**Phase and Polarization Spatial Light Modulator (PPSLM) system for optical data storage in glass**

LCOS SLM has became a more useful tool in light field modulation. It has advantages in high modulating resolution and programmability with the development of computer generating hologram. Utilizing LCOS SLM in optical data storage in glass for writing light field generation can provide the increase of data writing speed. The LCOS SLM can provide multi-beam light field with needed polarization state. In this talk, I will show some current my results of the LCOS SLM system in phase and polarization modulation. Also, the study in elimination method of zero order beam in diffraction has been included.