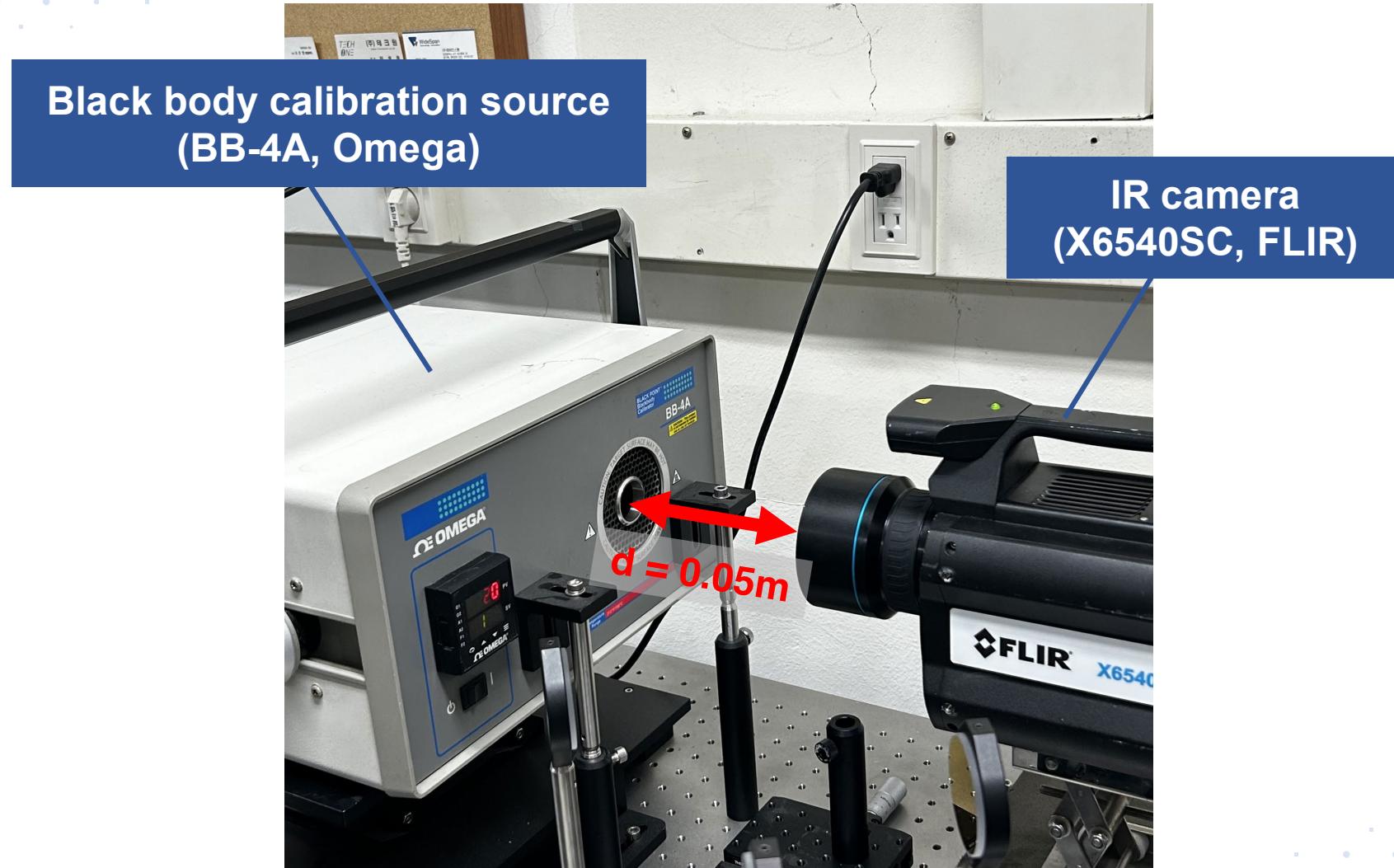


## **RESEARCH PROJECT**

**Hands-on experience on infrared (IR)  
measurement and data processing**

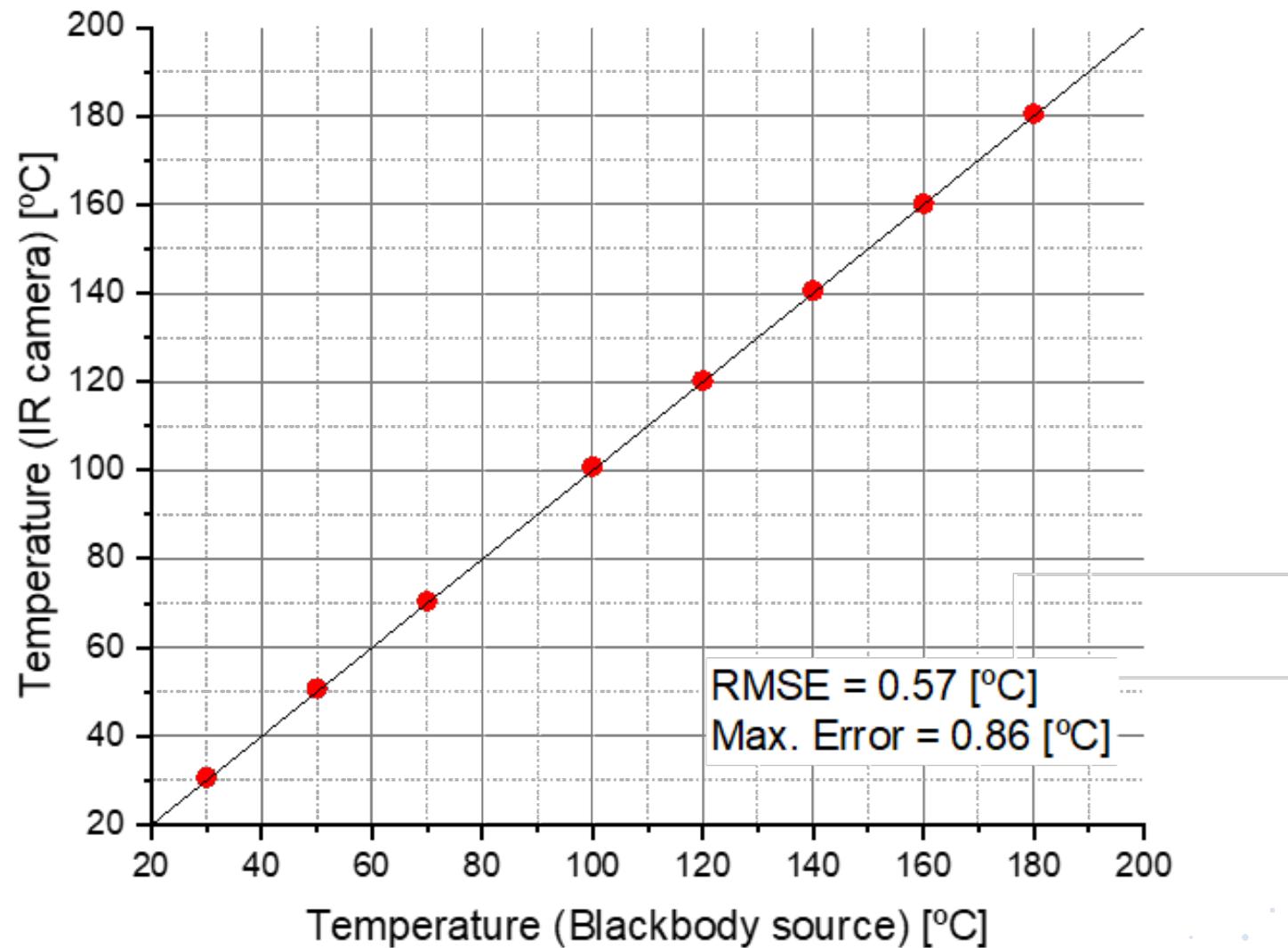
# Calibration of IR camera

## IR camera calibration set-up



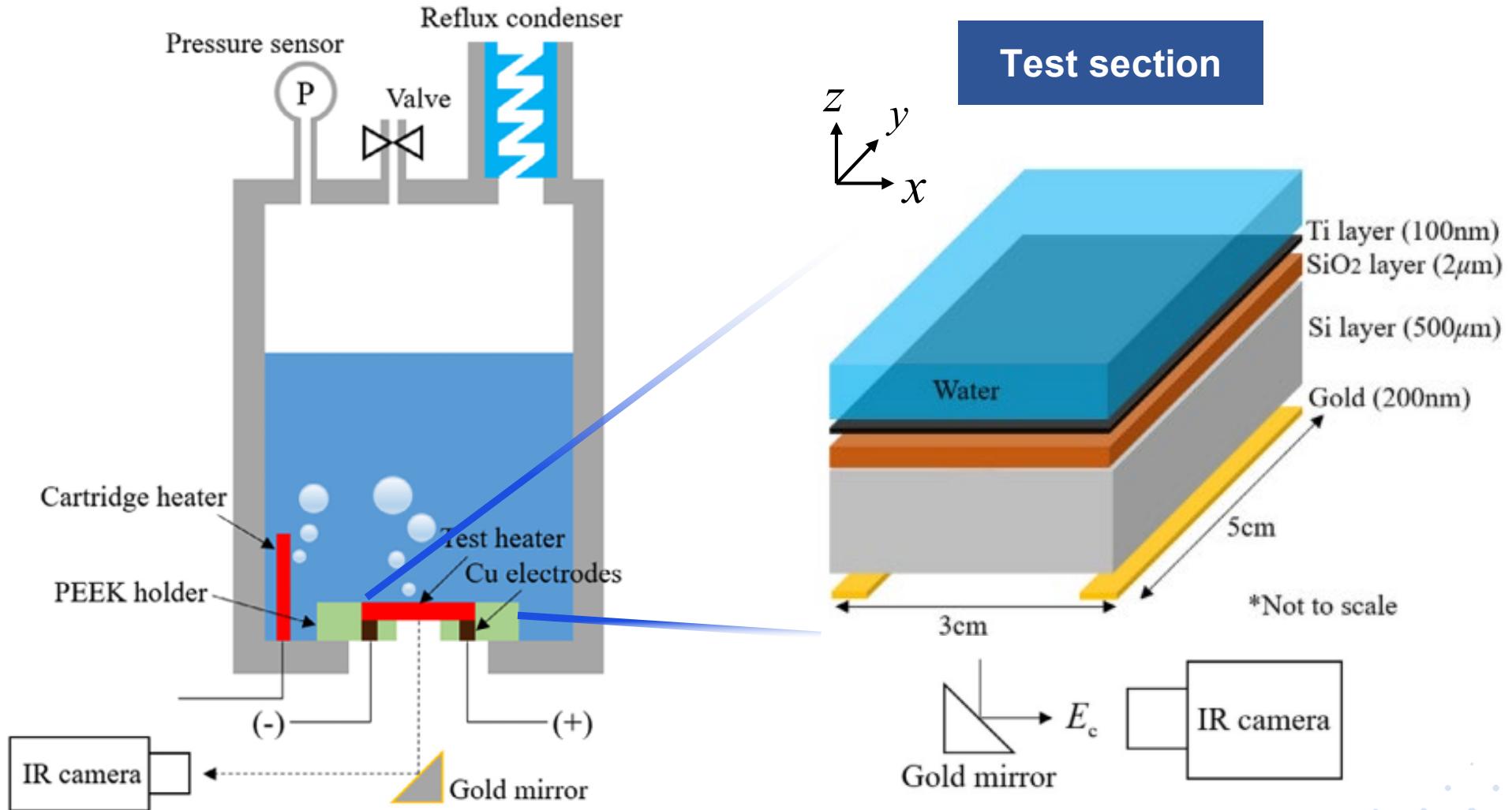
