

## 進偏鄉學校服務 化學遊樂趣入選教育創新團隊 獲美媒專訪

學習新視界

【舒宜萍淡水校園報導】理學院科學教育中心以科普活動「化學遊樂趣」，於5月20日入選「親子天下」舉辦的教育創新團隊，並於5月12日獲得美國3BL Media線上媒體登出其專訪報導。「化學遊樂趣」以2臺貨車持續在全省及離島走透透，帶著國高中同學們認識化學，並提供化學教師們更靈活易備的化學教學方式，至今剛好滿10年。

科教中心執行長高憲章表示，由化學系教授王伯昌、副教授鄧金培及4位助理共同推廣的「化學遊樂趣」科普活動，透過永光化學校友陳定川及台灣默克企業捐贈的2部貨車，將化學實驗、探究分析、表演、故事等科普活動，直接帶進化學教育資源不足的國高中，這10年來舉辦了超過600場各種大小的化學科普活動，其中近七成在偏鄉學校，一成是化學工業區的學校，透過多元的活動設計，讓同學們在初接觸化學時能有正確了解與體驗，提高學習興趣。

科教中心成員譚均皓說明：「即使在去年疫情最嚴重時期，我們也在遵守防疫規定情況下，持續進入校園推廣，服務團隊中更出現了當年曾參加過化學遊樂趣的孩子，加入服務活動中。」

「化學遊樂趣」科普活動成員林佑燐提到，因為與台灣默克的夥伴關係，受到美國媒體3BL Media的重視，接受專訪後以大篇幅英文「MilliporeSigma Partnership Spotlight: Chemistry on the Go」特別報導，網址：<https://ppt.cc/fnCtsx>。

，「很感激有這樣的機會，我們會更努力讓活動有多元的變化，帶給更多人寬廣的化學視野。也希望化學遊樂趣的故事可以影響更多人，未來有更多像這樣的團體出現，陪伴著教育資源弱勢的孩子們繼續成長。」

化學車於5月21日前往位於宜蘭五結鄉的興中國中，因距離幾公里外的一家遊藝場不久前爆出疫情，科教中心正好將活動完全依照公布的防疫措施，盡可能在開闊的地方進行，全部參與人員都量體溫、戴口罩、用酒精消毒後參加。由於與興中國中合作已經好長一段時間，有熟識的師長，也有化學車陪伴長大的九年級同學跑來打招呼，感覺分外親切。參與活動的七年級同學學習到交聯反應、鍍膜、碳黑及造紙的原理，活動中同學們爭先恐後搶答，令科教中心同仁覺得欣慰。



# MilliporeSigma Partnership Spotlight: Chemistry on the Go



TWEET ME @milliporesigma an open with Rogers Hall, CEO of the Center of Science Education for Tainan University, is helping the Center Chemistry on the Go by sharing an activity in Taiwan. Check out the partnership spotlight here: [https://t.co/...](#)

Wednesday, May 9, 2018 10:00am

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We are excited to partner with Tainan University for its Chemistry on the Go program, which engages students in high and lower secondary schools of Taiwan through hands-on science experiments. MilliporeSigma has provided the materials and support for activities that promote and provide quality education through laboratory, theory, and online connections to students. Our technical customer support also provides a variety of resources to help experimentally-minded students improve their skills, including the most well-known and frequently used resource: our support site. Support site help provides technical assistance and other online support on our website to students.

We are down with Rogers Hall, CEO of the Center of Science Education for Tainan University, to highlight the impact Chemistry on the Go is making on students in Taiwan.

### 1. Please explain what Chemistry on the Go is and its relevance.

The journey began a decade ago when the Center for Science Education, with support from the United Nations Educational, Scientific and Cultural Organization, started the "International Year of Chemistry" project. One of the main objectives of the program is to celebrate the 100th anniversary of the IUPAC, marking Taiwan.

This started the idea to make chemistry available to as many students as possible, especially in underprivileged areas around Taiwan. As a result, we were motivated to launch Chemistry on the Go in 2014, a mobile lab and an annual lab. These activities would allow junior and senior high schools in every county and city in Taiwan to enjoy chemistry in a fun and safe way through simple, practical, and safe experiments, demonstrations, and hands-on experiments. This program is implemented as Chemistry on the Go.

### 2. Tell us about your role at Chemistry on the Go.

As the CEO of the Center of Science Education, Tainan University, I think the center expands and manages the Chemistry on the Go program. For the comprehensive program and training, it is a heavy-duty job of all kinds. It is responsible for general management and reporting, and also one of the duties of the implemented lab. A year-long manager for the program and the program manager. The team has two full-time members, who are responsible for different aspects, including coordinating experiments and online resources for the program, handling and maintaining equipment, and providing support to teachers and labs, and coordinating human resources efforts. The people doing and online resources to facilitate the Chemistry on the Go website operation. (I think the role of the center is to help the Chemistry on the Go team and provide the budget and support in terms of the university activities and the chemistry industry cooperation that support the program.)

