Supplementary Information

Flexible Corner Cube Retroreflector Array for

Temperature and Strain Sensing

Muhammad Waqas Khalid,[1,] Rajib Ahmed,[1,] Ali K. Yetisen,[2] and Haider Butt[1,]*

[1]Nanotechnology Laboratory, School of Engineering, University of Birmingham, Birmingham

B15 2TT, UK.

[2]Harvard-MIT Division of Health Sciences and Technology, Harvard University and

Massachusetts Institute of Technology, Cambridge, MA, 02139, USA.

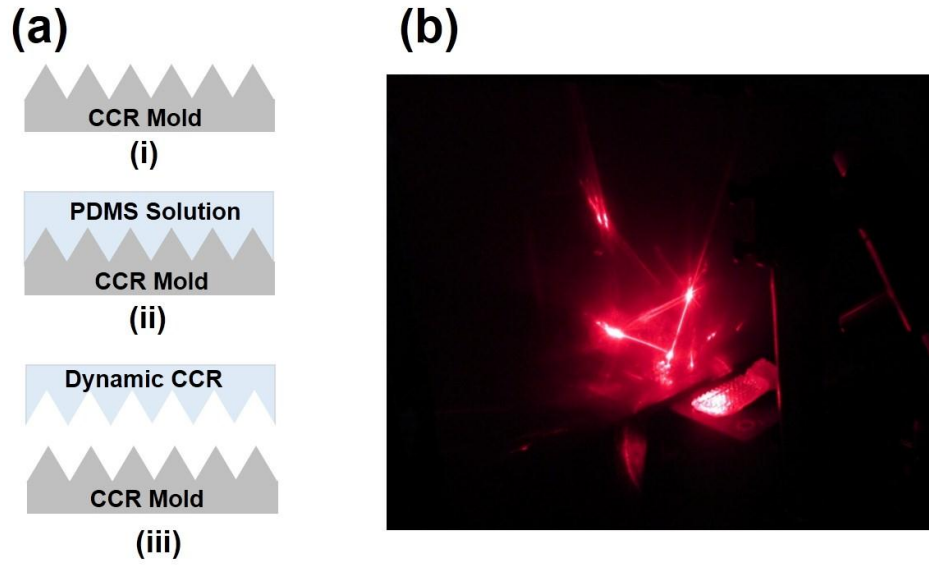*E-mail: h.butt@bham.ac.uk, Tel.: +441214158623

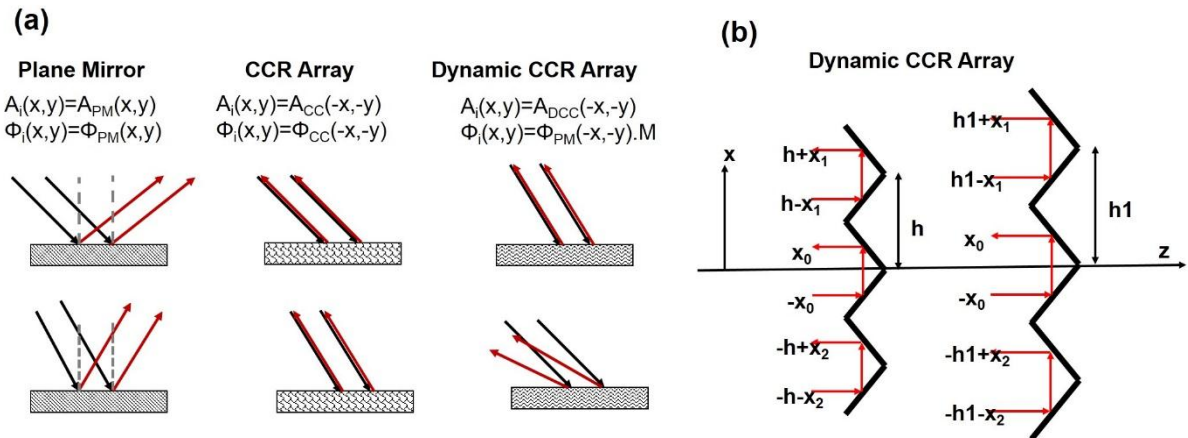**Figure S1:** (a) Dynamic CCR fabrication (b) optical characterization through reflection mode.

