



Disruption of an Aligned Dendritic Network by Bubbles During Re-Melting in a Microgravity Environment

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BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 24 pages. Dimensions: 9.7in. x 7.4in. x 0.1in. The quiescent Microgravity environment can be quite dynamic. Thermocapillary flow about large static bubbles on the order of 1mm in diameter was easily observed by following smaller tracer bubbles. The bubble induced flow was seen to disrupt a large dendritic array, effectively distributing free branches about the solid-liquid interface. Small dynamic bubbles were observed to travel at fast velocities through the mushy zone with the implication of bringing detaching redistributing dendrite arm fragments at the solid-liquid interface. Large and small bubbles effectively re-orient-re-distribute dendrite branches/arms/fragments at the solid liquid interface. Subsequent initiation of controlled directional solidification results in growth of dendrites having random orientations which significantly compromises the desired science. This item ships from La Vergne, TN. Paperback.



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