

5. Conclusion

In summary, we have experimentally demonstrated that the emission from a slit in a plasmonic screen may be directed in a specific direction of choice by coupling it with a compact grating system patterned on one side of the slit in the plasmonic surface. The radiation can be tuned to a large degree by varying the wavelength of operation and/or the index matching fluid surrounding the grating. Potential applications of this effect may be envisioned in tunable nano-optical devices and optical wireless links tunable in real-time. In addition, the sensitivity to such tuning mechanisms may be utilized for chemical and biomedical applications for which the spectral signature of samples could be identified.

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