

# Nanolasing from plasmonic cone lattices

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Periodic metal nanoarrays serving as cavities can support directional-tunable nanolasing that goes beyond the diffraction limit due to the hybrid states of surface plasmons and Bloch surface waves. Most of these modes' interactions remain within the weak coupling regime, yet strong coupling is also anticipated to occur. We present intriguing cases of nanolasing, amplified by the surface lattice resonance mode as well as splitting upper polariton mode with-in a strong coupling system, stemming from a plasmonic cone lattices. The lasing properties are exhibited by the home-made momentum space imaging system.



## **Short Bio:**

**Wenxin Wang** received his Ph.D. degree in Technical Physics from TU Ilmenau, Germany. He is a professor at Harbin Engineering University, China. His research interests include lattice plasmons, nanolasing, and strong coupling. Currently, he leads the Photonic Materials Group at HEU.