

**ABSTRACT OF THE PHYSICO-CHEMICAL LITERATURE
IN JAPAN**

AUTHOR INDEX

VOL. XIII 1939

The numbers refer to those of the abstracts.

- Akamatu, H.** Sedimentation volume and thixotropy. 40.
 — Studies on the oiliness of liquids. V. Lubricants consisting of two or three chemical compounds. 137.
- Amagasa, M., Itô, K. and Nishizawa, K.** Studies on the system of sucrose and liquid ammonia. I. Vapour pressure of the liquid ammonia solution of sucrose. 60.
- Amaki, T. and Sugimoto, A.** β -ray spectra of radioactive antimony and sodium. 69.
- Andô, S.** See Ishikawa, F.
- Aoki, H.** See Kikuchi, S.
- Aoyama, S. and Sakuraba, S.** Studies on fluorine at low temperatures. X. (1) The colour of liquid fluorine. (2) Photochemical reaction of liquid fluorine and liquid oxygen. (3) A new compound: 2-3 oxygen fluoride O_3F_2 . 27.
- Araki, G. and Noma, S.** Intervals of X-ray spin-doublets. 14.
- Arli, K.** The sorption of chlorine by active charcoal. III. On the rate of the sorption. 101.
 —, Kawahata, M. and Takai, T. On the sorption of phosphorus trichloride by active charcoal. 205.
- Ariyama, K.** Electronic states of divalent metals. 15.
- Azuma, T.** Photographic spectrophotometry of a continuous spectrum. 157.
 — and Nagasawa, T. Measurements of luminous efficiency of sulphide phosphors. 118.
- Doi, K.** See Uzumasa, Y.
- Fujioka, Y. and Tanaka, Y.** On the molecular spectra $^2I \rightarrow ^2\Sigma$ of mercury hydride and deuteride. $I \rightarrow ^2\Sigma$ State. 30.
- Fujita, S.** Liquids of standard viscosity. 107.
- Fujiwara, T. and Takeshita, I.** Image made by X-rays radiated from a crystal surface. 153.
- Fukuda, M.** See Sasaki, N.
- Fukumoto, T.** See Kameyama, N.
- Gotô, K.** See Titani, T.
- Hagisawa, H.** The measurement of pH by means of the glass electrode and the hydrolysis of copper sulphate. 95.
 — On the hydrolysis of zinc sulphate and the formation of basic sulphate. 96.
 — On the hydrolysis of zinc sulphate and the formation of basic sulphate. 114.
- Hara, R.** See Toriumi, T.
- Harai, K.** The absorption spectrum of coloured solutions of inorganic salts. II. 144.
- Harasima, A.** On the theory of fusion. 184.
- Hasegawa, M.** See Okaya, T.
- Higasi, K. and Uyeo, S.** The molecular configuration of diphenyl ether as revealed by dipole moment data. 120.
- Higuti, I.** Studies on the sorption of gases and vapours by titania gel. V. Variation in the sorptive capacity of titania gel by the addition of Fe_2O_3 -gel and difference between the sorptive capacities of α - and β -titania gel. 103.
- Hijikata, K.** See Ishikawa, F.
- Hiroki, K.** See Yoshida, K.
- Homma, M. and Takai, T.** The vapour pressures of both heavy and light hydrates of $BaCl_2$. 174.
- Horie, T.** Vibrational analysis of CCl bands. 166.
- Hori, N.** On the galvanomagnetic effect of ferromagnetic substance. 47.
- Hosino, Y.** See Takei, T.
- Husimi, K.** On the slowing down of neutrons in a proton gas. 75.
 — Partitio numerorum as occurring in a problem of nuclear physics. 76.
- Igarasi, I. and Kodama, S.** The electrolytic solution pressure of pure aluminium. I. 191.
- Iijima, S.** On the adsorption of hydrogen on poisoned nickel. Studies at low temperatures. 208.

