

MASTERS' DEGREES AWARDED, 1947 AND 1948

June, 1947

ANDERSON, ETHEL IRENE, B.S., Ursinus College.

Master of Science, Chemistry. Thesis: Condensation of Alpha-Carboethoxy-Gamma-Butyric Lactone and Amidines.

COX, JAMES CARL, JR., B.S., West Virginia Wesleyan College.

Master of Science, Chemistry. Thesis: Intramolecular Rearrangement of Diethyl-Tertiary-Butylcarbinol and Related Studies.

JOCHEN, EDWIN AUGUST, B.A., State Teachers College, Millersville, Pa.

Master of Arts, History.

JOHNSTON, HAZEL VIOLA, B.S., University of Delaware.

Master of Science, Education. Thesis: Communication between Home and School on the Progress of the Child.

KIRSCH, FRANCIS WILLIAM, B.Ch.E., University of Delaware.

Master of Chemical Engineering. Thesis: The Structure of Gas Streams and Flames.

LI, TSIANG KWANG, B.S., University of Nanking.

Master of Science, Chemistry. Thesis: Improvement of Water Absorption of Soybean Protein.

LIMPEROS, GEORGE, B.S., University of Delaware.

Master of Science, Chemistry. Thesis: Ring Structure as a Factor in Barbiturate Formation.

MAXWELL, JANE LEWIS, B.S., Randolph-Macon Woman's College.

Master of Science, Chemistry. Thesis: Polymerization of Styrene with Linoleic Esters.

MCNEIL, NELLIE HALL, B.S., University of Pennsylvania.

Master of Science, Education. Thesis: The Teaching of Social Studies in the Junior High School.

NIXON, WINIFRED HARPER, B.A., Scripps College.

Master of Arts, Education. Thesis: Faculty Load Survey, University of Delaware (Fall Semester 1946-47).

ROSENBERG, RONALD, B.S., Franklin and Marshall College.

Master of Science, Chemistry. Thesis: Bromination of Ethyl Arylcyanopyruvates.

STIEGLER, FREDERIC LUTHER, B.S., University of Delaware.

Master of Chemical Engineering. Thesis: Moisture Sorption and Drying Rates in Vulcanized Fibre.

September, 1947

BARRY, EDWIN McCORMICK, B.S., Syracuse University.

Master of Arts, Economics. Thesis: Economic Significance of the Fisheries to Calvert County, Maryland.

BRITTINGHAM, HERMAN OSCAR, B.S., Rutgers University.

Master of Science, Education. Thesis: Development of Industrial Arts in the Schools of Delaware to 1947.

CLIFFORD, ALAN FRANK, A.B., Harvard University.

Master of Science, Chemistry. Thesis: The Chemical Isolation of Samarium from Lanthanide Mixtures.

COLEMAN, JAMES JOSEPH, B.S., Notre Dame University.

Master of Science, Chemistry. Thesis: Oxidation of Tertiary Alcohols.

DUKES, REESE EDWIN, B.A., University of Delaware.

Master of Arts, Education. Thesis: Relationship of Variations in Reading Ability to Variations in English Ability, Mental Ability, and Personality Development of 230 Senior High School Students.

GOODWIN, MANFRED EDWIN, A.B., Johns Hopkins University.

Master of Science, Chemistry. Thesis: Studies in Acid Catalyzed Aliphatic Reactions.

HUBER, MELVIN LEFEVER, B.S., Franklin and Marshall College.

Master of Science, Chemistry. Thesis: Studies in the Oxidation of Triphenylmethane and Triphenylcarbinol.

JENKINS, RODMAN, B.S., Massachusetts Institute of Technology.

Master of Chemical Engineering. Thesis: Two-Phase Two-Component Flow of Water and Air.

KAPP, NUMER MARTIN, B.S., Grove City College.

Master of Chemical Engineering. Thesis: Stability, Size and Shadowgraph Investigations of Butane-Air Flames.

KAUFFMAN, GEORGE EMMETT CLARENCE, B.S., Washington College.

Master of Science, Education. Thesis: Mathematics Needed for Secondary School Physics.

KERNEN, ARTHUR RAYMOND, JR., B.S., Notre Dame University.

Master of Science, Chemistry. Thesis: Studies of the Oxidations of Aliphatic Alcohols.

LANGERAK, ESLEY OREN, B.S., Central College, Pella, Iowa.

Master of Science, Chemistry. Thesis: The Chromic Anhydride Oxidation of Some Secondary Aliphatic Alcohols.

MACLARY, RACHEL ELISABETH, B.S., University of Delaware.

Master of Science, Education.