Figure S2: (a-b) Reflection and retroreflection property of plane mirror, CCR array, and dynamic CCR array.
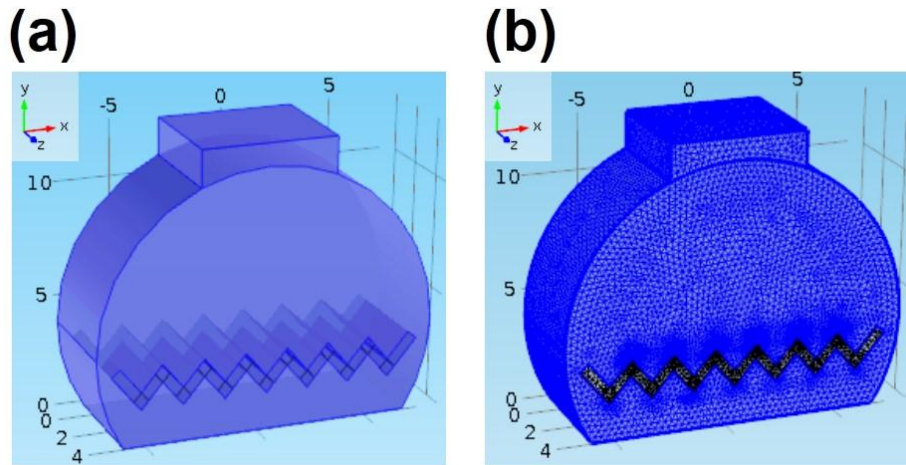
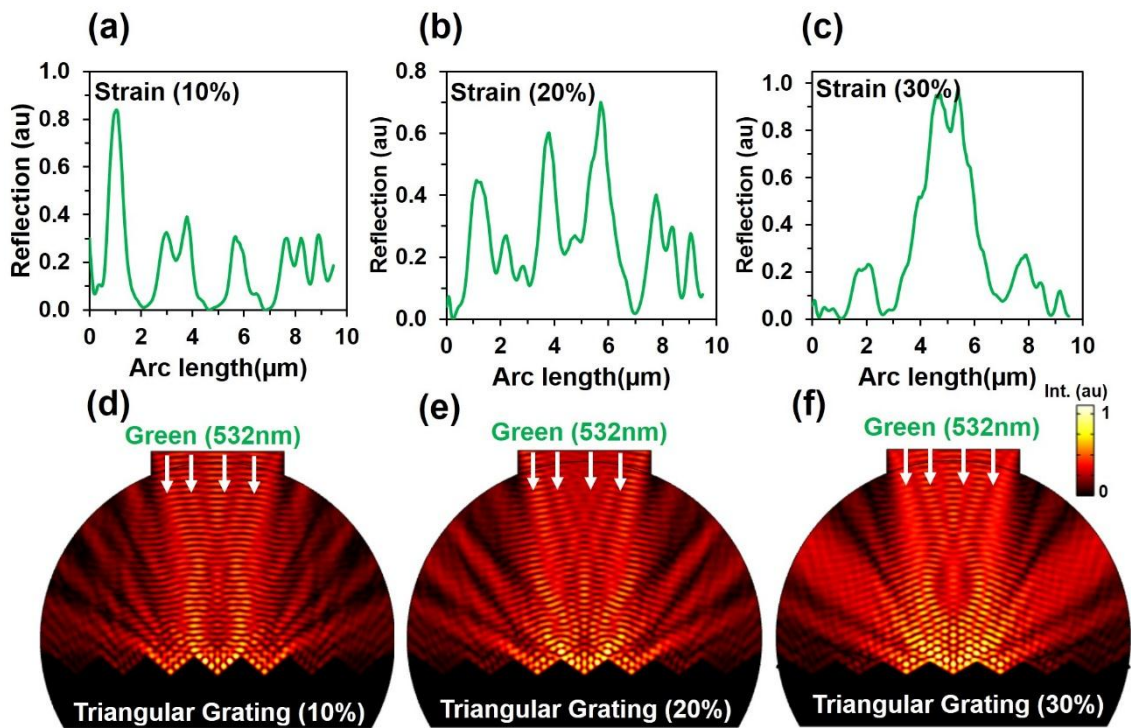**Figure S3:** (a-b) 3D simulation and mesh diagram.

