

# NiBi<sub>3</sub> CVT Growths

July Update: JAH007-009

# JAH007

<-- open

<-- 14cm -->

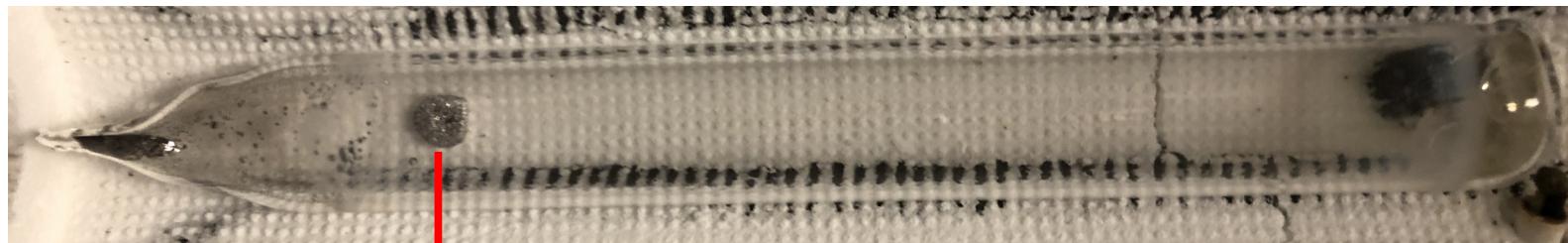
700 °C



\*cooled slowly over 35 hrs

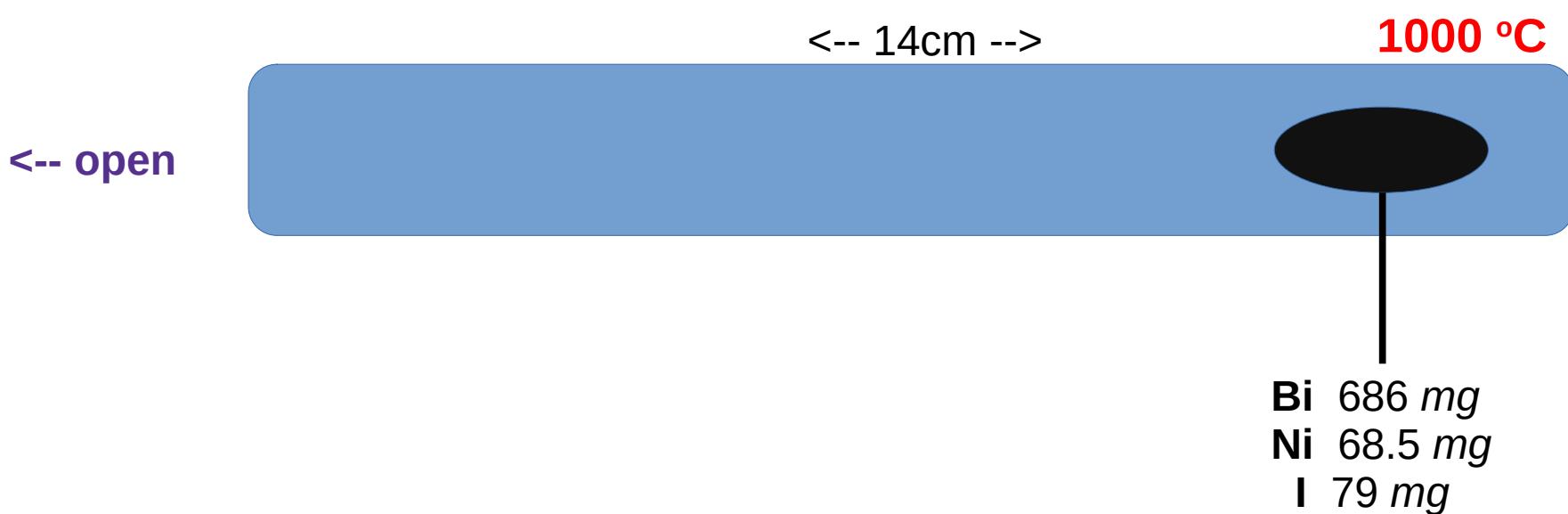
Bi 687 mg  
Ni 66.0 mg  
I 80 mg

# JAH007



(Yellow color is a camera saturation artifact)