MCBRIDE, JOSEPH JAMES, JR., B.S., St. Joseph's College.

Master of Science, Chemistry. Thesis: The Chlorination of Trimethylchlorosilane and Related Studies.

MERTES, THOMAS SHANE, B.Ch.E., University of Delaware.

Master of Chemical Engineering. Thesis: Vapor-Liquid Equilibrium and Thermodynamic Properties Data on the Systems n-Butane-Furfural, Isobutane-Furfural, 1-Butene-Furfural, n-Butane-1-Butene-Furfural, and Isobutane-1-Butene-Furfural.

NICHOLS, LESTER PATTERSON, B.S., Rhode Island State College.

Master of Science, Plant Pathology. Thesis: The Fungicidal Value of Several Dithiocarbamate Fungicides in the Laboratory and Its Relation to Their Field Performance.

NELSON, DORSEY COOK, B.S., Washington College.

Master of Science, Chemistry. Thesis: The Solvent Effect on Liquid Junction Potentials.

OMOHUNDRO, GEORGE ALFRED, B.S., Purdue University.

Master of Chemical Engineering. Thesis: Heat Transfer and Fluid Friction During Viscous Flow Across Banks of Tubes.

POTTER, ARTHUR MURDOCK, B.P.E., M.Ed., Springfield College.

Master of Science, Education. Thesis: Survey of Educational and Training-on-the-Job Opportunities for Veterans in the State of Delaware.

TAYLOR, HUGH ALTON, B.S., Michigan State College.

Master of Science, Chemistry. Thesis: Reaction Rates of Isocyanates and Alcohols: Phenyl Isocyanate and n-Butyl Alcohol.

WARD, ALFRED DUDLEY, B.A., University of Delaware.

Masters of Arts, Sociology. Thesis: Labor Unions and Social Change: A Study of the Social Influences of the Labor Movement.

WEBER, PETER GERARD, B.A., St. Joseph's College.

Master of Arts, Education. Thesis: Factors Affecting Poor Relationships of School Children in Claymont, Delaware.

June, 1948

ABELES, JULIUS EMILE, B.A., Franklin and Marshall College.

Master of Arts, History. Thesis: The German Element in Wilmington from 1850 to 1914.

BERGEN, MARTIN JOHN, B.S., Massachusetts Institute of Technology.

Master of Mechanical Engineering. Thesis: A Critical Analysis of Job or Position Evaluation as It Pertains to a Small Sample of a Homogeneous Engineering Group.

BERNHARDT, ERNEST CARL, B.S., Purdue University.

Master of Chemical Engineering. Thesis: The Scratch Resistance of Plastic Materials.

BESWICK, WILLIAM REID, B.S., West Chester State Teachers College.

Master of Science, Mathematics. Thesis: Heat Conductivity in an Electrical Conductor.

CARMODY, THOMAS WALSH, B.S., Massachusetts Institute of Technology.

Master of Chemical Engineering. Thesis: Measurement of the Gas Film Mass Transfer Coefficient in a Bubble-cap Tower.

CHEN, LESLIE HUNG, B. S., Chiao Tung University.

Master of Mechanical Engineering. Thesis: Performance Obtainable in a Small 4-Cycle Gasoline Engine Using 25% Alcohol-Gasoline Blend as Fuel without Any Change in Engine other than Carburetor.

COPELAND, NORMAN ARLAND, B.S., Massachusetts Institute of Technology.

Master of Chemical Engineering. Thesis: Heat Transfer to Granular Materials: Settled Beds Moving Downward over Horizontal Tubes.

CUSTER, THOMAS GOODWIN, B. A., Swarthmore College.

Master of Science, Chemistry. Thesis: Polymerization of the Oleic Acid Ester of 1, 2-dihydroxy-3-butene.

DAVIS, EDWARD STOWMAN, B.S., Lehigh University.

Master of Chemical Engineering. Thesis: Heat Transfer in Flow Across Unbaffled Tube Banks.

DEFRIES, MYRON GEORGE, B.Ch.E., City College of New York.

Master of Chemical Engineering. Thesis: Water Absorption of Plastic Laminates.

FOSTER, SAMUEL PHILIP, B. E., Yale University.

Master of Chemical Engineering. Thesis: Shadowgraph Investigations of Gases Mixing in Square Ducts.

HAUER, HARVEY JOSEPH, B.S., Drexel Institute of Technology.

Master of Chemical Engineering. Thesis: The Effect of Average Column Temperature upon the Plate Efficiency in the Separation of iso-butane and 1-butene by Extractive Distillation with Dry Furfural.

