# Read at the 55th Semi-annual Meeting of the Institute on June 10th and 11th, 1955

- 1. Kiyoshi HIRABAYASHI: Optical Microscopic Studies of Chemically Colored Vinylon,
- 2. Kiyoshi HIRABAYASHI and Shu TAMAMURA: Section of Fibers for Electron Microscopy.
- 3. Noboru MORI and Koji FUKUMI: Studies on Fibers from the Mixture of Polyvinylalcohol and Acetalized Polyvinylalcohol with p-Dimethylamino-benzaldehyde.
- 4. Yasuo Sone: Effect of the Residual Acetate Groups on Swelling of Polyvinylalcohol.
- 5. Noboru OKADA: X-Ray Studies on the Reaction between Polyvinylalcohol and Iodine.
- 6. Waichiro TSUJI and Toshio OKADA: Studies on the Tribo-Electricity of Textile Fibers. (II). Measuring Apparatus.
- Waichiro TSUJI and Masazo IMAI: Chemical Treatment of Silk to prevent the Browning and Light Deterioration.
- 8. Waichiro TSUJI, Kiyoshi HIRABAYASHI, Ryozo KITAMARU, Takuhiko MOTOYAMA, Takao YAMASHITA and Masazo IMAI: Chemical Treatments of Cotton. (II). Partial Acetylation and Partial Carboxymethylation.
- 9. Yasuhiko NUKUSHINA and Ichiro SAKURADA: On the Crystal Structure of Cellulose. (II).
- Chugo KUJIRAI: After-effect and Effect of Light Intensity in the Photogradation of Cellulose by Ultraviolet Rays.
- 11. Hiroshi INAGAKI: Sedimentation Study of Sodium Carboxymethyl Cellulose by the PHYWE's Ultracentrifuge.
- 12. Hiroshi INAGAKI: On Newly Designed Light-scattering Apparatus and its Calibration.
- Keinosuke KOBAYASHI, Nobuo UTSUMI and Akira NAKAMURA: Crystalline States of Linear Polymers. (IV). On the Relation between Molecular Lengthes of Celluloses and their Crystallites.
- 14. Keinosuke KOBAYASHI and Yotsuo GOTO: Crystalline States of Linear Polymers. (V). Microfibril Formation of Synthetic Fibers.
- Takeo SUGANO, Naomi HAYAMA and Rempei GOTO: Interaction between Dyestuffs and Surfactants.
- Nishio HIRAI and Rempei GOTO: Types of Breaking by Elongation and Mechanical Model.
- Hiroshi AIDA, Soichi HAYASHI and Rempei GOTO: Brittle Fracture and Rate of Deformation of Visco-elastic Substances.
- 18. Ikutaro SAWAI, Kaoru UMEYA and Susumu KAWAMOTO: Dynamic Measurement of the Slip Casting.
- 19. Ikutaro SAWAI, Kaoru UMEYA and Tomozo NISHIKAWA: Effect of the Thixotropic Properties of Clay Slips on Casting.
- 20. Ikutaro SAWAI and Toshio MAKI: On the System of BaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>.
- 21. Sakae SHIMIZU, Fu:nio HIRAYAMA and Sunao OKAMOTO: Studies on Polystyrene Scintillator.
- 22. Sakae Shimizu, Sunao Okamoto, Fumio Hirayama and Hiroaki Akagi: A New Pulse-Height Analyzer Using a Single 6BN6 Gated-Beam Tube.
- 23. Akira KATASE and Hidekuni TAKEGOSHI: On the Cyclotron Oscillator.
- 24. Akira KATASE and Hidekuni TAKEGOSHI: On the Dee Voltage of the Cyclotron.
- 25. Toru TAKENAKA and Rempei GOTO: Negative Feedback Resonance Amplifier of Infrared Spectrometer.

- Rempei GOTO and Toru TAKENAKA: Hydrophilic Property and Infrared Absorption of Alcohols.
- Akira WATANABE, Fukuju TSUJI and Shizuo UEDA: Study on Surface Electricity.
  (XXI). On Capacity Measurement of Dropping Mercury Electrodes by Resonance Method. III.
- 28. Naokazu KOIZUMI: Complex Dielectric Constants of Some Glycols at 18.7 kmc/sec.
- 29. Kiyoshi ABE, Takeshi KIYONO, Minoru TOYODA, Ichiro TANIGUCHI and Katsutomo KISHIMOTO: Dielectric Characteristics of High Polymeric Materials in the Centimeter Wave Region. (I).
- 30. Isao TAKAHASHI, Hideo SENO and Mikio TAKEYAMA: An Approximate Method of Dielectric Measurement in the Centimeter Wave Region.
- 31. Isao TAKAHASHI, Kentaro TASHIRO, Toru OGAWA and M. XAMANO: Study of Stark Modulation Atomic Clock as an Automatic Control System.
- 32. Kiyoshi ABE, Minoru TOYODA and Ichiro TANIGUCHI: Dipole Moments of Organosilicon Compounds. (V).
