Laser-Induced Fluorescence Thermography Measurements of Flow Boiling Heat Transfer
Faculty: S. V. Garimella  Student: B. J. Jones

Objective
Explore the heat transfer mechanisms associated with single bubble growth under forced-convection conditions using a laser-induced fluorescence thermography technique.

Impact
- Experiments will further elucidate the important heat transfer mechanisms occurring during nucleate flow boiling.

Approach
- Develop a laser-induced fluorescence measurements system for studying temperature fields around a growing vapor bubble.
- Conduct measurements and analysis to ascertain the important mechanisms behind nucleate flow boiling heat transfer.

Selected Publications
- B.J. Jones and S.V. Garimella, Laser-induced fluorescent thermography measurements of nucleate flow boiling, 14th IHTC, 2010 (submitted abstract).
- B.J. Jones and S.V. Garimella, Measurements of temperature field around a growing vapor bubble using laser-induced fluorescence thermography, ITherm, 2010 (abstract accepted).