# JAH008



# JAH008



# JAH009

825 °C

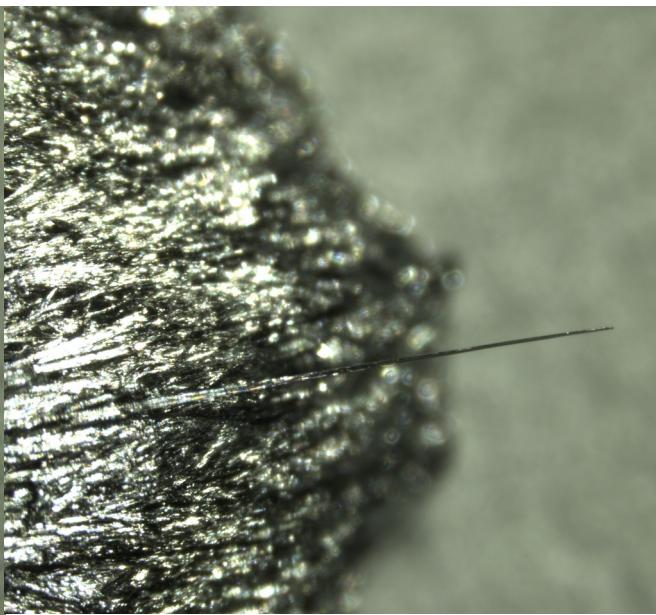
<-- 20 cm -->

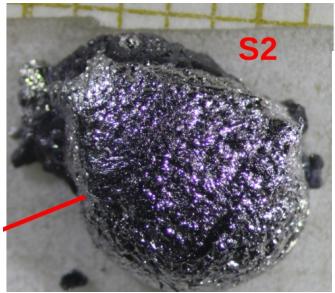
875 °C



Bi 688 mg  
Ni 66.8 mg  
I 159 mg

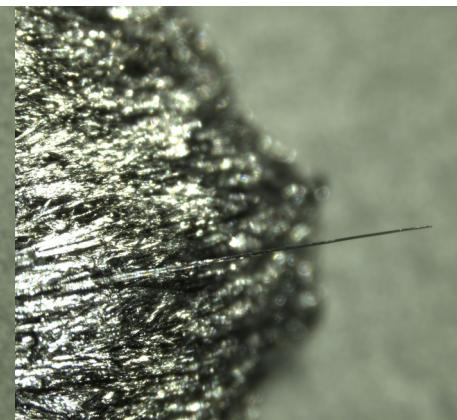
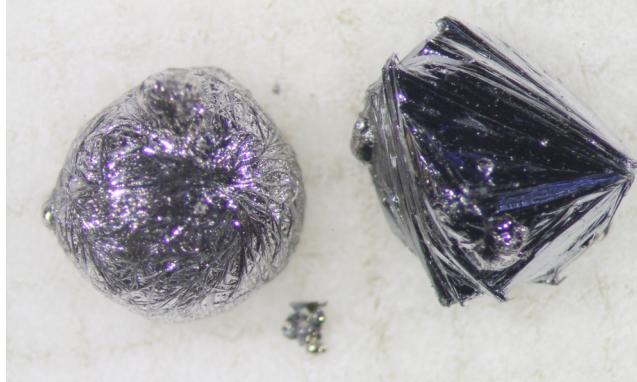
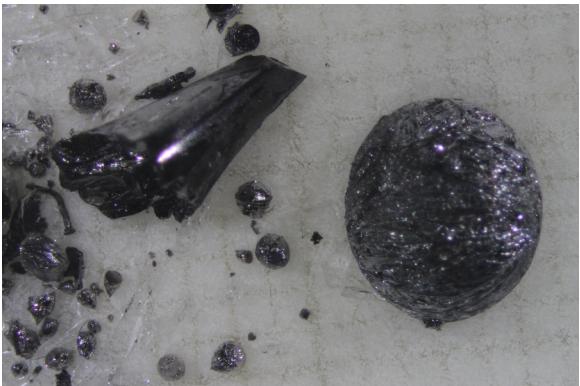
# JAH009

