without incident.

At 1:30 PM the next afternoon, Xu Yun stood at the main workstation once again.

"Fellow students."

He glanced around, reminiscing that the last time these six gathered felt like just yesterday:

"Thanks to everyone's tireless efforts yesterday, we've cleared the first hurdle of this project. No need for further ado, let's feast tonight!"

"Clap clap clap——"

As soon as he finished speaking, Tang Yiqiu and others began applauding.

Xu Yun paused before continuing:

"Additionally, from today, we're starting the synthesis of both pheromone and Imidacloprid, which mainly involves two steps:

First is through an asymmetric orientation given to CH₃ for cyclization, and second is the synthesis of new substances.

The target pheromone structure we've synthesized is extremely complex, so it's uncertain if we can precisely remove a CH₃ for cyclization. Your collaboration is essential for great results!

Alright, that's all for now; let's start the experiment!"

With that, he waved his hand, and everyone returned to their stations.

Xu Yun moved to the main workstation, personally taking charge of the key steps.

"Xiaotang."

Xu Yun seriously made preparations, while telling Tang Yiqiu:

"Start by adding protective argon!"

"Understood!"

After the argon was added, Xu Yun began adding 50 mol of anhydrous LTHF and 20 g hexamethylphosphoramide to a 250 mL Schlenk flask, stirring to dissolve.

Upon completion, he lowered the reaction system's temperature to -78°C , added 2.52 g of propargyl alcohol, and used a syringe to gradually add n-butyllithium, then raised the temperature to -30°C .

After three more hours, the stirring reaction fully occurred.

"Xiaotang, prepare 22.50 mmol of 1-bromoundecane!"

Meanwhile.

In the invisible microscopic domain, some peculiar reactions quietly occurred.

LTHF, technically should be called LT-HF.

The former stands for low temperature, while HF is hydrogen fluoride.

LTHF and hexamethylphosphoramide are like adolescent boys and girls, fond of each other but afraid to express it, stalling, only progressing to borrowing an eraser.

At this point, the bold 1-bromoundecane emerges.

It behaves like a typical street jerk from novels, pinning delicate hexamethylphosphoramide against the wall one afternoon.

"Don't come here, let go!"

"Hehehe, little sister, would you like to take a ride?"

1-bromoundecane approached hexamethylphosphoramide, cornered her, and even grabbed her hand.

"Let go of me!"

At this moment, the pure-hearted boy LTHF arrives. He first picked up a stone from the ground (propargyl alcohol decomposed a hydrogen), and threw it hard at 1-bromoundecane.

The stone hit 1-bromoundecane heavily, spilling bright red droplets (three carbons).

While 1-bromoundecane clutched his head in agony, LTHF grabbed hexamethylphosphoramide and fled.

Arriving at a deserted alley, hexamethylphosphoramide looked up with tearful eyes at LTHF:

"Why did you save me?"

LTHF scratched the back of his head, eyes wandering:

"Because... because..."

Muttering for a while, he still lacked the courage to say 'I like you.'

At that moment, he felt a soft moistness on his lips.

His eyes widened with shock, staring ahead, meeting hexamethylphosphoramide's loving eyes.

Hexamethylphosphoramide stretched out three nitrogen-hands, hugging LTHF, her second mouth of oxygen softly said:

"LTHF, I like you..."

"Pop!"

Meanwhile, in the lab, Xu Yun clapped his hands together:

"Perfect, the reaction is complete!"

Chapter 55: Chapter 53, 4th Generation, Breakthrough!

The cyclization of the target pheromone proceeded very smoothly, but Xu Yun did not relax in the slightest because of this.

The usage time for this bio-medicine laboratory is fourteen days. Although on the surface, as long as the research team solves the synthesis of the Fourth Generation Imidacloprid within this time, it can be considered a success.

But as mentioned before, Xu Yun's ultimate goal is far more than just a Fourth Generation.

Due to the large amount of equipment needed for this experiment, the entire project was initiated under the name of Tian Liangwei's subsidiary project from the start.

Once the time limit is up, even Tian Liangwei would find it hard to provide such good experimental conditions for Xu Yun again.

Thus, this can be said to be Xu Yun's best opportunity at present. Once missed, at the least the research and development of the Fifth Generation Imidacloprid would be delayed, at worst it could affect key points of knowledge and the opening of time-space dungeons.

So after completing the cyclization of the target pheromone, Xu Yun and others did not slack off at all, continuing with a 12-hour stirring reaction.

And at dawn the next day, performed a quenching reaction with a saturated NH_4Cl solution under an ice bath cooling.

