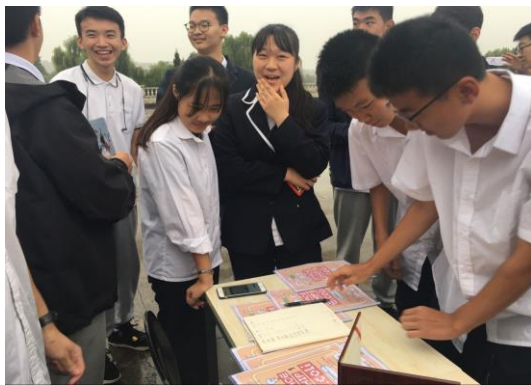


# Comic Book Publicity

## 1、JNFLS

The annual recruitment of club has attracted hundreds of grade 10 and grade 11 students. BC club, as one of the main clubs in our school, provides those new students a better perspective about the charm of synthetic biology. Many students are interested in E. coli cartoon. It introduces complex synthetic biology with vivid pictures and words, which enable more students to learn about biology and fall in love with biology. We eventually took in dozens of students who are interested in biochemistry. We will impart some biological knowledge in the E. coli cartoon in detail in future club activities, and invite parents to participate to allow more people know about biology.



## 2、NAU-CHINA

On the 9.28th day, the Science and Technology Association of the Academy of Sciences and the 2018 NAU-iGEM team held the iGEM campus promotion event on Yulan Road. The event used a display panel to present the knowledge of synthetic biology, the iGEM competition overview and the team composition. The most important thing is the new topic of the iGEM team this year.

In addition, some basic equipment for molecular biology experiments on the site also attracted the attention of many schoolmates. Here, Xiaoke told everyone that the days of struggle in the lab are still very long, and I want to learn more experiments. Skills must be actively pursued by yourself!

What is ridiculous is that around 12 noon, the weather in Nanjing once again staged a "blue sky, white clouds, clear storms, and a sudden storm." It was caught off guard, and the field staff could only squish in the tent and could not tell.

Fortunately, in the afternoon, heavy rain stopped, and many students were attracted by iGEM this interesting game, and they chose to join iGEM to select the army! Here I wish you all the knowledge soaring, the selection of customs clearance, insurance research plus points, comprehensive test to fill up, embark on the peak of life!



### 3、SZU-CHINA

On September 28, 2018, the iGEM team of Shenzhen University went to ShenzhenYueliangwang Primary School to introduce the science of synthetic biology as well as the project of the 2018 SZU-China to students interested in biology.

At 4:15 pm, the students of Yueliangwan Primary School started the club activities. At this time, we started our popularization in the conference hall to the students interested in biology. First of all, We gave students a better way to learn about the habits of cockroach and how to eliminate them in their daily lives. After that, we invited several students to experience the design of the model we designed. At the same time as they experienced, we distributed the *SPACESHIP E.coli* brochure for synthetic biology designed by OUC-China, the students read it, and the team members of ours gave a guidance while reading. Then we will carry out the science of synthetic biology for the contents of the brochure. Finally, we designed a prize-winning Q&A session to let the students have a deeper memory of this popularization.

When using the brochure designed by the OUC-China team, several teachers said that the content inside was not clear, and it was difficult for primary school students to understand. However, we quite appreciate your idea, the idea of science popularization with comics is great and more acceptable. We think it would be more comprehensible if OUC-China can make a better organization of your comice. We are looking forwards to our futher collaboration.



#### 4、TUST-China

On September 13th, we invited the igem team of Nankai University and the igem team of Tianjin University to go to the 13th Middle School of Tanggu, Tianjin to give a class of students in the second class of synthetic biology a brief biochemistry class, and introduced them to igem. They also issued OUC iGEM's popular science brochures. When they were just released, the children were very interested in flipping them, but after careful watching, they found that some did not understand, and they did not systematically accept organisms such as E. coli. When I learned the knowledge, I couldn't fully understand it at the high school biology level. They said that the drawing was quite interesting, but the specific content could not be understood.





## 5、Fudan

Sharing same aim of promoting the popularization of synthetic biology, team OUC-China and team Fudan both wanted to present synthetic biology in a more vivid way for people to understand. We took some comic books from them and put the books on our bio-art display to better interest the audience, while also helping team OUC-China to propagate their project.

