



California Science Center
CALIFORNIA STATE SCIENCE FAIR
2001 PROJECT SUMMARY

Your Name (List all student names if multiple authors.) David A. Levi	Science Fair Use Only
Project Title (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) Modifying Crystal Growth: The Effect of Supersaturation	J0419
	Division <input checked="" type="checkbox"/> Junior (6-8) <input type="checkbox"/> Senior (9-12)
Preferred Category (See page 5 for descriptions.) 4 - Chemistry	
Abstract (Include Objective, Methods, Results, Conclusion. See samples on page 14.) Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges. Objectives: My project determines how, if a crystal environment and/or level of supersaturation is changed, the characteristics of a growing crystal will change. Materials and Methods: 3 main types of experiments utilizing the crystal growing methods of cooling, sublimation, and evaporation. These methods had several subexperiments which changed the rate of cooling, created convection currents, and changed the rate of supersaturation from a given control in each of these methods. R esults: Changing the environment and rate of supersaturation in which the crystals grew created some very noticeable contrasts. When the rate of cooling was increased, smaller crystals grew. Convection helps control supersaturation. Growth by sublimation was enhanced by increased supersaturation involving crushing the source material to increase sublimation rate. Conclusion: When the environment and rate of supersaturation are altered even slightly the growing crystals characteristics can change dramatically.	
Summary Statement (In one sentence, state what your project is about.) My project deals with the effect of changing supersaturation conditions on crystal growth.	
Help Received in Doing Project (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4. Father helped with advice; Used lab equipment at UCSB under the supervision of Dr. Levi.	