

國立清華大學第 23 屆新進人員研究獎得獎人簡介

楊尚樺博士於 2017 年加入清華大學電機系擔任助理教授，專業領域在於半導體元件技術、透視感測及超高速無線通訊。學術研究方面，楊博士專注於太赫茲半導體光電元件、半導體微波元件、奈米製程技術、太赫茲晶片、Tbps 無線通訊系統與生醫感測系統，於該專業領域已有超過 60 篇學術論文發表，獲頒數項重要學術殊榮：SPIE 光學獎(2012)、IEEE 天線與傳播分會博士研究獎(2014)、教育部留學獎(2015)、林島諾貝爾獎會議年輕科學家獎(2016)、科技部愛因斯坦計畫得主(2018)、人類前沿科學研究計畫獎(2020)、清華大學電資學院新進人員研究獎(2020)與其他重要研究獎項。楊博士的研究重點與主要學術貢獻在於整合光電半導體技術、電漿子奈米技術、鎖模雷射技術及天線技術，實現全世界最高轉換效率、最高功率、可室溫操作、極高穩定度、可波束重整及掃描、可晶片化光電導太赫茲發射源，對量產多功能太赫茲晶片系統及 6G 無線通訊系統有極大助益。楊博士所開發太赫茲元件，已成功用在許多重要產業應用包括：半導體檢測、非破壞式檢測、多維度材料檢測、製藥、轉譯農學領域，目前正積極將技術商品化。

這次有機會成為本校新進人員研究獎得主，楊尚樺博士要感謝實驗室成員、合作團隊、電機系同仁，特別是家人，於各方面的支持及付出。由衷感謝。

Dr. Shang-Hua Yang is a tenure-track assistant professor in department of electrical engineering at National Tsing Hua University. He has established significant contributions to the development of ultrafast electronics, microwave photonics, terahertz optoelectronics, integrated terahertz systems as well as innovative plasmonic photonics applications. The outcomes of his research have appeared in over 60 refereed papers in peer-reviewed journals and conference proceedings on these topics. He has received several prestigious awards and scholarships including the United Microelectronics Corporation Scholarship (2007), Rotary Education Foundation Best Student Award (2008), Rackham fellowship (2011-2012), SPIE Scholarship in Optics and photonics (2012), IEEE Antennas and Propagation Society Doctoral Research Award (2014), Rackham Summer Graduate Student Award (2015), Taiwanese Government Scholarship to Study Abroad (2015), Joan and Irvin Jacobs TIX Institute Industry Scholar (2017, 2018), MOST Young Scholar Fellowship (2018) and Human Frontier Science Program Award (2020). He was Lindau Nobel Laureate Meeting Young Scientist Fellow (2016), Director of NTHU Garage Incubator (2018-2020), Deputy Executive Director of NTHU Zai Wu College (2018-2020). Co-founder and Deputy Director of Terahertz Optics & Photonics Center (2019 - present).