

## Supplementary material

for the paper

### Study on the fluorescence enhancement characteristics of double-layer dislocated metal gratings

Dongliang Tian,<sup>a</sup> Zhiyuan Wang,<sup>a</sup> Bin Han,<sup>a</sup> Jie Song,<sup>a</sup> Chunying Liu,<sup>a</sup> Zhihui Chen<sup>a,\*</sup> and Yang Wang<sup>b,\*</sup>

<sup>a</sup>Key Lab of Advanced Transducers and Intelligent Control System, Ministry of Education and Shanxi Province, College of Physics and Optoelectronics, Taiyuan University of Technology, Taiyuan 030024, China

<sup>b</sup>Key Laboratory of Chemical Biology and Molecular Engineering of Ministry of Education, Institute of Biotechnology, Shanxi University, Taiyuan 030006, China.

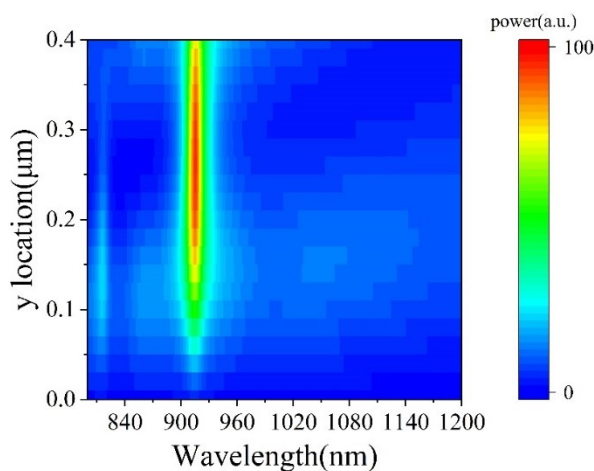


Figure S1. The far-field power while changing the y-coordinate of the dipole light source in the structure.

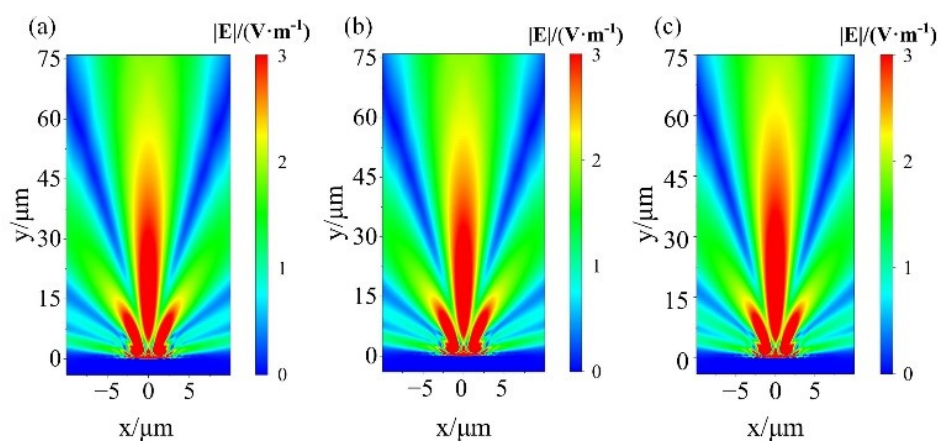


Figure S2 The electric field distribution at the wavelength of 915 nm for the dipole in the structures with (a) gold gratings, (b) silver gratings, (c) gratings with approximately 3-7% error of fabricating.