SUPPLEMENTARY INFORMATION

Plasmonic black metals via radiation absorption by twodimensional arrays of ultra-sharp convex grooves

Jonas Beermann^{1*}, René L. Eriksen¹, Tobias Holmgaard², Kjeld Pedersen² & Sergey I. Bozhevolnyi¹

¹Department of Technology and Innovation, University of Southern Denmark, Niels Bohrs Allé 1, DK-5230 Odense M, Denmark.

²Department of Physics and Nanotechnology, Aalborg University, Skjernvej 4A, DK-9220 Aalborg Øst, Denmark.

^{*}corresponding author: job@iti.sdu.dk

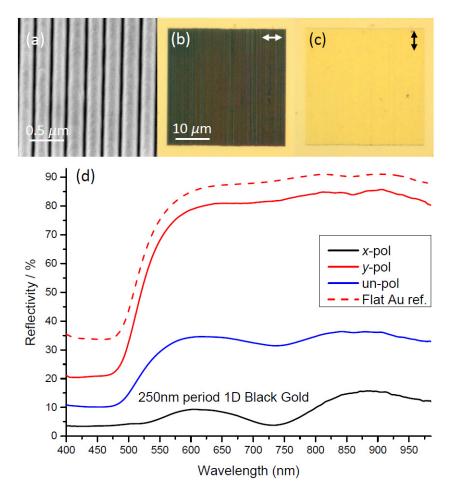


Figure S1. (a) SEM image of 1D black gold along with (b)-(c) Optical microscopy images obtained for the incident electric field polarization directions indicated by arrows and (d) corresponding reflectivity spectra including a flat gold reference.

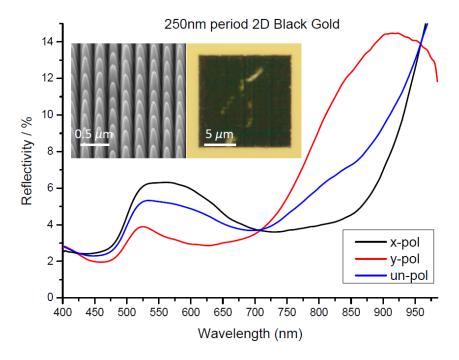


Figure S2. Reflectivity spectra of *2D black gold*, exhibiting some anisotropy due to material re-deposition by the previous FIB fabrication procedure¹¹. Insert: SEM image taken at 54 deg. relative to normal incidence of the ion beam, along with un-polarized optical microscopy image of 2D black gold and smooth gold background, revealing minor post-fabrication damage to the structure.