At this step, what's left is the synthesis step of combining the pheromone-binding protein with Imidacloprid, which is also the main focus for several biology graduate students.

In layman's terms, this step is like endlessly relying on luck, with the cyclized pheromone-binding protein being like an iron ring. For simplicity's sake, let's assume it's divided into twelve sections like a clock face.

What Xu Yun and others need to do is drop a small steel ball from above. As they've already performed cyclization treatment from the 9 to 12 o'clock direction, the landing point of the steel ball is bound to be between 9 and 12.

But this scale is far from precise; the steel ball must land precisely on the number 46 for Xu Yun and their synthesis to be considered successful—note that this is just a macro perspective for better understanding, in reality, the scale numbers of the disk are much greater than 12 by countless times, for instance...

"22440484 pairs!"

In the laboratory, Zhou Peiyao looked at the numbers sequenced from the IlluminaHiSeq high-throughput second-generation sequencing platform and calmly said to Xu Yun:

"Senior, we have studied the binding capabilities of two OBPs with the target pheromone through a small molecule fluorescence competitive binding experiment, amounting to approximately 6.6 G of base data, with post-filtering reads showing 22440484.

The alignment consistency of the target pheromone with the American cockroach sample genome is about 84.62%, with the German cockroach being 83.68%, and the theoretical value of the binding site reads is 648!"

compared to 648, a 1 in 35,000 chance, is certainly not a simple matter.

Upon hearing this number, Xu Yun nodded lightly and turned to look at Qiu Sheng:

"Old Qiu, it's up to the two of us now."

Qiu Sheng clapped him on the shoulder, laughed, and said:

"No need to say more, just grind it out. At worst, we can sacrifice this head of luscious hair, my friend."

Saying this, he put on a serious expression, picked up a paper strip similar to a supermarket receipt, and glanced at it:

"19.10 and 19.36kDa, the position of the protein electrophoresis bands matches the predicted molecular weights. Xiaoren, proceed directly with the fluorescence competitive binding experiment.

Let's aim to measure the binding ability of 3,11-dimethyl-nonacosan-2-one and the target pheromone within three hours, that way we'll have things much easier."

Standing beside him, Ren Yongcun adjusted his glasses, skillfully combining two pre-prepared reagents together.

Xu Yun then stood at the ultra-clean bench with ventilation, adding the precisely measured 1 μ g of target pheromone, 4 μ g of Anchored Oligo, 10 μ l of 2 \times ESReaction Mix, 1 μ l of gDNARemover, and finally RNase-free Water, bringing the mixed liquid volume to 20 μ l.

He then gently flicked the 20 μ l mixture to blend it evenly, and handed it to Zhou Peiyao:

"Xiaozhou, set to 42 $^{\circ}$ C, incubate in the PCR machine for 15 minutes, then heat at 85 $^{\circ}$ C for 5 seconds.

Afterwards, quantify the synthesized cDNA template, determine its eligibility with 1.2% agarose gel electrophoresis, and store it in an environment at negative twenty degrees."

Zhou Peiyao took the test tube and nodded heavily:

"Rest assured, Senior!"

If yesterday's cyclization experiment was like a Lovecraftian romance, then today's synthesis experiment is undoubtedly a small healing story.

In its slumber, it was awakened.

The companions around it urged it:

"Hey, hey, it's time to get up. You haven't moved at all since the last cycle started."

Oh, it remembered, it was a linear resolve polymerase, not yet encountered its sigma factor.

Though it had just passed Christmas a few days ago, to it, that was just an ordinary night.

Following its companions, it walked and walked, not knowing how much time had passed, it suddenly heard a gentle voice calling.

"Are you... okay?"

It turned its head and saw a beautiful silhouette standing gracefully, smiling like a flower.

For a moment, it didn't know how to respond and could only say clumsily:

"You... hello."

She was so beautiful, it dared not hope for anything, perhaps she was only asking where the nearest promoter was, as the polymerase there was much stronger in synthesis capacity than it.

"Well... I'm an Oligo primer, accidentally got lost, could you kindly direct me?"

Looking into her eyes, it unthinkingly said:

"Sure."

It gentlemanly linked her binding domain, she shyly consented, and they wandered about the nuclear matrix, counting the beautiful bands on the chromosomes together.

And so it went, unbeknownst for how many cycles.

One day, she suddenly joyfully shook its β -clamp:

"Look there!"

It gazed in the direction her finger pointed, and there was a sequence:

AUGAUACUCUAGGUGGAGUAUUGAUGA

Isn't that.....

