

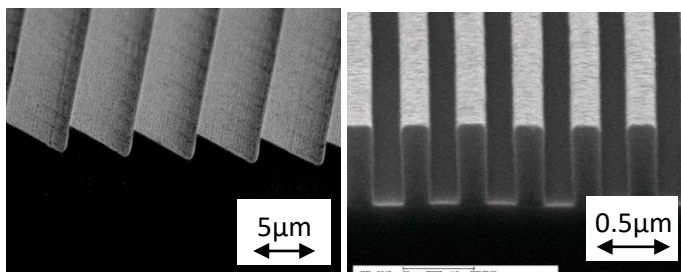
# Fabrication Service

- NALUX offers fabrication service for optical elements using lithography technology.
- We propose the most suitable method based on our past experiences and provide prototypes.

## Shape example:

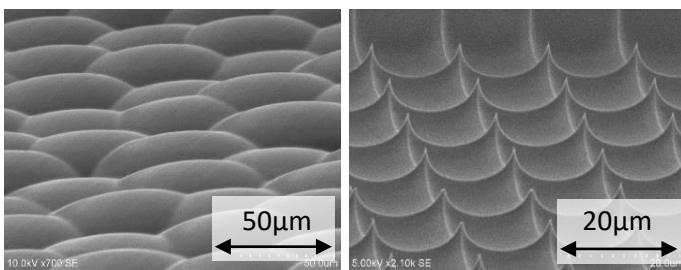
### Grating

- Pitch : > 200nm
- Shape : Binary / Blazed / CGH



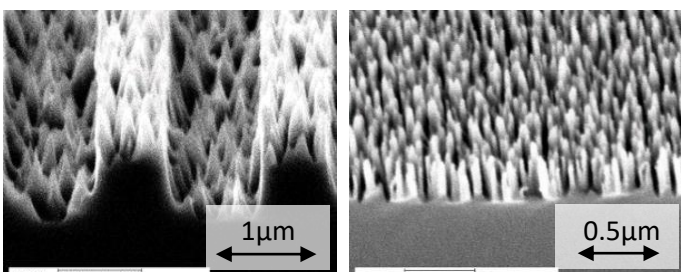
### Micro lens array

- Pitch : > 10µm
- Shape : Sphere / Asphere / Freeform

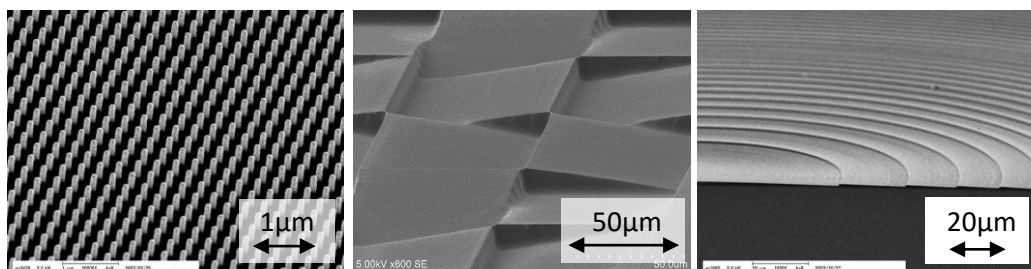


### Anti reflective structure

- Reflectance : < 1%
- Wavelength : DUV / Visible / IR



### Others



# Fabrication Service

## Typical processes:

### Patterning

- Mask exposure
- Direct writing laser lithography
- Electron beam writing

### Etching

- Plasma etching
- Wet etching

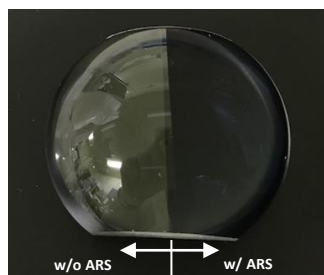
### Transcription (Inversion)

- UV imprint
- Electroforming

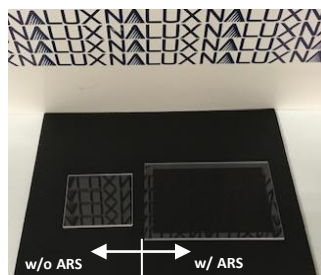
### Deposition

- CVD / PVD / Sputtering
- Lift-off process

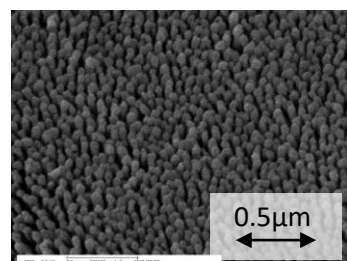
## Recent cases:



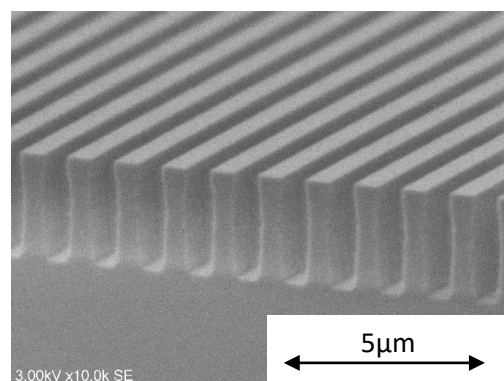
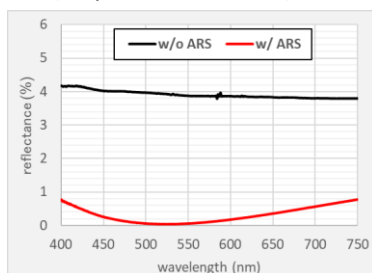
ARS on plastic lens  
(JP-patent 6611113)



ARS on glass substrate  
(JP-patent 6901189)



Formation of anti-reflective structures on various materials



High aspect fused silica grating  
(requested from Japan Aerospace  
Exploration Agency)