HITCHEN, MARIE, B.S., Temple University.

Master of Science, Education. Thesis: The Climate of Affection and Its Effect on the Growing Child.

HULL, HAROLD LEGRAND, B.Ch.E., University of Florida.

Master of Chemical Engineering. Thesis: Fluid Friction in Flow Across Unbaffled Tube Banks.

JENKINS, LILLIAN COTTY, B.S., University of Delaware.

Master of Science, Education, English. Thesis: A Study of the Responsibility of the Home, the School, and the Community in Social Hygiene Education.

KASKEY, GILBERT, B.A., University of Pennsylvania.

Master of Arts, Mathematics. Thesis: A Non-rigorous Determination of the Critical Radius of a Heat-generating Cylinder.

KELLER, NORMAN ALLAN, B.S., Muhlenberg College.

Master of Science, Chemistry. Thesis: A New Technique for the Analysis of Urinary Sodium Pregnanediol Glucuronidate.

KNARR, ROBERT LEE, B.S., Franklin and Marshall College.

Master of Science, Chemistry. Thesis: Oxidation of 3-Methyl Valeric Acid.

LAYTON, WALTER JOHN, B.A., University of Delaware.

Master of Arts, Mathematics. Thesis: The Mathematical Theory of Huygens' Principle as Applied to Sound Waves.

MARSH, SAM, B.Ch.E., New York University.

Master of Chemical Engineering. Thesis: Heat Transfer to Granular Materials; Free Fall of Solid Particles Across Steam-heated Horizontal Tubes.

MASON, SHIRLEY JUNE, B.S., George Washington University.

Master of Science, Chemistry. Thesis: The Rate of Reaction of Alcohols with Isocyanates: II Sec-butyl and Other Alcohols with Phenyl Isocyanate and Hexamethylene Diisocyanate.

MCCARTNEY, ROBERT FRANCIS, B.Ch.E., Rensselaer Polytechnic Institute.

Master of Chemical Engineering. Thesis: Plate Efficiencies in the Separation of C_4 Hydrocarbons by Extractive Distillation.

MEDILL, MARY AUGUSTA, B.A., University of Delaware.

Master of Arts, Biology. Thesis: Studies on a Fungus of the *Epiccum Vulgare* Type with Special Reference to Growth, Pigmentation and Antibiotic Action.

MEISENHEIDER, WILLIAM CROSBY, B.S., Franklin and Marshall College.

Master of Science, Chemistry. Thesis: Polymerization of Saturated Fatty Acid Esters of 1, 2-dihydroxy-3-butene.

MEISER, CHARLES HERBERT, JR., B.S., Washington College.

Master of Science, Chemistry. Thesis: Chlorination Reactions to Produce 1, 2, 3, 4, 5, 6-hexachlorocyclohexane.

NAPHRAY, JIT SINGH, B.S., Purdue University.

Master of Mechanical Engineering. Thesis: Personnel Management in U. S. A. and India.

NELSON, AUGUST CARL, JR., B.S., Massachusetts Institute of Technology.

Master of Science, Mathematics. Thesis: A Statistical Analysis of a Chemical Engineering Experiment.

OWEN, JAMES BISHOP, B.A., Lafayette College.

Master of Arts, Education, Social Studies. Thesis: Some Factors in Initiating the Community School Concept.

PEARCE, EARL JOY, B.S., Michigan College of Mining and Technology.

Master of Chemical Engineering. Thesis: An Equilibrium Study of the Furfural-water Binary System.

PERKINS, JAMES FRANK, B.S., Pennsylvania Military College.

Master of Science, Chemistry. Thesis: Condensation of 5-bromoethylbarbiturates with Gamma-N,N-dialkylaminopropylamines.

PRUCINO, LAWRENCE JOSEPH, B.A., University of Delaware.

Master of Science, Chemistry. Thesis: Reactions of Beta-benzopinacolone with Grignard Reagents.

SMITH, HARRY, JR., B.A., University of Delaware.

Master of Arts, Mathematics. Thesis: An Elliptic Distribution and Application.

WARREN, JAMES COULLIE, B.A., University of Delaware.

Master of Arts, Biology. Thesis: The Haploid-diploid Relationships for the Mutant Type Gynoid of *Habrobracon Juglandis*.

WILD, WILLIAM LOUIS, B.A., Lafayette College.

Master of Arts, Education, Sociology. Thesis: Educational Factors Related to Truancy.

WOOD, DANIEL WESLEY, B.S., University of Delaware.

Master of Science, Education, Mathematics. Thesis: The Application of the Philosophy of Experimentalism to the Teaching of Mathematics in Secondary Schools.

