

## Biography

Professor Hsiao-Wen Zan works in the Department of Photonics at National Yang Ming Chiao Tung University (NYCU) and is the Director of the Institute of Pioneer Semiconductor Innovation at Industry Academia Innovation School. She holds a Ph.D. in Electronics from National Chiao Tung University (former NYCU) and is the Chair of the IEEE WiE Taiwan Section and a director of the Society of Taiwan Women in Science and Technology.



Professor Zan focuses on interdisciplinary research with a background in semiconductor devices. She is dedicated to developing high-performance hybrid transistors and chemical sensors for medical diagnostics. Professor Zan has closely collaborated with scholars from various fields, including chemists, biologists, and physicians. In the field of transistors, she proposed the first organic transistor operating at 1 volt and introduced novel concepts like dot doping in the channel and capping a strong reduction layer on the back interface to enhance effective carrier mobility. In the field of sensors, she developed highly sensitive gas sensors using low-cost solution processing, successfully applying them to breath ammonia detection. She actively collaborates with hospitals on clinical studies and with companies in science parks to develop prototype devices for rapid screening of chronic kidney disease.

Professor Zan received the 2022 Franco-Taiwanese Scientific Grand Prize, the 2021 Institute for Biotechnology and Medicine Industry “National Innovation Award: Clinical Innovation Award,” the 2018 MoST Taiwan “Future Tech Award,” the 2011 Wu-Chien-Shiung Education Foundation “Taiwan Promising Women in Science,” and the Silver Award in the Application Category of the 16th Macronix Golden Silicon Award. Professor Zan has published over 218 SCI papers, many in leading journals such as *Advanced Materials*, *Biosensors and Bioelectronics*, *ACS Advanced Materials and Interfaces*, and *Sensors and Actuators B*. Additionally, she holds 98 invention patents, including 22 US patents.