Figure S4: Computation modeling of retoreflection, diffraction/scattering from triangular grating structure with strain variation (10, 20, 30%) and green light illumination.
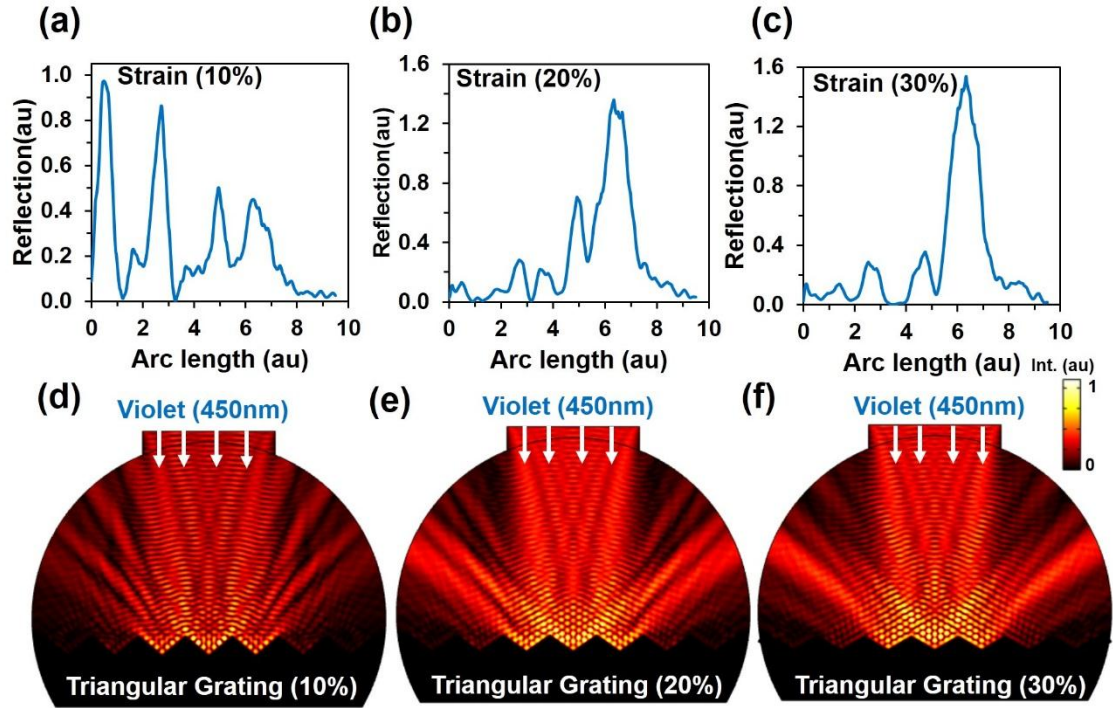
