

Working procedure FURNACE ROOM (Room: 5118.-137, Solid State Materials for electronics)

All authorized users who want to work in the furnace lab of the SSME need to fill an Experimental form (these are to be found at <http://www.ssme.nl/en/facilities/safety-documents.html>). **The form should be signed by you and your supervisor, as well as by Jacob Baas (Group technician, ext. 4417, Room: 5118.-143).** Once the duly signed form is ready, the planning of the experiment can be done safely and efficiently.

The persons in-charge of the training and maintenance of the furnace lab are **Jacob Baas (Group technician, ext. 4417, Room: 5118.-143)** and a PhD student, who will be on a rotation basis each year. From Sept. 2014 until Sept. 2015, the designated PhD student in-charge is **Aisha Aqeel (ext. 4412, Room: 5117.0021).**

All authorized users must receive instructions from the persons responsible and demonstrate an understanding of the safety and the operation of the furnaces before starting unsupervised work.

Users need to be aware that contaminating a furnace can have very serious consequences and impact very negatively on the work of other researchers, for whom sample purity is often crucial. Users should carefully check the volatility of their materials and set the maximum working temperatures accordingly. Users working with volatile chemicals should work under the fume hood and request their own furnaces or quartz tubes, which should be properly labelled. If nevertheless, the user is aware that a furnace could have been contaminated, he/she should immediately communicate this to the persons in charge (see above), such that the furnace/tube can be adequately dealt with.

Only authorized and specially trained individuals are allowed to make repairs or remedy malfunctions of the furnaces.

During the training you will make yourself familiar with the personal safety tools and protection. Before using the furnaces, you should collect all necessary items in advance.

Opening furnace doors is **ONLY** allowed when the furnace is at room temperature or with personal protection and a second person in furnace room.

Sealing Glass Ampules or Samples under Vacuum

Warning ! - There are many safety issues that need to be addressed before performing glass ampule/sample seal-offs under vacuum. High pressures, chemical properties/exposure and the process itself can be hazardous. A review of the sample material properties under vacuum and heat should be conducted prior to any attempts of a vacuum seal-off. Consult with the lab in-charge before attempting any of these steps in the laboratory. Use appropriate precautions such as proper eye protection and/or safety/blast shields as needed.