# Calibration of IR camera

## Calibration result



# Simultaneous measurement of boiling heat flux

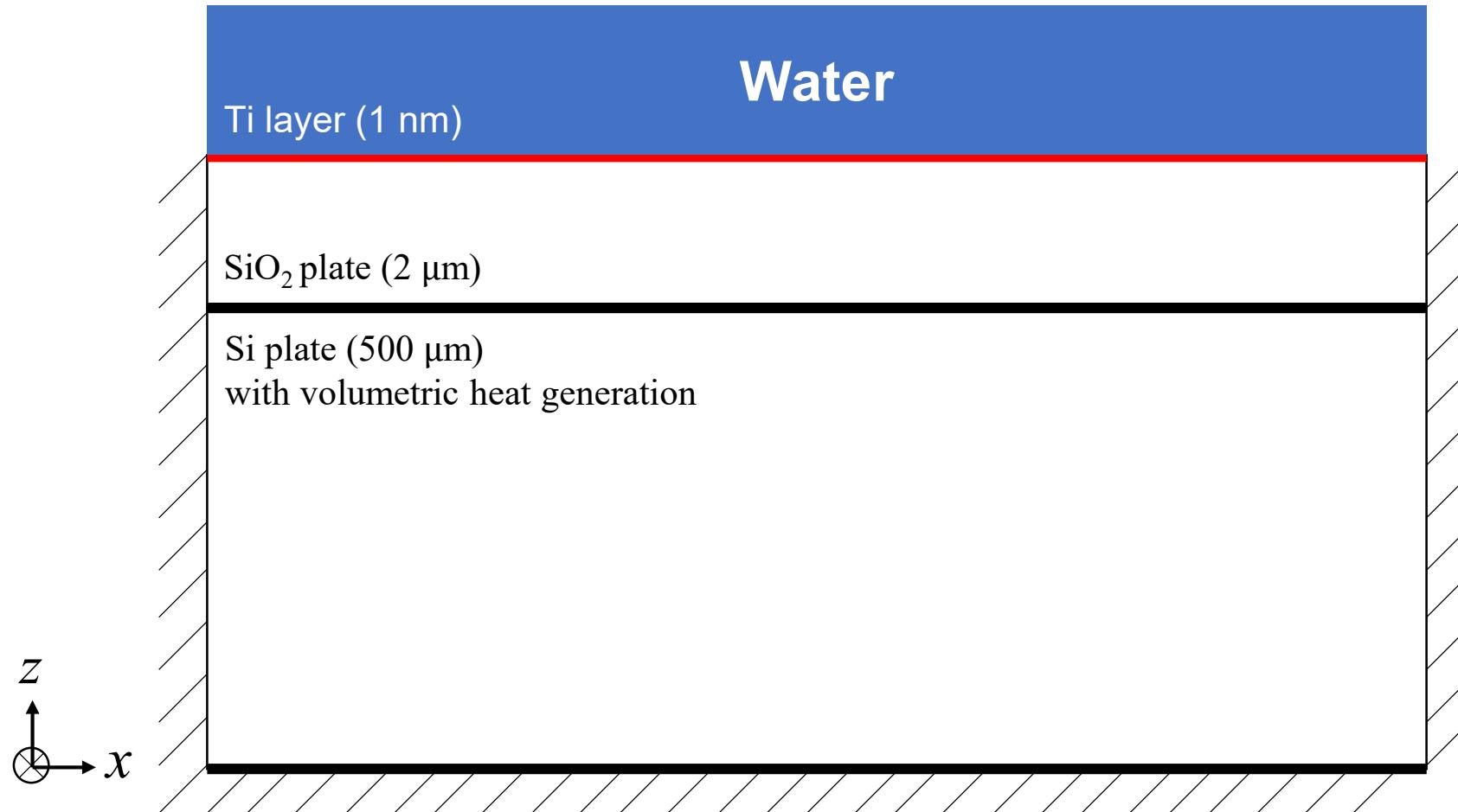
## Pool boiling experimental set-up



(Kim and Kim, 2020)

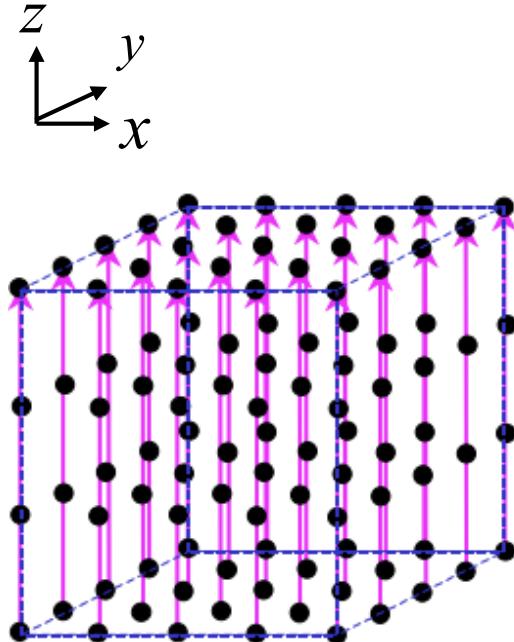
# Simultaneous measurement of boiling heat flux

## Problem definition



# Simultaneous measurement of boiling heat flux

Numerical analysis method (Iterative line by line TDMA method)



For each (x,y)  
Solve:

$$T_{i,j,k}^{n+1}$$

- **Nodes** located on axis parallel to **z-axis** are calculated **implicitly**.
- The other nodes are calculated **explicitly**.

(Tian-Yuan Wan et al., 2003)

# Simultaneous measurement of boiling heat flux — Synchronized local heat flux and surface temperature distributions