Figure S5: Computation modeling of retoreflection, diffraction/scattering from triangular grating structure with strain variation (10, 20, 30%) and violet light normal illumination.
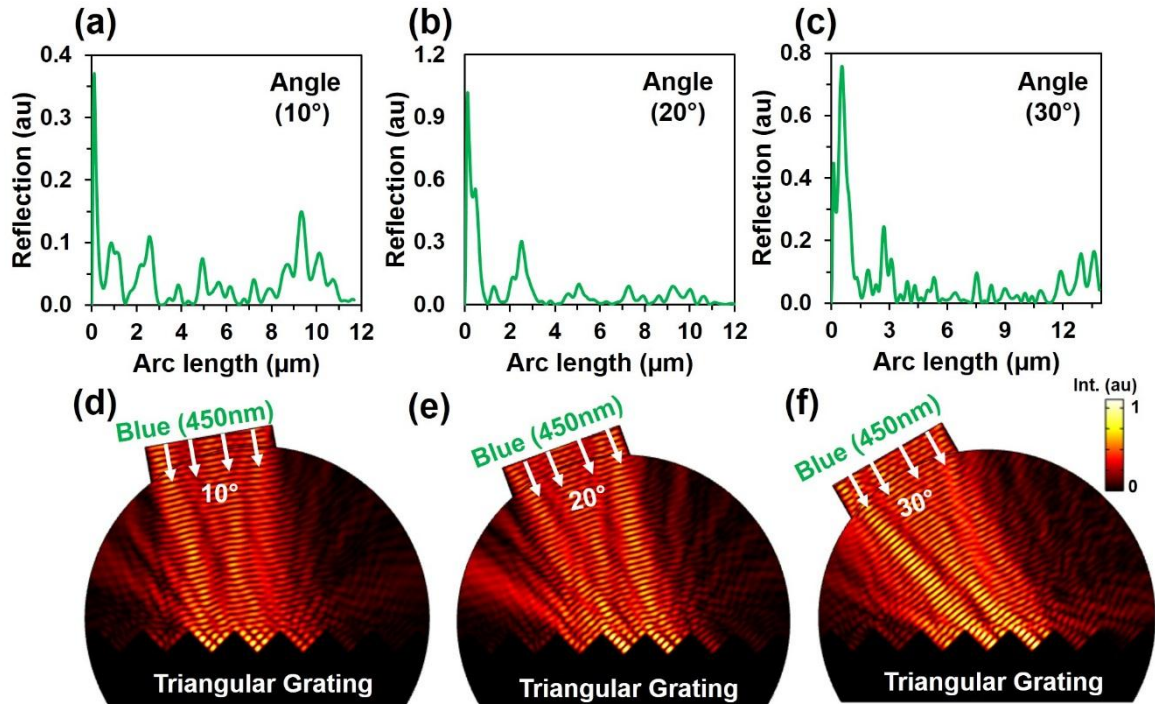