We exhibited the comic books from OUC-China on the introduction section, which received unanimous praise from our audience. Everyone agreed that this is a good way to popularize science. We had seen that many of the viewers who were just wandering around would be attracted by the cute cover of the comics.

In this display, we only exhibited the English version of the comic book, but most of the audience in the exhibition were Chinese. At the same time, we have met many international students from Japan, Germany and other countries throughout the exhibition, so it would be better if we could display the comic books in these country's language versions.

As for the targeted audiences, we think that adults may also be a potential target of the comics, although it is first designed for children. We can see that comics is very attractive to students and teachers alike.

In general, the comics of OUC-China has helped us profoundly in promoting synthetic biology. It is our pleasure to cooperate with you.



## 6、Fudan-CHINA

I'm rather surprised at the affinity between synthetic biology and engineering, both featuring logic and inspiration, and thus have a better understanding of the "E" in iGEM. The comic script takes 2014 iGEM Team BIT-China as an example to illustrate the logical system, whose project is an E.co-Lock mimicking the electronic combination lock. It is built up by layered AND Gates, a sRNA regulatory System to inhibit the promoters and a re-designed Min System (a cell division inhibiting system), to form a biological lock, which strictly control those potentially hazardous engineered microorganisms.

The three key points to be concluded from the comic script are listed below:

- (1) The system of biological inhibition and promotion. This system appeared crucial to me because it is related to p53 the tumor suppressor genes and the process of positive/negative feedback of hormone mentioned in biology class I take.
- (2) Diversity of microcosmic systems. For example, complicated designed of AND Gates is indispensable because one single promoter can be triggered by a wide range of chemicals.
- (3) The way to observe and measure microcosmic processes. Fluorescin and bistable switch is mentioned to act as a bridge between microcosmical and macroscopical world.

Synthetic biology provides us with a new perspective: it might be better to modify microcosmically rather than block macroscopically.



## 7、DLUT\_CHINA\_B

On September 26, 2018, three members of DLUT\_China\_B came to the High School affiliated to Dalian University of Technology, where they brought posters on synthetic biology science designed by Ocean University of China. The team members answered questions for the students and helped them to understand synthetic biology further.

Under the guidance of the teachers of the International Department, the three members posted a series of posters of DLUT\_China\_B on campus to popularize relevant knowledge for the students.

After the team members explained the principle of synthetic biology, many students have shown a great interest in synthetic biology. We learned that the Dalian High School affiliated to the Dalian University of Technology had also established the iGEM Student Association. This communication also provided some new ideas for the students of the iGEM association, which broadened their horizons and inspire them to learn more about synthetic biology.

At last, the team members of DLUT\_China\_B expressed their gratitude to the teachers and students. They hoped that this iGEM publicity trip would arouse the students' interest in synthetic biology and contribute to the development of the iGEM competition in China. All the members of the DLUT\_China\_B expect further and deeper cooperation with the to the High School affiliated to Dalian University of Technology in the future.



## 8、NEFU-CHINA

We believe that there are more challenges exist when preach on some scientific topics to primary school students. In their view, even the most basic conceptions such as “transcription”, ”translation” are too profound to understand. During the preparing, we have to pay more attention to how to arouse their interest and transmit more knowledge. Therefore, we also would like to express appreciation to team OUC-China, for their outstanding job on the pamphlet.

This preach is the first time we teach primary school students, but they showed abundant passion and curiosity. Molecular biology is a completely undiscovered field for them, they dare to ask any question they feel confused, and try their best to make interaction with us. What’s more, they painted many pictures of the apperence of the genetic modified E.coli in thier imagination. After the class, they have preliminarily comprehend the process of gene expression and the function of some parts.

In our opinion, the meaning of this activity is far more than a class, we made every student confirm that synthetic biology is a subject which is full of interest and creativity. They will bring the interest into their future life and research.





## 9、SDU-CHINA

On August 8th, SKLMT-China team set up the booth in the orientation area of Qingdao campus of Shandong University, carried out the cooperation project of popularization of science with OUC-China and achieved remarkable results.

Before the event, we received and printed the publicity comic books of OUC-China, and bound them to be distributed in the event. At the same time we prepare many small gifts for lottery activities.

