

# 人工微结构科学与技术协同创新中心

## 学术报告

### *Optical absorption engineering of ultra-thin films using metamaterial and nanocavity resonances*

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Abstract:

Perfect absorbers are important optical components required by a variety of applications. While there is great interest in achieving highly absorptive materials exhibiting large broadband absorption using optically thick, micro-structured materials, it is still challenging to realize ultra-compact subwavelength absorber for on-chip optical/thermal energy applications. In this presentation, we will discuss nanocavity enhanced light-matter interaction in ultra-thin films and patterned hyperbolic meta-film with engineered and freely tunable absorption band. These on-chip absorbers can easily be integrated with other on-chip electronic/optoelectronic devices, which is promising to create new regimes of optical/thermal physics and applications.