

CONTENTS

	PAGE	RUSS. PAGE
Foreword	vii	3
I. Theoretical and Experimental Investigations		
The Thermodynamics of Crystallization Pressure. <u>V. Ya. Khairnov-Mal'kov</u>	3	5
Experimental Measurement of Crystallization Pressure. <u>V. Ya. Khairnov-Mal'kov</u>	14	17
The Growth Conditions of Crystals in Contact with Large Obstacles. <u>V. Ya. Khairnov-Mal'kov</u>	20	26
The Crystallization of Alum from Water in an Ultrasonic Field. <u>A. P. Kapustin and V. E. Kovalyunaite</u>	29	40
The Adsorption of Thionin Blue by Growing Lead Nitrate Crystals, and the Effects on the Morphology of the Crystals . <u>E. N. Slavnova</u>	32	44
The Growth Forms of Thiazine Dye Crystals. <u>N. M. Melankholin</u>	36	49
The Green and Brown Colors of Synthetic Quartz Crystals. <u>L. I. Tsinober, L. G. Chentsova, and A. A. Shternberg</u>	45	61
The Crystallization of KI in Contact with Biotite and Muscovite. <u>I. E. Kamentsey</u>	50	68
Determination of Surface Energies of Crystals from Equilibrium States. <u>A. V. Belyustin</u>	52	70
II. Growing Monocrystals (Apparatus, Methods, and Accessory Operations)		
Growing Calcite and Other Carbonates. <u>Jan Kašpar</u>	57	73
Growing Monocrystals of Anthracene. <u>N. N. Spendiarov and B. S. Aleksandrov</u>	61	78
The Orientations of Monocrystals of Certain Ferrites. <u>A. A. Popova</u>	66	84
Crystallization of Ferrites from Liquid and Vapor Phases. <u>V. A. Timofeeva and A. V. Zalesskii</u>	69	88
The Growth of Barium Titanate Crystals from a Barium Chloride Melt. <u>V. A. Timofeeva</u>	73	95
A Crystallizer for Growing Organic Crystals from the Melt. <u>L. M. Belyaev, G. S. Belikova, and G. F. Dobrzhanskii</u>	77	102
A New Type of Pistonless Compressor for Producing Very High Gas Pressures. <u>S. S. Boksha</u>	79	105
The Growth and Morphologic Symmetry of Benzophenone Crystals. <u>A. A. Chumakov</u>	82	109
Synthesis of Especially Pure Calcium and Barium Fluorides for Growing Optical Monocrystals. <u>I. A. Sinyukova and I. V. Stepanov</u>	86	115
The Effects of Cooling Conditions on the Formation of Dislocations in Germanium Crystals. <u>E. Yu. Kokorish</u>	89	120

CONTENTS (continued)

	PAGE	RUSS. PAGE
Guanidine Alum inum Sulfate Hexahydrate. Synthesis, Properties, and Monocrystal Growth. (Preliminary Communication). <u>I. S. Rez</u> and <u>L. A. Varfolomeeva</u>	93	126
The Crystallization of Germanium on Silicon and of Silicon on Germanium. <u>N. P. Kokorish</u> . .	97	132
The Growth and Uses of Gem-Grade Corundum Crystals. <u>S. K. Popov</u>	103	140
III. Review and Discussion Articles		
Dislocations in Germanium Monocrystals (Review). <u>E. Yu. Kokorish</u>	155	211
The Main Trends in the Study of Inorganic Crystals Containing Organic Impurities (Review). <u>E. N. Slavnova</u>	166	223
The Theory of the Crystallization of Steel. <u>P. S. Vadilo</u>	175	233