

Chih-Hsin Chen & Po-Shen Pan Receive Gold Award in Taiwan Innotech Expo

From the Department of Chemistry, Chair Chih-Hsin Chen and Associate Professor Po-Shen Pan 's team participated in the 2023 Taiwan Innotech Expo held from October 12 to 14 at the Taipei World Trade Center. Dr. Chen was awarded a gold medal for the invention competition with the research theme "The system and Methods for Sensing Ammonia Gas," and Dr. Pan received a gold medal for the research topic "Preparation Method of Tetraboronic Acid Compounds, and Tetraboronic Acid Compounds." Both projects have already obtained patents in the Republic of China.

Dr. Chen invented a method for precisely measuring the proportion of ammonia in the air using test paper, which can improve the environment in chicken farms or other breeding facilities. He hopes that in the future, businesses can consider enhancing their equipment and quality based on the test results, leading to a transformation in practices. He believes that exhibiting this innovation provides students with an opportunity to gain experience, not only in winning awards but also in accumulating valuable learning experiences.

Dr. Chen also mentioned that the expo had many international exhibitors, which is highly beneficial for promoting our university. Besides increasing the university's visibility, it also helps to recognize our excellent research capabilities. He shared the purpose of participating in the exhibition, which is to make the invention available for more people in need and help them determine how to use it.

Dr. Pan stated that since 2003, major pharmaceutical companies worldwide have introduced a total of 6 boron-containing drugs targeting various diseases. Just in 2019, the global sales of boron-containing drugs reached nearly 2.2 billion US dollars. Generally, the synthesis of boron-containing drugs is challenging and requires a series of complex synthesis steps, making the development costs high. This invention offers several advantages, including simplicity of operation, shorter reaction time, and

high synthesis efficiency. For companies looking to develop boron-containing drugs, this can significantly reduce research and development costs.

Dr. Pan shared that both of these inventions received gold medals. Subsequently, they plan to use these 2 patents to jointly develop new technological applications and are also considering applying for patents in the Republic of China.

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