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臺灣大學應用力學研究所

演 講 公 告

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主 講 人：顏毅廣 副教授

國立台北科技大學機械系

講　　題：CMOS BioMEMS 奈米力學生醫感測器之研發及其應用

摘　　要： 如附件

主 持 人： 陳建甫教授

時　　間： 114年03月17日（星期一）下午2時20分開始

地　　點： 臺灣大學應用力學研究所國際會議廳

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CMOS BioMEMS 奈米力學生醫感測器之研發及其應用

Development of CMOS BioMEMS nanomechanical biosensors and their applications

Yi-Kuang Yen

Department of Mechanical Engineering, National Taipei University of Technology
ykyen@ntut.edu.tw

Abstract

The rapid advancement of technology in the field of biosensing has paved the way for the development of CMOS BioMEMS nanomechanical biosensors, which integrate complementary metal-oxide-semiconductor (CMOS) technology with microelectromechanical systems (MEMS) to create highly sensitive and efficient biosensing devices. This talk will explore the innovative design and fabrication processes of these nanomechanical biosensors, emphasizing their unique capabilities in detecting biomolecular interactions at the nanoscale. We will discuss various applications, including disease diagnostics, environmental monitoring, and personalized medicine, highlighting how these sensors can revolutionize healthcare by providing real-time, accurate, and cost-effective solutions. Furthermore, we will address the challenges and future directions in the field, such as enhancing sensor sensitivity and specificity, miniaturization, and integration with mobile platforms. By the end of the session, attendees will gain insights into the transformative potential of CMOS BioMEMS nanomechanical biosensors and their role in shaping the future of biosensing technologies.