

微奈米光電力學實驗室

國立臺灣海洋大學機械與機電工程學系



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本實驗室的研究重點在於應用微奈米光電與力學之技術，發展尖端新穎的微奈米光電力學元件。近年來，本實驗室主要從事的研究題目包含：(I)半導體電漿子奈米雷射；(II)光機械晶體聲光元件；(III)表面電漿波生物感測器；(IV)太陽能光電元件

學術合作：半導體表面電漿子奈米雷射 (海大、交大、中研院)；
光機械晶體電光聲元件 (海大、雲科大、台大、交大)；
表面電漿波生物感測器 (海大、台大、交大、中研院)；
太陽能光電元件 (海大、台大、高雄大學)

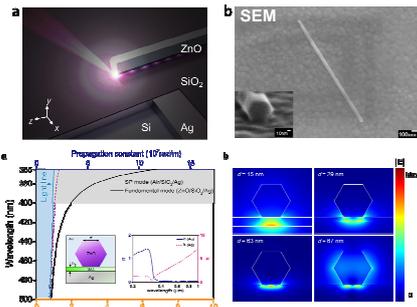
團隊獲獎：全國力學會會議論文獎(2009, 2013, 2014)；物理年會論文獎(2014)；
物理學會碩士論文獎(2014)；物理學會大學生論文獎(2015)；

台灣光電年會論文獎(2012, 2013, 2016)；光電學會碩士論文獎(2014)；

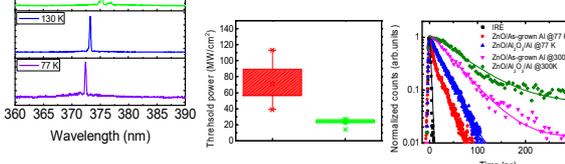
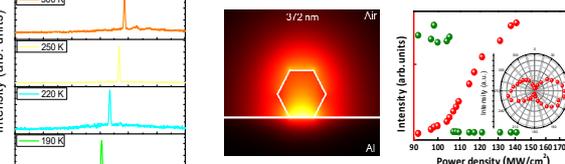
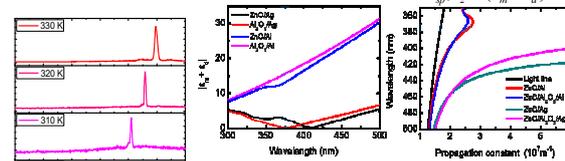
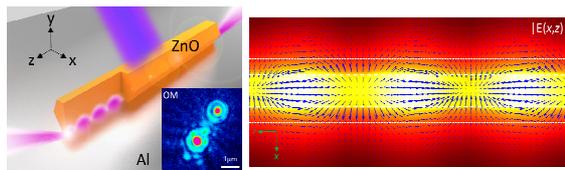
台灣化工年會論文獎(2014)；美律電聲論文獎(2014)；奈米工程論文獎(2016)

榮譽：海大教學優良獎(2013)；海大學術優良獎(2014)；美律電聲新銳獎(2014)；
海大學術研究進步獎(2016)

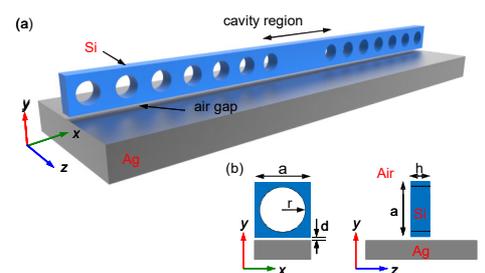
近期成果：



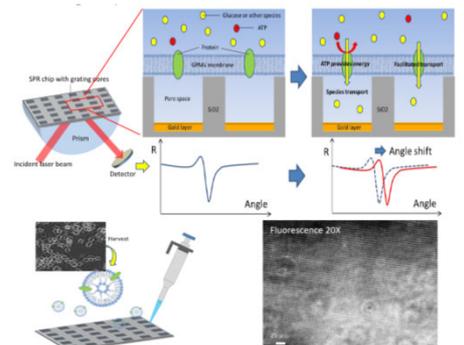
表面電漿子奈米雷射 · 2015
(ACS Nano, 與交大盧廷昌教授合作)



