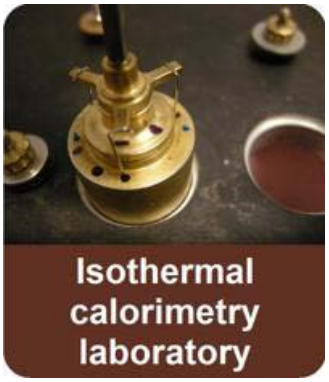
Laboratories at Building Materials, Lund University, Sweden



Isothermal calorimetry laboratory

Isothermal calorimetry is the measurement of heat and heat production rate from different processes (physical, chemical, biological) under constant temperature conditions. Different principles can be uses for such instruments; at Lund University we have a long tradition in designing heat conduction calorimeters, but we also work with quasi-adiabatic instruments. Samples usually have a volume between 0.5 and 20 mL.

The research group that manages the isothermal calorimetry laboratory at Building Materials is Lund Isothermal Calorimetry Group (LICG), which consists of Lars Wadsö and Yujing Li, and all those persons (master, PhD, PostDocs and senior scientists) who use the LICG equipment.

The main aim of LICG is to design instruments and methods to help other researchers perform their work more efficiently. As we build instruments, the whole lab is full of calorimeters and parts of calorimeters; we are specialists in putting things together in novel ways to make new types of measurements possible. Below is a partial list of the equipment that we have

- Five TAM Air calorimeters (20 mL, eight channels each)
- Eight admix ampoules for the TAM Air
- One BAM thermostat with four microcalorimeters (3-4 mL)
- One BAM thermostat with a sorption microcalorimeter (Markova, Sparr et al. 2001; Wadsö and Markova 2002)
- A thermostat with three microcalorimeters (20 mL)
- One 16 channel calorimeter (3mL)
- One sorption calorimeter with an air thermostat
- One isothermal calorimeter that measures at four different temperatures (Wadsö, Salamanca et al. 2011)
- Three student calorimeters (20 mL, four channels each) (Wadsö, Smith et al. 2001; Wadsö and Li 2008; Wadsö, Li et al. 2011)

For more information see the homepage of LICG.

Contact

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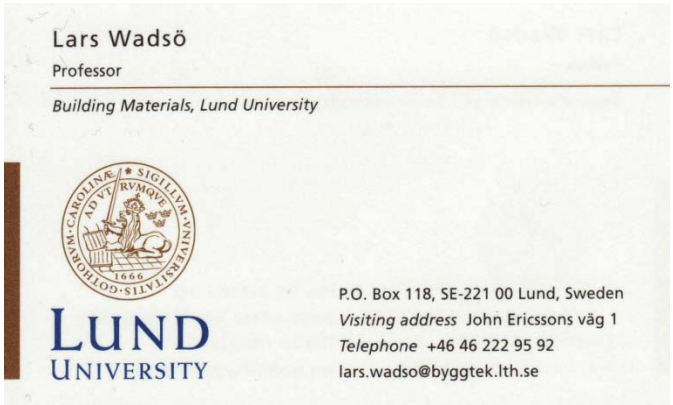

References

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