THIRD JOINT FRIENDS OF MINERALOGY - MINERALOGICAL SOCIETY OF AMERICA SYMPOSIUM

TUCSON, ARIZONA FEBRUARY 13 - 14, 1977

Crystal Growth and Habit Symposium - Session I (February 13, 8:30-12:00)

Chariman: Gordon E. Brown (Stanford University)

1. J. D. H. Donnay and Gabrielle Donnay (Department of Geological Sciences, McGill University, Montreal, Canada): *Crystal Geometry and Crystal Habit* (8:30-9:00)

2. Konrad B. Krauskopf (Department of Geology, Stanford University, Stanford, Ca.): *Conditions of Crystallization in Surface and Near-Surface Environments* (9:00-9:30)

3. Paul J. Shlichta (Materials Division, MSA, Inc., San Pedro, Ca.): *Effects of Convection on Crystal Morphology and Perfection* (9:30-10:00)

4. Clifford Frondel (Department of Geological Sciences, Harvard University, Cambridge, Mass.): *Polar Orientation of Quartz Fibers at Interfaces* (10:00-10:30)

5. Gordon E. Brown (Department of Geology, Stanford University, Stanford, Ca.): *The Silicate Melt and the Genesis of Magmatic Crystals* (10:30-11:00)

6. Gary E. Lofgren (NASA Johnson Space Center, Houston, Texas): *The Nature of Growth Processes for Silicate Minerals from the Melt* (11:00-11:30)

7. Philip E. Long (NASA Johnson Space Center, Houston, Texas): *Zoning and Morphology of Synthetic Alkali Feldspar: Implication for the Origin of K-Feldspar Megacrysts* (11:30-12:00)

LUNCH BREAK (12:00-1:30)

Crystal Growth and Habit Symposium - Session II (February 13, 1:30-5:00)

Chairman: Kurt Nassau (Bell Labs)

1. Eugene E. Foord (U. S. Geological Survey, Denver, Colo.): *Morphology and Growth Characteristics of Pegmatite Pocket Tourmaline* (1:30-2:00)

2. Walter E. Dibble, Jr. and William A. Tiller (Departments of Geology and Materials Sciences and Engineering, Stanford University, Stanford, Ca.): *Deducing Historical Thermodynamic Environments from Features of Aqueous Grown Crystals, Part I: Empirical and Experimental Evidence* (2:00-2:30)

3. William A. Tiller and Walter A. Dibble, Jr. (Departments of Material Science and Engineering and Geology, Stanford University, Stanford, Ca.): *Deducing Historical Thermodynamic Environments from Features of Aqueous Grown Crystals, Part II: Theoretical Viewpoint* (2:30-3:00)

4. Jun Ito and Anthony R. Kampf (Department of Geophysical Sciences, University of Chicago, Chicago, Ill.) *Contribution of the High-Temperature Solvent Growth to the Crystal Chemistry of the Major Rock-Forming Silicates:Feldspars, Pyroxenes and Olivines* (3:00-3:30)

5. Kurt Nassau (Bell Laboratories, Murray Hill, N.J.): *The History of Emerald Synthesis* (3:30-4:00)

6. William S. Wise and R. W. Tschernich (Department of Geological Sciences, University of California, Santa Barbara, Ca., and Zeolite Research and Exploration, Everett, Wash.): *Habits and Crystal Forms of Thomsonite* (4:00-4:30)

General Discussion (4:30-5:00)

MSA-FM Banquet (February 13, 8:00 -)

Plenary Speaker, Kurt Nassau (Bell Laboratories):

Gems: Science, Beauty and Deception

General Session I (February 14, 9:00-12:00)

Chairman: Clifford Frondel (Harvard University)

1. John Sinkankas (San Diego, Ca): *Early Crystal Illustration* (9:00-9:30)

2. Kurt Nassau and B. E. Prescott (Bell Laboratories, Murray Hill, N.J.): *Growth-Induced Irradiation-Developed Pleochroic Anisotropy in Quartz* (9:30-10:00)

3. Kenneth J. Brock and Karen L. Brunson (Department of Geosciences, Indiana University Northwest, Gary, Indiana, and Department of Geology, Indiana University Bloomington, Bloomington, Indiana): *Zoned Anisotropic Ca-Garnet from Garnet Hill, Calaveras County, California* (10:00-10:30)

4. George R. Rossman (Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, Ca.):*Non-essential Components of Minerals* (10:30-11:00)

5. Kathleen M. Parkin and Bruce M. Loeffler (Department of Earth and Planetary Sciences, Massachusetts Institute of Technology, Cambridge, Mass.):*What Mossbauer Spectroscopy Can Tell Us About Minerals* (11:00-11:30)

6. William S. Wise (Department of Geological Sciences, University of California, Santa Barbara, Ca.):*Origin of the Minerals of the San Benito Gem Mine, California* (11:30-12:00)

LUNCH BREAK (12:00 - 1:30)