The code of love?

She ran all the way over, gently leaning against the -35 sequence, with a look of enchantment.

Seeing this scene, suddenly, it gathered the courage:

"Um... can you be my girlfriend?"

Her expression suddenly froze, a trace of bitterness rising on her face:

"I am just a primer, I might disappear tomorrow, our union is cursed...."

"It definitely won't be! We'll surely be happy forever!"

It hugged her tightly, forcefully prying apart the two tightly bound complementary strands.

She did not resist much, and thus, they embarked on a journey of love.

Everything went smoothly. It looked at the messenger strand continually extending behind, glanced back at the most adorable her, and felt a surge of desire to protect her for a lifetime.

Having such a lovely girl accompany for life, what a blessing in three lifetimes!

And so, more time passed.

However, one day, an unexpected incident occurred.

The temperature of this world suddenly began to drop, a vast amount of matter began to wither, freeze, even die.

It used all its strength to wrap tightly around her, but with a jolt, the structural domain binding them together suddenly loosened!

It shouted out in a heart-wrenching voice:

"Hold on to me, don't let go! I'll think of something!"

Trembling, she responded helplessly, with despair and tears:

"It's useless, I can't do it!"

After a swirl of current, she drifted further and further away from it.

"Complete the synthesis of our messenger chain, I will love you forever!"

Her tiny figure slowly faded out of its sight, disappearing into the cold nucleoplasm.

It desperately cried to the sky, cursing the injustice of fate.

But the road that needs to be walked must still be traveled, it's just now it is alone.

It laboriously opened up the glued double strands, placing the nucleotides one by one, each base representing its deep longing for her.

Yet gradually, it too felt exhaustion.

The surrounding electrons continuously attacked its core protein, its subunits gradually loosened, and most alarmingly, at some point, a short ubiquitin chain extended behind it.

It understood that its life was about to reach its end.

In its dying moments, her smiling face flickered in its mind.

So, I've always missed her so much, so, I've always loved her deeply.

Then, dragging its broken body, it slowly walked and walked until it finally arrived outside a deep pit.

At this moment, lying in the deep pit were countless polymerases like it, from the double strands it was not difficult to see, they too had once met their 'her'.

It laboriously moved to a corner, gazing unfocused at the sky:

"Could it be that the union of primers is destined to have no result?"

In a blur, her three-dimensional structure appeared in front of it, she seemed to be smiling at it, opening her arms...

Just at the thousandth of a second before its consciousness was about to disperse, suddenly in its peripheral vision, there appeared a big and small two figures:

It was a similar kind to it, without a partner beside it, but on one of its strands, a beautifully carved little girl was gingerly holding on.

"That is... that is....."

Its breath suddenly became rapid.

Actually, it was not just it, almost at an instant, due to the tio guidance effect, every 'it' in the deep pit noticed the incoming one.

"Dear, did you see that?!"

Using the last bit of strength it had, it smiled:

"So... our love was never cursed..."

At the same time.

Looking at the very tiny red dot in the RPKM value heat, Xu Yun felt a bit inexplicably melancholic:

"The fourth generation... finally broke through."

Chapter 56: Chapter 54: 1,800 Cockroaches!

The narrative of our little healing story is sketched in just a few strokes, but in reality, from the reaction's start to the generation of the material, the duration lasted over three days.

This speed is actually considered fast in the synthesis field. For more complex reactions, it can take several hundred hours just for static observation, with a project team of over a hundred people working for four to five months, all for the final product of just a fraction of a milligram.

The entire process allows for the slightest mistake to cause all prior efforts to go to waste.

This is the risk of biochemistry, but it is also its charm.

Upon confirming that the fourth-generation Imidacloprid—or rather, the new cyclic compound—can be routinely synthesized, Xu Yun immediately instructed Qiu Sheng to take charge of compiling the data.

He himself left the laboratory, took out his phone in the hallway, and dialed a number.

A moment later, a female voice came from the receiver:

"Hello? Who is this?"

"Sister Jiajia, it's me, Xu Yun."

"Oh, it's Xiaoxu, what's up?"

"It's like this, Sister Jijia, these days I've been conducting an experiment with cockroach medicine. Can your Insect Research Institute spare some cockroaches for me?"

"No problem, how many do you need? When will you come to get them?"

Xu Yun thought for a moment and said:

"Three hundred Dubia, and five hundred each of Oriental, German, and American cockroaches. As for the timing... is now convenient for you?"

