Supplementary Information:



Figure S1: Spectral signature of the localized plasmonic resonances. (a,b) Red, green, and blue images of the light emission from the grating sample in Fig.3e, taken by a color CCD. The line defect feature is mostly seen in the red (R) and green (G) images and cannot be seen in the blue (B) images, proving that its plasmonic resonance has different spectral components than the conventional Smith-Purcell background. (c,d) Color images as collected by the camera. Note that color saturation and gamma correction are performed, meaning that the intensity scale is not linear. (e,f) Integration along the y axis show intensity peaks at the line defects; they have different spectra than the background of conventional Smith-Purcell radiation.