- 33. Kiyoshi ABE, M noru TOYODA, Kenzi SUGIYAMA and Yushiro SHIRAISHI: Studies on the Fluorine Resin. (III). On the Dielectric Breakdown. (2).
- 34. Kiyoshi ABE. Tetsuro TANAKA, Michiharu KANBARA and Kazuhisa NARSE: Study of TiO<sub>2</sub> Semiconductor. (IV).
- 35. Kiyoshi ABE, Tetsuro TANAKA, Michiharu KANBARA and Kazuhisa NARUSE: Study of TiO<sub>2</sub> Semiconductor. (V).
- 36. Kiyoshi ABE, Tetsuro TANAKA and Toshio INOGUCHI: Prepolarization of Barium Titanate Ceramics.
- 37. Kiyoshi ABE, Tetsuro TANAKA and Akira KAWABATA: Aging of the Properties of Barium Titanate Ceramics.
- 38. Kiyoshi ABE, Tetsuro TANAKA, Michiharu KANBARA and Junzo YAMAMOTO: Magnetic Properties of Ni-Ferrite.
- 39. Kiyoshi ABE, Tetsuro TANAKA, Michiharu KANBARA and Junzo YAMAMOTO: Ni-Ferrite as a Magnetostriction Materials.
- 40. Isao TAKAHASHI and O. NAKAHARA: On the h.f.s. Levels of Paramagnetic Mn-Salts in Zero Magnetic Field.
- 41. Isao TAKAHASHI, Tsuneo HASHI, Osamu RYUZAN and O. NAKAHARA: Transient Nuclear Induction Associated with Pure Quadrupole Coupling. (I).
- 42. Hajime NARUMI and Shigeru MATSUO: On the Interaction between Atomic Nuclei and Electrons. (II). The Schrödinger Field and the Molecular Symmetry.
- 43. Hajime NARUMI, Tadashi Watanabe and Hisao Katsuragi: On the Interaction between Atomic Nuclei and Electrons. (III). Nuclear Quadrupole Coupling and Wave Function of the Hydrogen Molecule.
- 44. Hajime NARUMI and A. SAIKA: On the Interaction between Atomic Nuclei and Electrons. (IV). Vibrational Dependence of Nuclear Quadrupole Coupling.
- 45. Wataru SAKAI and Hajime NARUMI: On a Model of Light Nuclei—Binding Energy of C12.
- 46. Keiiti SISIDO, Hitosi NOZAKI, Hirosi TAKAHASI and Reizi MEZAKI: Synthesis and Preparation of Di-t-butyl and Dibenzyl-Acetamidomalonate.
- 47. Keiiti SISIDO, Kenzi HIRATUKA and Hitosi NOZAKI: Synthesis of New Triarylacrylonitriles.
- 48. Keiiti SISIDO, Motoo MATO and Seizi INOUE: Friedel-Crafts Cyclialkylation of Diphenylmethane with 1,4-Dichlorobutane.
- 49. Keiiti SISIDO, Motoo MATO and Itiro TAKAHASI: Studies on Heat Stabilizer for Polyvinyl Chloride Resins.
- 50. Sango KUNICHIKA and Shinzaburo OKA: Behavior of Glycols in Vapor Phase Catalytic Reaction.
- 51. Risaburo NAKAI, Michiyasu SUGII and Hajime TOMONO: The Use of Radioactive Elements. (I). The Synthesis of β-Diethylaminoethyl Xanthene-9-Carboxylate (Carboxyl-C<sup>14</sup>-) Methobromide.

- Risaburo NAKAI, Hajime TOMONO and Michiyasu SUGII: The Use of Radioactive Elements. (II). The Synthesis of β-Resornic Acid (Cardoxyl-C<sup>14</sup>-).
- 53. Hajime FUJIMURA, Michiyasu SUGII, Masaaki ISHIKAWA, Keijiro SUGA and Kazuo ASAI: Studies on Pharmacological Action of Tetralin Derivatives. (II).
- Hajime FUJIMURA and Kiyohisa KAWAI: Pharmacological Studies on Sulfhydrul Compounds.
- 55. Tatsuo KARIYONE and Tokunosuke SAWADA: Studies on Flavonoids in Leaves of Coniferae.
- 56. Yoshiyuki INOUE and Shozaburo KITAOKA: N-Glycylglucosamine.
- 57. Hideo KATAGIRI and Yoshio ICHIKAWA: Studies on Propionibacterium. (VIII).
- 58. Mamoru KURACHI: Studies on the Mechanism of Pyocyanine-Formation. (I). On the Mutation of the Bacteria in View of Pyocyanine-Production.
- 59. Hideo KATAGIRI, Chuji TATSUMI and Shohei NAKAGAWA: Studies on the Production of Lipids and Caroten by *Rhodotorula mucilaginosa*. (V). Effects of Inhibitors on the Formation of Caroten.