### 3. What is the reach and impact of Chemistry on the Go?

Chemistry on the Go has reached an average of 100,000 students in 10 years. We have reached all 22 districts of Taiwan and 200 activities using the program can reach more than 5000 students per year. About 80 percent of the program are held outside of the laboratory and in underprivileged areas, and 10 percent of the program are held in the laboratory. Students in these areas have access to the program through equipment, and they are interested in chemistry experiments in their schools. Chemistry on the Go has been held in many experiments to the students to make chemistry interesting and improve their attitude towards science.

### 4. What feedback have you received from students who have experienced the mobile science lab and activity lab?

Most students from the hands-on mobile lab activities are interesting, understandable, and inspiring. We are glad to see some students during a lot of questions during our activities, which Taiwanese students rarely see. Many students express their interest in their teachers and family, especially during the hands-on activities. The mobile lab really makes a big impression on what chemistry is and how students feel regarding chemistry education on the Go.

The annual lab activities are another part of achievement for students. The program is designed for students who are at the end of high school or college. They are designed to be a fun and interactive way to learn about chemistry. The lab feedback we received is that the lab gives students insight into a variety of research areas. Furthermore, the experience has benefited their skills in their chemistry lab activities.

### 5. Why do you think it's valuable to bring hands-on science experiences to students?

It's challenging for students to learn chemistry and bring these types of experiences to students in Taiwan. Not enough high school students graduate from primary, secondary, and university. It also takes a lot of time to learn and practice the subjects, mathematics, and chemistry. Teachers in other fields must prepare from textbooks, activities, and lab materials and take the responsibility to help the students learn. Students in Taiwan are underprivileged areas need to be able to do some hands-on experiments. Students in other areas need to be able to do some hands-on experiments. It is more difficult for these students to find a good chemistry laboratory and other students choose to perform experiments. There is a lot of no opportunity to see chemistry in the lab. The hands-on lab is a really interesting and fun way to do it. In these areas, students could make it the subject matter, which makes it interesting and fun to do. They just enjoy learning.

### 6. How has Chemistry on the Go supported teachers and schools in Taiwan?

We work with the teachers to participate in the activities and share how we prepare the program and activity materials. We will demonstrate how we design the activities and the program for Chemistry on the Go. We hope that teachers can use our material to enhance students and give them an opportunity to do some lab activities. All activities need a chemistry lab. In the schools that do not have a chemistry lab, the students can be the best success and provide great help. This makes a great support group for science education and helps the students in underprivileged schools perform better.

### 7. How has MilliporeSigma's partnership with Chemistry on the Go supported the organization's mission?

MilliporeSigma's partnership helps our team build a stable team of members for Chemistry on the Go. The hands-on mobile lab materials have been well received by the students. To make the program a long-term success, we depend on the most group of participants. When they gain interest and familiarity with the activities and experiments, it leads to the best and best for the students' learning and performance. With these hands-on experiences, we can focus on developing more programs, hands-on experiments and chemistry activities. We also have more capacity to train the students and teachers.

The partnership also brings more of MilliporeSigma's resources to the Chemistry on the Go program. The support designed for the mobile lab is based on MilliporeSigma's (MS) 2014-2015 strategy for mobile chemistry, and brings a new perspective to the program.

### 8. What has been the most rewarding part of your role at Chemistry on the Go?

When we have done Taiwan, it's amazing to see students' interest in chemistry. In the past, we participated in the activities normally, the team spends a few hours, and then moves on to the next day. Chemistry on the Go has a lasting impact on the students. They remember what we do and they are happy to see us that we can help them with questions about chemistry or talk about their goals. One of the best things is when they can get help from us to solve a problem or answer a question. It's amazing.

### 9. Is there anything else you'd like to add?

I would like to thank MilliporeSigma for its support of Chemistry on the Go. It's been a long journey and it's always going to continue our efforts in Taiwan, especially when the team, the staff, the public, and the government are all working together. We have a lot of support from the government and the public. Support from the government in the chemistry industry gives us more confidence and opportunities in the future. The resources and the technology, when we have already built up the capabilities of the activities. The future is bright when you have already about the world. How amazing it is that chemistry education can provide our hands-on lab and give us a lot of passion to work together and do projects. With the support of a company like MilliporeSigma, we have a very good chance to show the world, and help improve them and hopefully, change their minds for the better.

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