


FIGURE 1


- Folder: `./Figure1`

Code&Data


1. `Trans_TE.m`

- **Description:**  Code for plotting the transmission from a lensed fiber ($D = 2 \mu\text{m}$) to a subtractive taper ($h = 320 \text{ nm}$, $\alpha = 84^\circ$, $w = 500 \text{ nm}$).
- **Input:** `Trans_TE.mat`
- **Usage:** Used for plotting Figure 1f.


2. `Trans_TE.mat`

- **Description:**  Data file containing transmission simulation result from a lensed fiber ($D = 2 \mu\text{m}$) to a subtractive taper ($h = 320 \text{ nm}$, $\alpha = 84^\circ$, $w = 500 \text{ nm}$).
- **Generated by:** 3D FDTD simulation.
- **Usage:** Used for plotting Figure 1f.


3. `Fiber.m`

- **Description:**  Code for plotting the beam mode with a lensed fiber ($D = 2 \mu\text{m}$) at the optimal coupling position \vec{r}_o .
- **Input:** `LensedFiberOutput.mat`
- **Usage:** Used for plotting Figure 1c.


4. `LensedFiberOutput.mat`

- **Description:**  Data file containing the beam mode simulation result with a lensed fiber ($D = 2 \mu\text{m}$)
- **Generated by:** 3D FDTD simulation.
- **Usage:** Used for plotting Figure 1c.

5. `Taper.m`

- **Description:**  Code for plotting the taper mode at the facet with the subtractive taper ($h = 320 \text{ nm}$, $\alpha = 84^\circ$, $w = 500 \text{ nm}$).
- **Input:** `TaperOutput_TE.mat`
- **Usage:** Used for plotting Figure 1c.

6. `TaperOutput.mat`

- **Description:**  Data file containing the taper mode simulation result with the subtractive taper ($h = 320 \text{ nm}$, $\alpha = 84^\circ$, $w = 500 \text{ nm}$).
- **Generated by:** 3D FDTD simulation.

- **Usage:** Used for plotting Figure 1c.



Notes

1. Run the `.m` scripts in MATLAB with the corresponding `.mat` files.
2. The MATLAB version is suggested to be higher than R2022b.