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Three-dimensional plasmonic stereoscopic prints in full colour

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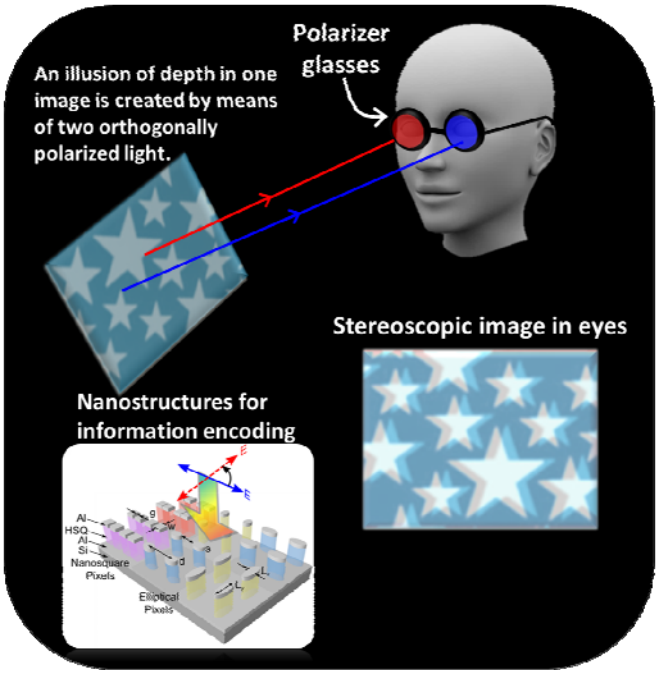
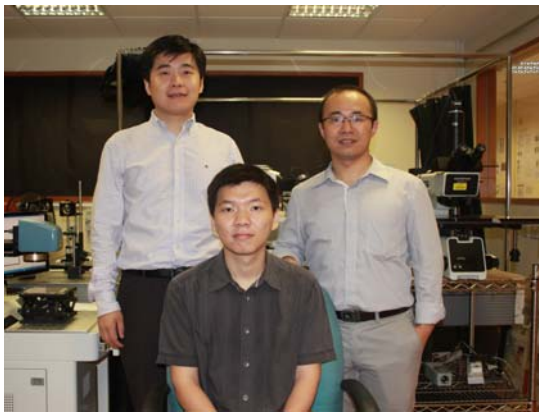
ECE FYP student Zheng Yihan, supervised by Dr. Qiu Cheng-Wei, published one paper entitled "Three-dimensional plasmonic stereoscopic prints in full colour" in the Nature Communications as a co-author in collaboration with Joel Yang's group in SUTD and A*STAR. In this work, a full-colour stereoscopic image display was successfully demonstrated by using nano-patterned plasmonic structure. When two polarized eyepieces are used in front of human eyes, one can see a very fine and high-fidelity image with vertical depth, ultrahigh spatial resolution and subwavelength pixel size. Mr. Zheng contributed much to the theoretical and numerical basis of the relation between the structural configuration/parameters and polarization-dependent color display, which was experimentally achieved by one scientist (first author) in IMRE. Such polarization-sensitive encoding can realize a wide spectrum of applications in colour displays, data storage and anti-counterfeiting technologies.





Left-Middle-Right: Dr. Qiu Cheng Wei, Mr. Zheng Yihan, Dr. Zhang Lei (RF)