Figure S6: Computation modeling of retoreflection, diffraction/scattering from triangular grating structure with green light illumination angle variation.
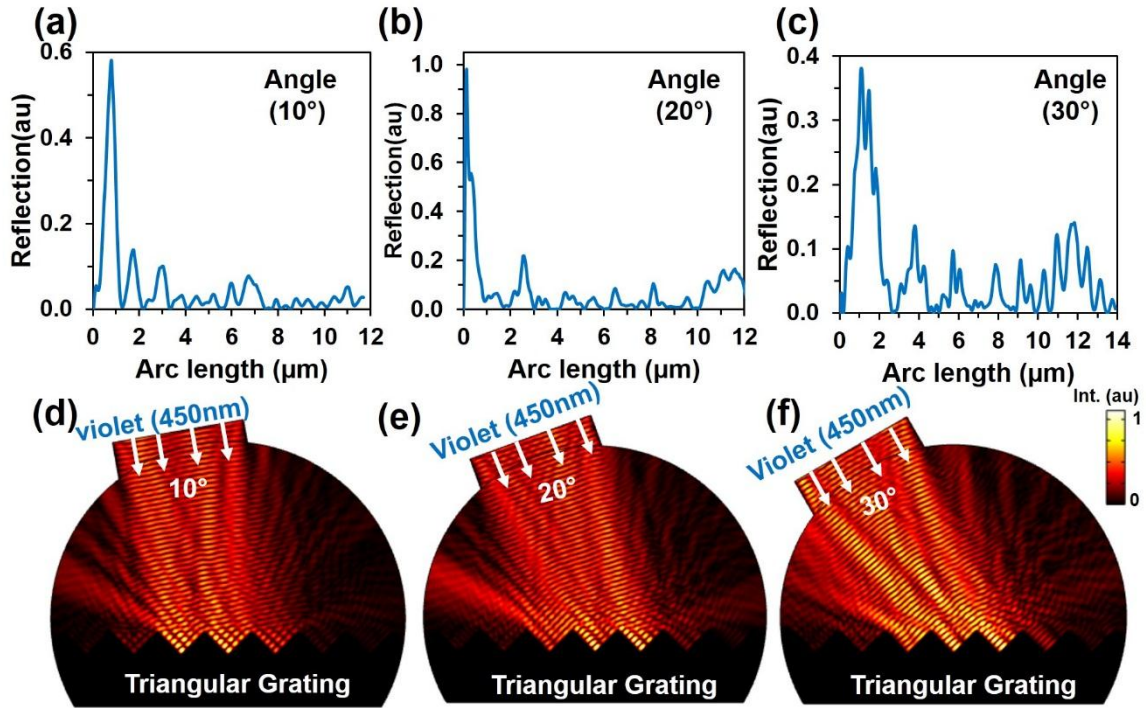
Figure S7: Computation modeling of retoreflection, diffraction/scattering from triangular grating structure with violet light illumination angle variation.
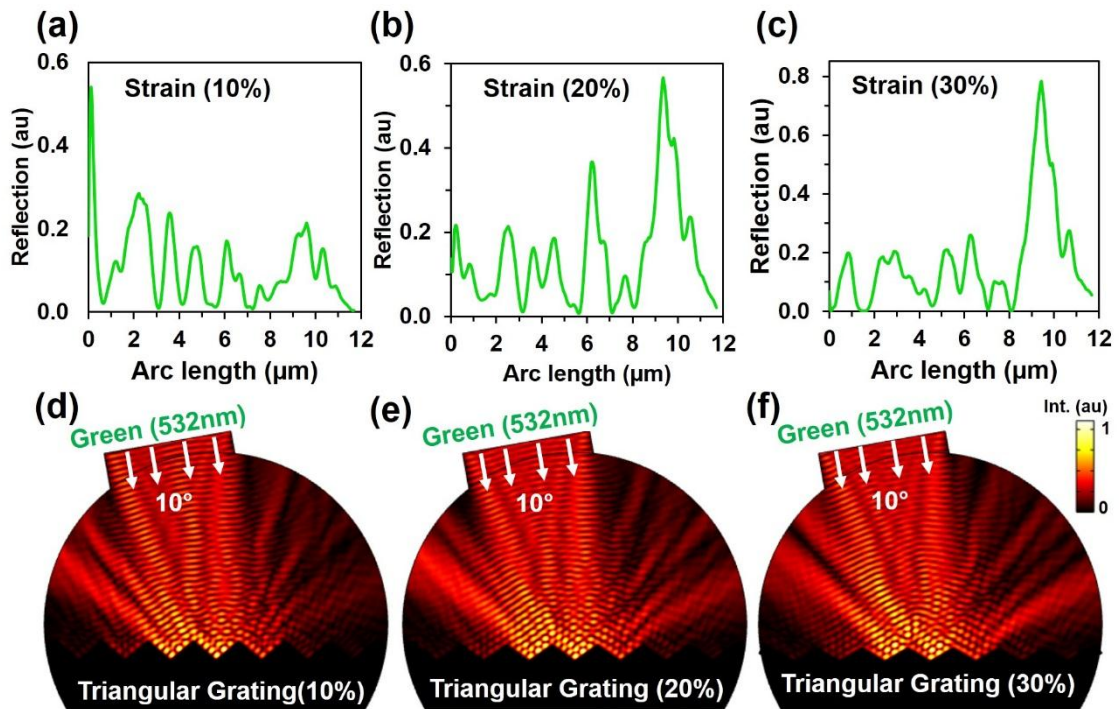

