Laboratory Experiment Proposal Submission

Experimental Details

Experiment location:	E131
Experiment title:	Annealing LaCl3-3LiBH4 (or LaI3-3LiBH4)
Experiment date:	14 Aug 2013
Experiment contactname:	Nina Verdal x 6027, Terry Udovic x 6241
Experiment contactphone:	315 882 7265
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Chemicals Used

Chemical Name	Health	Flammability	Reactivity	Special Hazards
Lithium Borohydride	3	4	2	NONE
Lanthanum Chloride	2	0	0	
Lanthanum Iodide	2	0	0	NONE
Hydrogen Gas	0	4	0	NONE
Helium Gas	0	0	0	NONE

Reactants and Resulting Samples

Chemical Name	Hazardous?	Known Hazards
LaCl3-3LiBH4	Y	reacts with water
LaI3-3LiBH4	Y	reacts with water

Required Safety Equipment

- ☑ Glove Chemical
- ☑ Glove Hot
- ☑ Safety Glasses

Required Laboratory Equipment

- ☑ Glovebox
- ☑ Chamber Furnace
- ☑ Vacuum Pump

Experimental Write Up

1. Inside the glove box (E131) the powdered sample will be loaded into a foil pouch and then into a steel, air-tight cell with valve
2. Cell (92 cm3 volume) will be connected to Sieverts apparatus (in E133) or other gas-regulated manifold
3. Helium from glove box will be evacuated from cell and replaced with hydrogen gas at 10 bar pressure (~ 10 atm)
4. Powder inside steel cell will be heated to 200 C in a tube furnace or oven for 30 min
5. Sample will be allowed to cool. At room temperature the hydrogen gas will be evacuated replaced with 1 atm helium gas
6. The sample and cell will be transferred to the glove box to load the powder into an aluminum cell for data collection.

[procedure previously executed in: J. Phys. Chem. C, 2013, 117 (29) 14972]

Experimenter Signature: _____ Date: _____

Lab Responsible Signature: _____ Date: _____