A moment later, a cheerful reply came from the other end of the line:

"Eighteen hundred in total, right? Okay, I'll start preparing them for you now, come over and get them."

After hanging up, Xu Yun let out a long breath, took the elevator out of the Medical Center Building, and headed towards the West District.

The West Campus of Ke Da is undoubtedly considered the area with the most prestigious laboratories aside from Science Island, shrouded in mystery.

Many who are unfamiliar with Ke Da often find it strange:

Why doesn't Ke Da have several national key laboratories, yet many of its disciplines rank so highly?

The reason is simple: Ke Da has two national laboratories (now, it should count as two and a half, as for what the half is about, check Baidu). This puts it far ahead of all other universities.

What's the concept here?—To not exaggerate, one national laboratory equates to over ten national key laboratories.

Therefore, this is also what makes Ke Da extraordinary:

There are only 20 national laboratories within the country, including those preparing, and Ke Da has two of them, soon to be three, whereas there are over three hundred national key laboratories, and Ke Da has just two...

The esteemed National Synchrotron Radiation Laboratory is located in the West District of Ke Da, also making it the first national laboratory of its kind domestically, holding both special significance and status.

The Synchrotron Radiation is also one of the six bases genuinely fulfilling the functions of a national laboratory currently, while Micro-Scale has cooled slightly, and Quantum

Information is still in preparation. However, judging from recent achievements, the prospects are promising.

Furthermore, there is also the Field-Reversal Fusion KTX Laboratory, Shock Wave Laboratory, and many others...

Besides many physical laboratories or institutes, the West District also hosts some lesser-known small laboratories or institutes.

For instance, right now, a small laboratory stands before Xu Yun...

The Insect Research Institute.

This Insect Research Institute is affiliated with the School of Life Sciences, consisting of a three-story building with over twenty researchers divided into six research directions.

After showing his access code, Xu Yun walked smoothly to a reception room.

A few minutes later, a young woman in a white lab coat, with her hair in a ponytail, entered the room:

"Xiaoxu? You're here?"

Upon hearing her, Xu Yun quickly stood up and greeted her with a smile:

"Sister Jiajia, long time no see."

The girl's name was He Jiajia, an older classmate of Xu Yun's in his specialty, 27 years old, and a deputy researcher at the Insect Research Institute.

Xu Yun was able to join the Penguin group aiming to protect the hairline, and He Jiajia was one of his introducers.

Upon seeing Xu Yun, He Jiajia briskly handed over several sealed, light-shielding portable cases, the size of two suitcases:

"Here, the cockroaches you wanted, they're all here, precisely eighteen hundred of them.

Speaking of which, why does our genius Xu have the time to play with cockroach medicine? Did you perhaps make a new breakthrough with Nithiazine?"

Xu Yun took the portable cases and shook his head:

"It's not Nithiazine, it's Imidacloprid."

"Oh, Imidacloprid?"

Xu Yun nodded gently towards her:

"Yes, Imidacloprid, but the specific situation can't be explained in a few words. Maybe we'll publish a paper in a while; Sister Jiajia, you can keep an eye out then."

"Which journal? Metallomics?"

"Hard to say, aiming for the third tier."

Not setting too high a flag for himself, Xu Yun exchanged a few more words with He Jiajia and then turned to bid farewell.

After leaving the Insect Research Institute, he carried the portable bio-box filled with cockroaches back to the laboratory to rejoin Qiu Sheng and the others.

With the help of Li Yi and others, they divided the thousand cockroaches into more than twenty culture dishes.

This time, He Jiajia thoughtfully categorized the cockroaches by gender, with a female to male ratio of about 1 to 4, fewer females, more males.

The cockroaches Xu Yun brought back were divided into four types:

Dubia, Oriental cockroach, German cockroach, and American cockroach.

Among them, Dubia is more inclined towards being pet feed, similar in nature to Cherry cockroach.

Enthusiasts who raise spiders, centipedes, scorpions, and ants mostly choose between Dubia or mealworms for long-term feeding.

The remaining Oriental, German, and American cockroaches are common cockroach species in China.

The German cockroach is commonly seen in the north, while the American cockroach appears more in the south.

In legends, the type that flies towards your mouth, allowing you to clearly see its leg hairs, is the southern American cockroach.

Watching the cockroaches crawling in the ecological boxes, a rare shadow crossed Xu Yun's face.

He then looked at Li Yi beside him, took a deep breath, and said:

"Xiaoli, prepare the test solution!"

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Note:

At midnight on the 1st, right after Friday night, we'll be live online...

Book Friends and Bosses, are you ready?