- 60. Hisateru MITSUDA, Katsuharu YASUMATSU and Atsushi NAKAZAWA: Crystallization of Animal Catalase and its Properties.
- Hisateru MITSUDA, Morikazu KAZIMA and Atsuhi NAKAZAWA: Studies on Yeast Catalase.
- 62. Hisateru MITSUDA, Katsuharu YASUMATSU and Atsushi NAKAZAWA: Crystallization of Plant Catalase and its Properties.
- 63. Hisateru MITSUDA and Katsuharu YASUMATSU: Studies on Optimum Temperature of Animal and Plant Catalase.
- 64. Shigeki MORI: On the Peptisation of Denatured Soybean Protein.
- 65. Hideo KATAGIRI, Masayuki IKEMIYA, Harugoro YOMO and Hideo AN-YOJI: Studies on Malt-Amylase. (VI). The Effect of Synthetic Detergents on Malt Amylases.
- 66. Kyugo SASAGAWA and Mikio KATO: Biochemical Analysis about Causality of Mutations Inductivity by Means of Supersonic Wave.
- 67. Nobuji SASAKI, Ryuzo UEDA and Akira ARAI: The Electron Microscopic and Micro-Diffraction Observation in situ of the Changes in Solids by the Electron Bombardment.
- 68. Nobuji SASAKI and Ryuzo UEDA: The Formation of Mo Particles from a MoO<sub>3</sub> Single by Hydrogen Reduction.
- 69. Keinosuke KOBAYASHI: Some Problems on High Magnification Electron Microscopy. (I). The Effects of Illuminating Aperture.
- 70. Eiji SUITO and Natsu UEDA: Study of the Lameller Single Microcrystals of Lead Iodide by a Three-stage Electron Microscope.
- 71. Eiji SUITO and Natsu UEDA: Study of Some Clay Minerals by a Three-stage Electron Microscope.
- 72. Eiji SUITO and Kazuyoshi TAKIYAMA: Electron Microdiffraction of Vanadium Pentoxide Sol.
- 73. Eiji SUITO and Masafumi ARAKAWA: Observation on the Dispersion State of Various Fillers in the Vulcanized Rubber by Electron Microscope.
- 74. Kenzo Tanaka and Hatsujiro Hashimoto: Double Refraction Effect and Subsidiary Maxima in Electron Diffraction Pattern of Cupric Sulphide Crystal.
- 75. Hideo TAKAKI, Masashige KOYAMA and Hidekiyo FUJIHIRA: Imperfections in Tin Single Crystals. (III).
- 76. Hideo TAKAKI, Masashige KOYAMA and Hidekiyo FUJIHIRA: Imperfections in Tin Single Crystals. (IV).
- 77. Shiro MORITA, Ryohei OZAKI, Yutaka KAWANO and Ken-ichi SHIMOMURA: Fundamental Studies on Spheroidal Graphite Cast Iron. (VII).
- 78. Shiro MORITA and Ryohei OZAKI: Fundamental Studies on Spheroidal Graphite Cast Iron. (VIII). Influences of V on the Formation of Spheroidal Graphite in Cast Iron.
- 79. Shiro MORITA, Ryohei OZAKI, Naoya INOYAMA and Susumu OTA: Fundamental Studies on Spheroidal Graphite Cast Iron. (IX). Influences of As on the Formation of

- Spheroidal Graphite in Cast Iron.
- 80. Isao KUSHIMA, Tsuyoshi AMANUMA and Fujio FUKUSHIMA: Fundamental Studies on Copper Converter Slag. (I-II). On the FeO-Fe<sub>3</sub>O<sub>4</sub>-SiO<sub>2</sub> System.
- 81. Kiyokado NISHIHARA, Yoshio KONDO and Hidemi SAKO: On the Treatment of Copper and Cobalt Bearing Pyrite.
- 82. Hiroshi SAWAMURA and Masatoshi TSUDA: Investigation on Cast Iron Having Fine Graphites Produced by Melting Cast Iron Covered with Slag Containing TiO<sub>3</sub>. (VIII). Influence of Titanium upon the Casting Structure of Gray Cast Iron.
- 83. Hiroshi SAWAMURA, Masatoshi TSUDA and Akitsu TOMITA: Investigation on ast Iron Having Fine Graphites Produced by Melting Cast Iron Covered with Slag Containing TiO<sub>2</sub>. (IX). On the Growth of S-H Cast Iron.
- 84. Hiroshi SAWAMURA, Masatoshi TSUDA and Sanzo NAKAGAWA: Investigation on Cast Iron Having Fine Graphites Produced by Melting Cast Iron Covered with Slag Containing TiO<sub>2</sub> (X). On the Heat-resisting of S-H Cast Iron.
- 85. Hiroshi SAWAMURA, Masatoshi TSUDA and Tatsuya WADA: Investigation on Cast Iron Having Fine Graphites Produced by Melting Cast Iron Covered with Slag Containing TiO<sub>2</sub>. (XI). Studies on the Determination by the Isolating Method of Titanium Contained in S-H Cast Iron.