Figure S8: Computation modeling of retoreflection, diffraction/scattering from triangular grating structure with strain variation (10, 20, 30%) and green light 10° illumination.
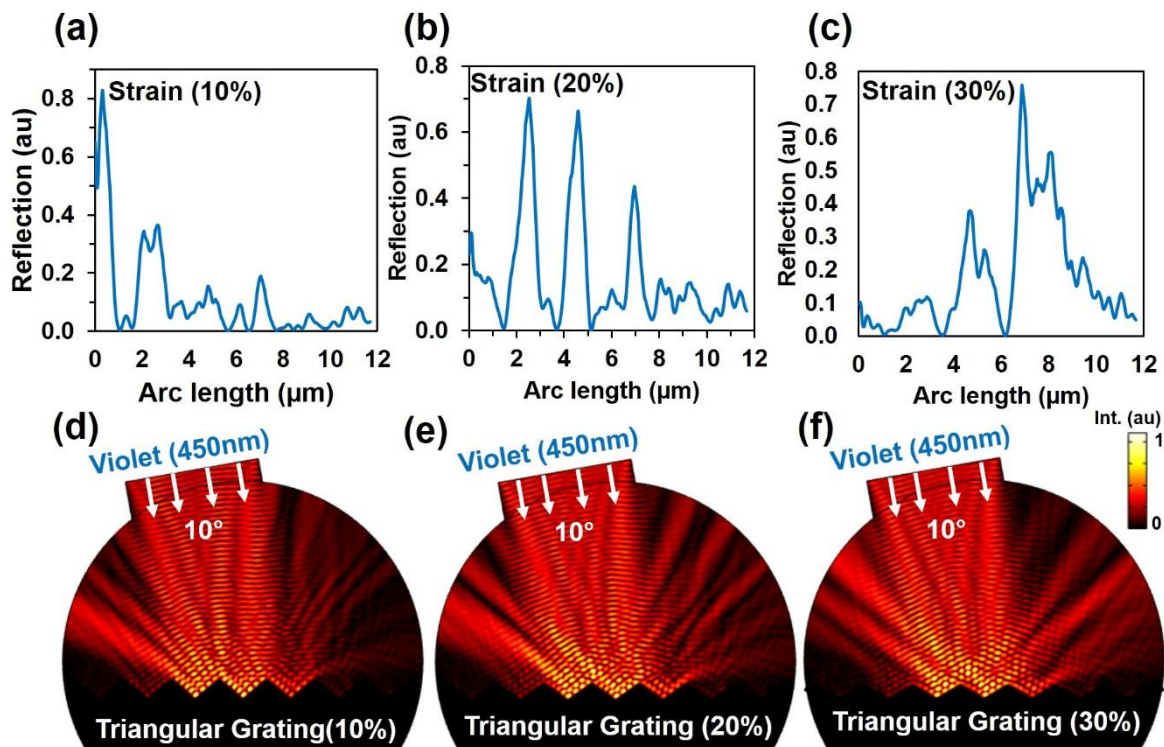
Figure S9: Computation modeling of retoreflection, diffraction/scattering from triangular grating structure with strain variation (10, 20, 30%) and blue light 10° illumination.
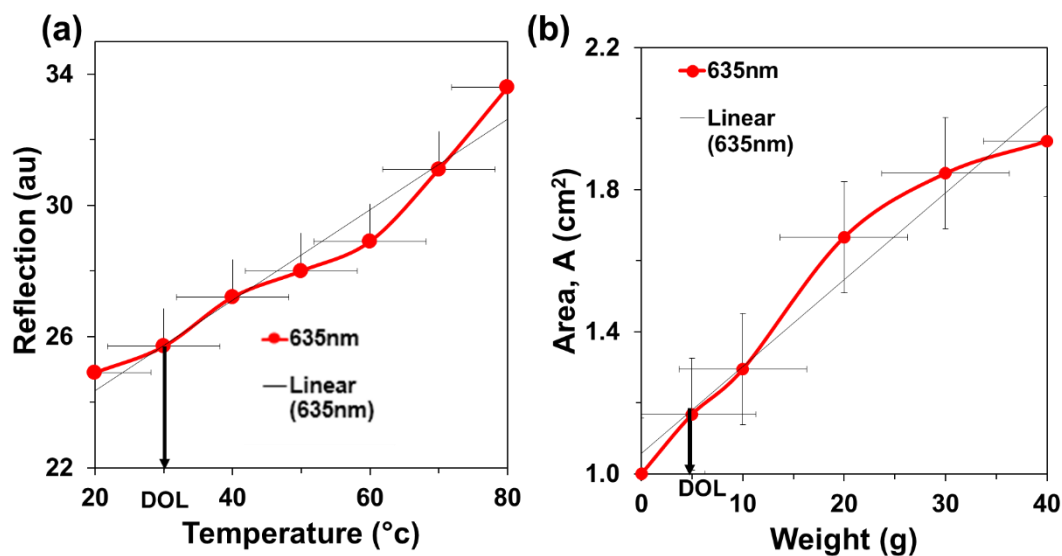

Figure S10: The detection limit (DOL) calculation for (a) temperature and (b) weight variation during red (635 nm) illumination.