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臺灣大學應用力學研究所
演 講 公 告

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講　　題：超音波對比劑之生醫應用

摘　　要：如附件

主 持 人： 陳國慶所長

時　　間： 111年11月21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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超音波對比劑之生醫應用

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Ultrasound contrast agents (UCAs) composed of spheres filled with gas or liquid are usually used to enhance the ultrasound imaging quality during the diagnosis. Not only applied for assisting clinical diagnosis, but UCAs have also been used for disease treatment or tumor therapy over two decades. Given the efforts of researchers from different disciplines, the fabrication techniques or the application range of UCAs have rapidly expanded in recent years. Nowadays, more than five generations of UCAs have been successfully developed for biomedical applications. When UCAs are activated under certain circumstances, a number of secondary effects are triggered to achieve therapeutic purposes. For example, sonoporation, one of the critical effects for improving drug or gene delivery into cells, refers to the process by which ultrasound-activated UCAs are used to induce the transient pore formation of the cellular membrane. Although the applications of UCAs have been broadly studied in the biomedical field, how to evolve and develop new and emerging applications in a safe manner is also an important issue in translating these techniques into the clinic successfully.