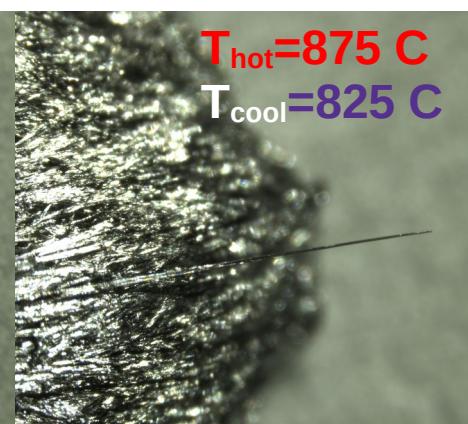
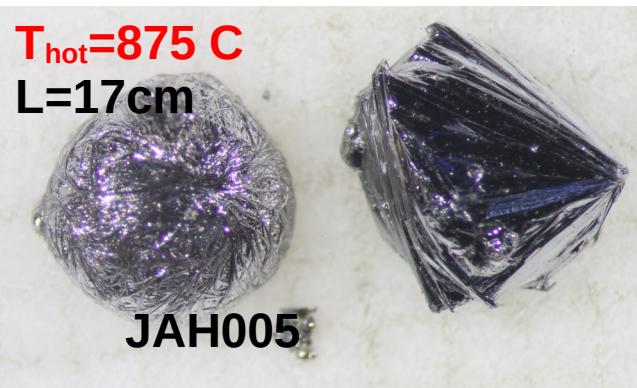
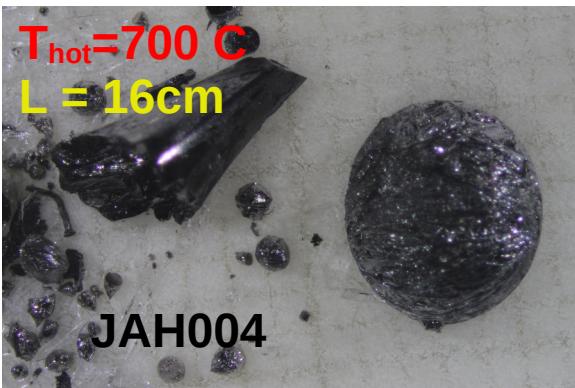
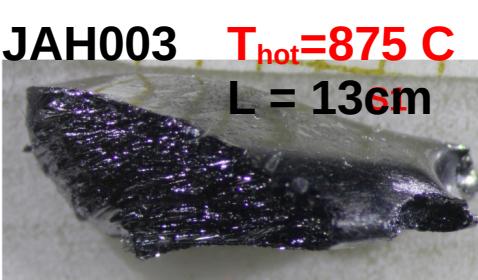
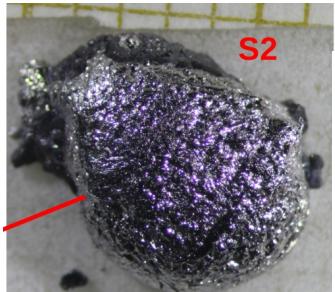




## RECAP OF GROWTHS

(without labels in the way)





## RECAP OF GROWTHS

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	700 °C	875 °C	1000 °C
Single zone 13-14cm	JAH007	JAH003	
Single zone 16-17cm	JAH006* JAH004	JAH005	JAH008
3-zone $\Delta T = 50\text{cm}$		JAH009	

\*Pre-reacted NiBi<sub>3</sub>

Poorly crystallized  
Thin needles  
Thick needles

# Discussion: Future Growths

- Less iodine
- Use Cl as transport agent
- Variable cold zone: from  $\Delta T=0$  to  $\Delta T\sim 40^\circ C$
- Force nucleation sites by shaking ampoule to get some of the powder on the cool end