September, 1948

BICKING, JOHN BEEH, B.S., Drexel Institute of Technology.

Master of Science, Chemistry. Thesis: Syntheses of 5-Alkyl-5-B-Mercaptoethylbarbituric Acid.

BIRD, ALBERT BRITTON, B.A., University of Alabama.

Master of Arts, History. Thesis: The Abolition of Flogging in the United States Navy.

BONNET, WILLIAM EUGENE, B.S., Drexel Institute of Technology.

Master of Chemical Engineering. Thesis: Heat Transfer Coefficients for Boiling C_4 Hydrocarbon-Furfural Mixtures Inside Vertical Tubes.

BURTON, ALBERT WAYNE, B.A., University of Delaware.

Master of Arts, Education, Science. Thesis: A Study of Physical Facilities and Materials of Instruction of Delaware Public Schools.

CLAYTON, JON MITCHELL, B.A., Asbury College.

Master of Arts, History. Thesis: Railroad Building in Delaware.

CLEMENTS, DONALD FORREST, B.S., Lafayette College.

Master of Electrical Engineering. Thesis: The Frequency Stability of Multivibrators.

DOUGHERTY, WALTER JOHN, B.Ch.E., University of Delaware.

Master of Chemical Engineering. Thesis: Subcooling in a Vertical Tube.

GOLIN, EDWIN, B.A., University of Delaware.

Master of Arts, Psychology. Thesis: The Relationship Between Emotionally-Toned Verbal Stimuli and the Speed of Perceptual Responses.

GREENSTEIN, JENNIE, B.S., Temple University.

Master of Arts, Education, History. Thesis: Identification as a Factor in the Development of Self in Children of a Fifth Grade Class.

GRIFFING, JUANITA COUCH, B.A., University of Delaware.

Master of Arts, Psychology. Thesis: Proactive Inhibition in Recognition as a Function of Distraction and Degree of Learning the Original Verbal Task.

HARPER, MILTON WILLIN, B.S., Lehigh University.

Master of Chemical Engineering. Thesis: Heats of Solution and Heat Capacities in the Binary Systems Methanol-Water and Acetone-Water.

HOLDEN, ELLSWORTH KISSAM, B.Ch.E., Yale University.

Master of Chemical Engineering. Thesis: Two-Phase Flow of Fluids: the Effect of Hydraulic Gradient on Stratified Flow.

HUBER, RICHARD DE VERE, B.S., Rensselaer Polytechnic Institute.

Master of Science, Chemistry. Thesis: Synthesis of Chloropropenylbarbituric Acids.

KUPPERIAN, JAMES EDWARD, JR., B.S., Webb Institute of Naval Architecture.

Master of Science, Physics. Thesis: Investigation of Spurious Counts from Geiger-Mueller Tubes.

LANCASTER, ROBERT VAUGHAN, B.A., University of Delaware.

Master of Arts, English. Thesis: Ella Middleton Tybout: Delawarean Woman of Letters.

LYNN, MARY ANGELA, B.S., West Chester State Teachers College.

Master of Arts, Education, English. Thesis: An Experiment in Free Writing in the Eighth Year English Program.

MARTIN, ERNA EULA, B.S., University of Virginia.

Master of Arts, History. Thesis: An Appraisal of School and Public Library Service in Kent County with Special Reference to Holdings in History.

ROBBINS, ROBERT C., B.S., Washington College.

Master of Science, Chemistry. Thesis: Vapor-liquid Equilibria for the Ternary System Carbon Tetrachloride-Benzene-Dioxane.

SCHWINGER, EDWARD RAYMOND, B.S., Shippensburg State Teachers College.

Master of Science, Education. Thesis: An Analysis of Pupil Maladjustment to Discover Educational Inadequacies.

SOMABHAI MOTIBHAI PATEL, B.S., Bombay University.

Master of Science, Chemistry. Thesis: Aminoethoxy Derivatives of Cellulose Ethers and of Cellulose.

THACKREY, JAMES DOW, B.S., Kansas State College.

Master of Mechanical Engineering. Thesis: Design, Construction and Operation of a Variable Pressure Combustion Test Apparatus.

THOMPSON, RALPH HENDERSON, B.A., Dickinson College.

Master of Arts, Education, History.

TROY, DANIEL JOSEPH, JR., B.Ch.E., Villanova College.

Master of Chemical Engineering. Thesis: Local Velocities in Jets and Flames.

WEICKSEL, JACOB ARNDT, B.S., Franklin and Marshall College.

Master of Science, Chemistry. Thesis: The Ternary System Magnesium Chloride-Dioxane-Water.