Wide FOV Metasurface

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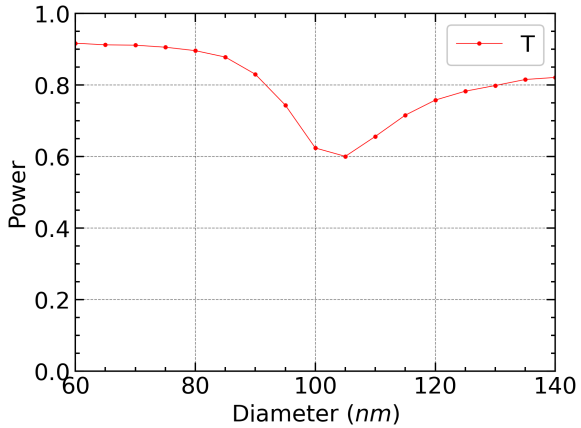
This is reproduction of the results in 1(b) using Diffraction Monitor. Parameters from the paper:

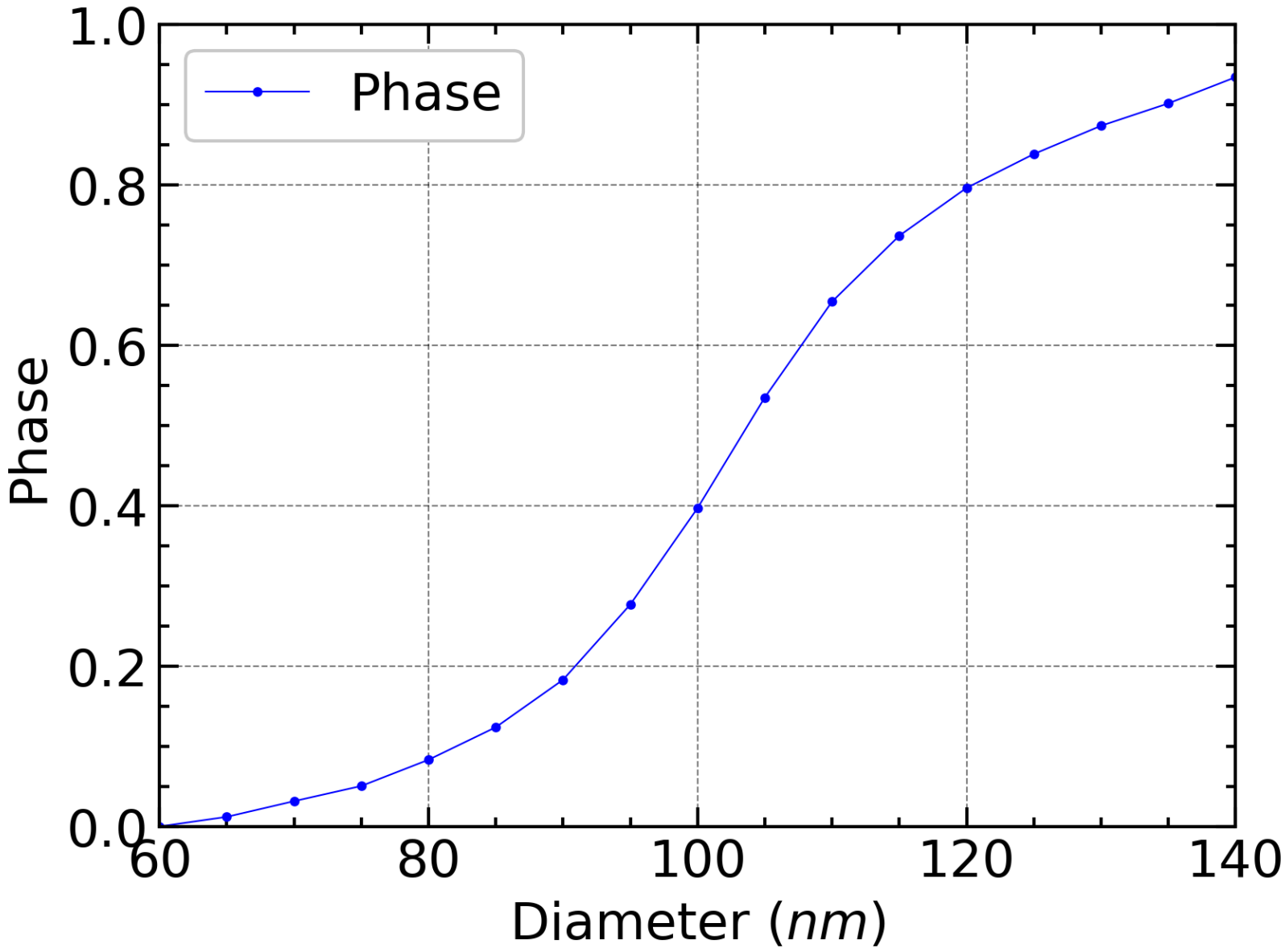
$$P = 190nm$$

$$h = 230nm$$

$$D = [60, 135]nm$$

$$\lambda = 532nm$$




Phase
1.0
0.8
0.6
0.4
0.2
0.0
Phase
60
80
100
120
140
Diameter (nm)

```python
# Import the necessary packages
import matplotlib.pyplot as plt
import numpy as np
import tidy3d as td
import tidy3d.web as web
import scienceplots

# Set logging level to ERROR to reduce output verbosity
td.config.logging_level = "ERROR"
```

```python
# 0 Define a FreqRange object with desired wavelengths
lda0 = 0.532
freq0 = td.C_0 / lda0
print("%E" % freq0)
```

```
5.635197E+14
```

```python
# 1 Computational Domain Size
h = 0.230  # Height of cylinder
spc = 1
Lz = spc + h + h + spc

Px = Py = P = 0.190 # periodicity
sim_size = [Px, Py, Lz]
```

```python
# 2 Grid Resolution
dl = P / 32
horizontal_grid = td.UniformGrid(dl=dl)
vertical_grid = td.AutoGrid(min_steps_per_wvl=32)
grid_spec=td.GridSpec(
```