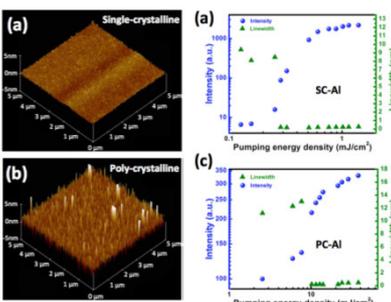
高溫表面電漿子奈米雷射 · 2016
(Nano Letters, 與交大盧廷昌教授合作)



光機械晶體電光聲元件 · 2015
(Nature-Scientific Reports, 與雲科大許進成教授合作)



表面電漿波生物感測器 · 2016
(與台大趙玲教授合作)



單晶鋁電漿子奈米雷射 · 2016
(Nature-Scientific Reports, 與交大盧廷昌教授合作)

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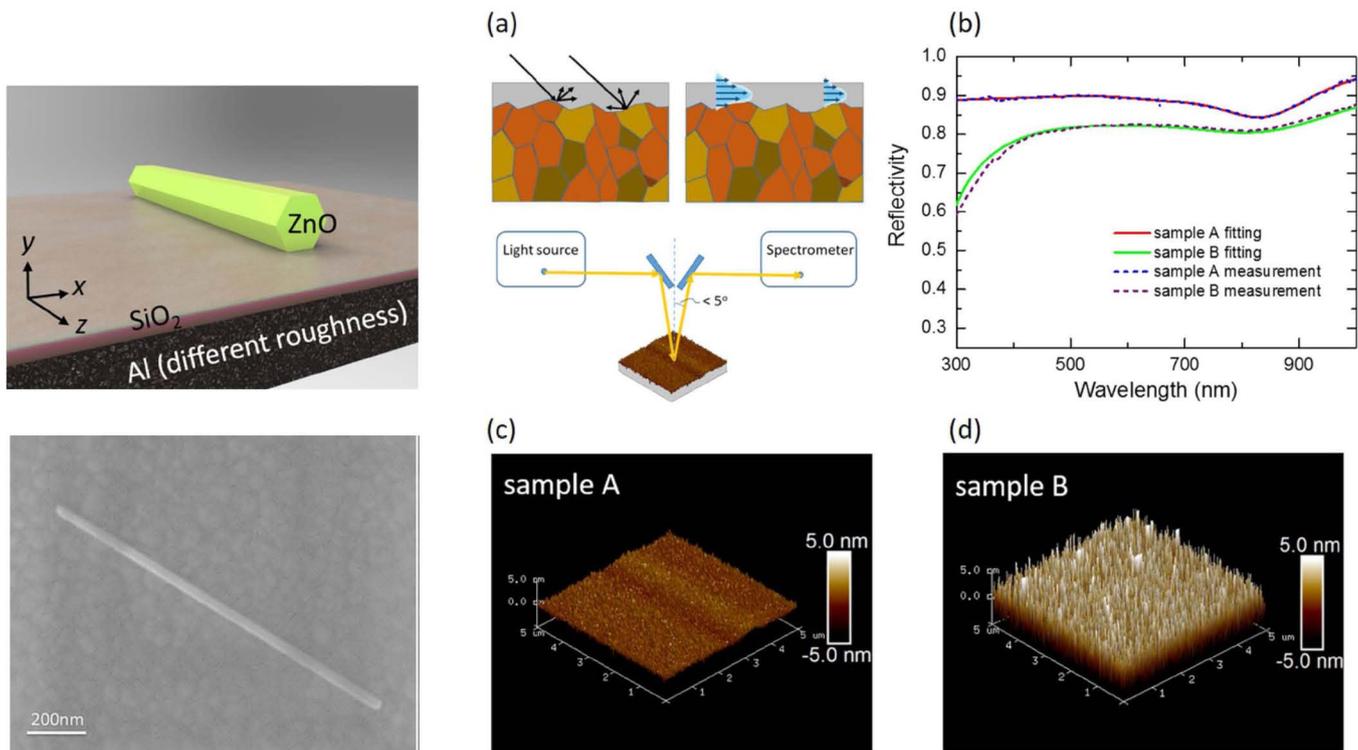
Surface roughness effects on aluminium-based ultraviolet plasmonic nanolasers

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