



# NUTTAWADEE INTACHAI

DEPARTMENT OF RADIOLOGIC TECHNOLOGY



☎ 053-949307

✉ [nuttawadee.i@cmu.ac.th](mailto:nuttawadee.i@cmu.ac.th)

## Education

- 2024 Doctor of Philosophy (Biomedical Sciences) Chiang Mai University
- 2019 Master of Science (Medical Radiation Sciences) Chiang Mai University
- 2010 Bachelor of Science (Radiologic Technology) Chiang Mai University

## Research areas of interest

Glass and Crystal scintillator  
Scintillation material  
X-ray imaging  
Radiation shielding material

## Research theme

My research focuses on the development and characterization of advanced glass scintillators and luminescent materials for medical imaging and radiation detection applications. I specialize in rare-earth-doped glass systems, including borate, silicate, phosphate, and oxyhalide glasses, with an emphasis on optimizing scintillation and photoluminescence performance. My work integrates material synthesis, structural and optical characterization, and X-ray imaging evaluation. I am particularly interested in synchrotron-based X-ray tomography, detector performance, and structure–property relationships for next-generation medical imaging materials.

## Publication

- 2026 Intachai N, Rachniyom W, Wantana N, Thanyaphirak W, Khrongchaiyaphum F, Sarumaha CS, Pakawanit P, Phoovasawat C, Kanjanaboos P, Choodam K, Kim HJ, Tariwong Y, Neamin H, Kothan S, Kaewkhao J. High quantum yield Tb<sup>3+</sup> doped glass scintillator based on Ta<sub>2</sub>O<sub>5</sub> and La<sub>2</sub>O<sub>3</sub> in mixed glass former for synchrotron and medical x-rays imaging applications. *Radiat Phys Chem.* 2026;238 Article number 113113.
- 2025 Intachai N, Rachniyom W, Angnanon A, Wantana N, Kim HJ, Tungjai M, Kothan S, Kaewkhao J. Enhancement mechanisms of luminescence and scintillation behaviors in Tb<sup>3+</sup>-doped silicoborate glass through Gd<sub>2</sub>O<sub>3</sub> addition. *J. Lumin.* 2025;288 Article number 121549.
- 2025 Rachniyom W, Intachai N, Kothan S, Wantana N, Sarumaha CS, Pakawanit P, Phoovasawat C, Phongsa A, Yasaka P, Thanyaphirak W, Kanjanaboos P, Kim HJ, Chanlek N, Kaewkhao J. Fabrication of Eu<sub>2</sub>O<sub>3</sub> doped in high density and transparent silicoborate scintillating glass for synchrotron X-ray radiographic imaging application. *Ceram. Int.* 2025;51(16):22653-62.