On that day. We edited the event into a WeChat tweet and posted it on the WeChat public account. In the tweet, we showed the popular science comics, attached the complete electronic version, and added the lottery qr code. This new method enables new students to complete all promotional activities by reading their tweets. The activity received the attention and support of the majority of freshmen, and the freshmen showed a strong interest in synthetic biology. We succeeded in popularizing synthetic biology and propagating iGEM, and successfully completed the cooperation project.



## 10、CSU-CHINA

On September 19, 2018, the iGEM team of Central South University launched a special science class at Bocai Excellence Primary School in Changsha. In the class, the team members taught the knowledge of microbiology, DNA and genetics, and genetic engineering to students. In the class, we use the science books which wrote by our partner (Ocean University of China) for primary and secondary school students. The album uses the form that can be easily understood by primary and secondary school students, combined with comics, to explain the synthesis through the story on the 'E. coli spacecraft'. In this special science class, the team members explained biographical knowledge from the four parts of "Into the colorful microbial living world", "Where the mysterious genes are", "Exploring the story of gene expression" and "Charm of genetics". The students showed great interest. The class atmosphere is active, and everyone raises their hands to raise various questions about the whimsy of the primary school students. Students propose their ideas and unique designs, which greatly enhances the students' interest in biology. Until the class still has a lot of students around our preaching classmates asking a variety of questions about biology, through the class also found that students have a strong interest in biology and also like to read biological readings after school. This also proves that the Chinese Ocean University's handbooks can make students take interested in biology. I believe that this science popularization can arouse students' interest in biology and let more children know the magical and colorful biological world.



## 11、NUDT

This year, our team walked into high schools to disseminate knowledge of synthetic biology. We delivered two lectures in the First High School of Changsha.

In the first lecture, Chuanyang Liu introduced the background of the birth of synthetic biology, intending to expand students' knowledge from basic life science to synthetic biology and arouse their enthusiasm and interest in the latter one.

Expecting to expand influence of iGEM, Chenxing Sun introduced iGEM competition and gave students useful suggestions on participating as a high school team. He communicated with some of their teachers and students about specific issues such as organizing team members, choosing a project, doing experiment, as well as great harvest through iGEM. We were glad to hear that they were willing to gather their own iGEM team in 2019!

As one of the members in our team and student in this school, QianQian Tao shared her own experience of teaming with NUDTers. The students present raised many questions about details in competition. We also distributed brochures named *SPACESHIP E.coli* made by team OUC-China, hoping to increase publicity of synthetic biology. The brochure is a comic book and fun to look through and discuss with other readers. It really worked in intriguing students' enthusiasm for synthetic biology. They said this was a relaxing way to disseminate academic knowledge and hoped it would never stop.



## 12、BNU

On October 9th, BNU-China hosted a series of events including an outdoor exhibition, a lecture and a laboratory visit to propaganda synthetic biology and iGEM competition to the students.

In the outdoor exhibition, the team produced an electric circuit that simulates gene pathways, which indicate different ways of expressions of gene pathways by turning on different switches to illuminate bulbs of different colors. With the circuit, the team showed the design of the entire project concisely and clearly.

At the same time, BNU-China used the synthetic biology publicity brochure provided by OUC-China in the process of the exhibition. For a long time, how to promote popular science propaganda on synthetic biology is a big problem. The reason is that it is difficult to explain the knowledge of synthetic biology to students in a vivid and interesting way. For those who don't understand synthetic biology completely, the knowledge in this field is difficult to be understood so it is also hard to raise students' interests. OUC-China's brochures have solved this problem well. The brochures anthropomorphize E. coli through comics and simplified the relevant knowledge in the form of stories. In the exhibition, many students said that they liked this kind of popular science propaganda with story content instead of very academic expertise. The brochures had achieved the purpose of propaganda and attracted a large number of students to learn about synthetic biology and iGEM competition.

In the lecture, BNU-China introduced the significance of synthetic biology and iGEM competition, its process, and the 2018 project's concept to the students. The team distributed brochures made by OUC-China to everyone who came to listen to the lecture. During the free time of the lecture, many students read the brochures carefully, which proved again that the brochures had a positive publicity effect.