- On the adsorption of hydrogen on poisoned nickel. II. 209.
- On the adsorption of nitrogen on reduced nickel. 210.
- Iitaka, I.** and **Shiota, R.** A method of ascertaining and defining fineness of powders. 8.
- Imamura, N.** See Ishikawa, F.
- Imatomi, S.** On the dehydration of hydrated magnesium chloride. I—Mutual relation between potassium and sodium chlorides added as addition agents. 61.
- Imotani, G.** See Takamine, T.
- Inui, T.** A contribution to the theory of the hydrogen molecule. 17.
- Isemura, T.** On the silver chromate banding in silicic acid gel. 99.
- On the calcium phosphate banding in silicic acid gel. 100.
- Ishida, Y., Tamura, T.** and **Kamijima, G.** On the Stark effect of Ne II spectrum. 159.
- Ishikawa, F.** and **Andô, S.** On the equilibrium in the reduction of stannic oxide by hydrogen and deuterium. 83.
- and **Hijikata, K.** On the thermal conductivities of some binary gas mixtures. 181.
- and **Imamura, N.** On the thermal conductivity of the system H₂-HCl and the equilibrium in the reduction of cuprous chloride by hydrogen. 185.
- and **Satô, H.** On the stabilization velocity of glassy selenium. 53.
- Izii, K.** See Tani, I.
- Izii, R.** See Kato, S.
- Itô, K.** See Amagasa, M.
- Itoh, J.** See Kikuchi, S.
- See Watase, Y.
- Iwase, E.** The cathode-luminescence of luminescent aluminium oxide. 152.
- Iwase, K.** See Ôyama, Y.
- Kakinoki, J.** The investigation of thin films of cellulose derivatives by electron diffraction (A preliminary report). 138.
- Kakinuma, U.** The multiple structure of the electron. 22.
- Kameyama, N.** and **Fukumoto, T.** Photoconductance of the dye-sensitized silver bromide and the mechanism of the dye-sensitization. I. 169.
- Kamijima, G.** See Ishida, Y.
- Kamogawa, H.** Structure of oxidized silicon film. 3.
- Kanamaru, K., Takada, T.** and **Maeda, K.** The influence of dryness of samples on the electrokinetic potentials. 197.
- Kaneko, S.** Theories of diffusion, electric conductivity and viscosity. 5.
- On the electric conductivity and dielectric constant of mixture. 31.
- Theory of electrolytic conduction. 32.
- On the measurement of pH value. 35.
- On the Volta effect between pure metals. 37.
- On the viscosity of liquids. 56.
- On the dielectric constant of mixtures. 84.
- On the theory of electrolytic conduction. II. 87.
- Theory of overvoltage. 90.
- Theory of dielectric loss in solids. 93.
- Activity coefficient of strong electrolytes in the concentrated solution. 183.
- Kashimoto, S.** and **Tsuchida, R.** Absorption bands of metallic complexes. V. Complex salts of transition elements lacking the first band. 124.
- Katô, S.** and **Ishii, R.** A molecular compound of FeCl₃ extracted by ether from hydrochloric acid solutions. 139.
- Katsurai, T.** Studies on the precipitation of hydroxides and on some related phenomena. 105.
- Kawabata, M.** See Arii, K.
- Kawakami, M.** and **Uchida, S.** On the study of porous substances. III. 2.
- Kawakita, K.** On the chemisorption of carbon dioxide by reduced iron. II. 207.
- On the chemisorption of carbon dioxide by reduced iron. III. Thermodynamic consideration of the chemisorption. 212.
- Kido, K.** Magnetism of compounds. 106.
- Kikuti, Saburo.** On the specific gravities of liquid ammonia solutions of ammonium chloride and sodium chloride. 63.
- Kikuchi, Seisi** and **Aoki, H.** The scattering of D-D neutrons. 65.
- and **Aoki, H.** On the "neutron electron interaction" proposed by us and the gamma-rays in the D-D reaction. 77.
- and **Aoki, H.** The scattering of fast neutrons by atoms. 89.
- , **Watase, Y., Itoh, J., Takeda, E.** and **Yamaguchi, S.** Beta-ray spectrum of ¹⁵N. 79.
- , **Watase, Y., Itoh, J., Takeda, E.** and **Yamaguchi, S.** Beta-ray spectrum of ²⁴Na. 167.
- , **Watase, Y., Itoh, J., Takeda, E.** and **Yamaguchi, S.** Gamma-rays accompanying the disintegration of ²⁴Na. 168.

- Kitagawa, T.** Emission spectrum of the flame of bromide burning in hydrogen and mechanism of the reaction. 171.
 — Emission spectrum of the oxyhydrogen flame and its reaction mechanism. I. Formation of the activated water molecule in higher vibrational states. 173.
- Kiyama, R.** The decomposition of ammonia by iron catalyst mixed with Al_2O_3 and K_2O . 213.
- Kobayakawa, K.** See Masaki, O.
- Kobayashi, Masahisa.** See Tsuchida, R.
- Kobayashi, Minoru.** See Yukawa, II.
- Kobayashi, Y., Taka, K. and Miura, M.** Selective solvation of LiCl in mixed solvents. Experimental part. 123.
- Kodama, S.** See Igarasi, I.
- Kodera, K.** Chemical studies by means of molecular beams. VII—VIII. A method of measuring the intensity of potassium atomic beams with an incandescent tungsten surface. (1—2). 160.
- Koizumi, M. and Titani, T.** The velocity of the exchange reaction of the hydrogen atoms between hexoses and water. 129.
 — and Titani, T. The exchange reaction of the oxygen atoms between water and some organic compounds. (Preliminary report). 130.
- Komagata, S.** On the collodion membranes of graded pores. 206.
- Kubo, M.** The dielectric constants of solid acetylene tetrachloride, ethylene dichloride, and ethylene chlorobromide. 119.
 — On the theory of dielectric constant of gases under high pressures. 149.
 — See Mizushima, M.
- Kubota, H.** Influence of the fine-structure on the Stark effect of ionized helium. 71.
 — The variation of intensities of spectral lines with the direction of observation in the Stark effect. 158.
- Kuroya, H. and Tsuchida, R.** Absorption bands of metallic complexes. IV. Special bands of nitro-aniline cobaltic complexes. 28.
- Kuwahara, T.** See Toriumi, T.
- Maeda, K.** See Kanamaru, K.
- Makino, S. and Yoshida, J.** On the electrode potential of the carbon electrode of air cell and hydrogen ion concentrations. 34.
 — and Yoshida, J. On the electrode potential of the carbon electrode of air cell and hydrogen ion concentration. II. 91.
- Masaki, O. and Kobayakawa, K.** The near-infrared spectrum of cadmium. I. 20.
- Masuda, K.** On the reducing action of amalgams. VII. The mechanism of the reaction by shaking. 9.
- Matano, C.** Electron diffraction by organic films. I. Fibroin, keratin and gelatine. 50.
 — On the X-ray diagrams of fibre structures. 59.
- Matsunaga, Y.** On the lattice constants of *picea jezoensis* Carr. 54.
- Matsuyama, H.** Thermal analysis of the oxidation of sulphites. (I). 196.
- Minakawa, O.** See Sugiura, Y.
- Mishima, T.** See Nagaoka, II.
- Miura, M.** See Kobayashi, Y.
- Miyake, S.** See Sugito, S.
- Miyake, Y.** The chemistry of rain water. 49.
- Miyamura, Y.** The detection of ultra-short waves by an ionized gas tube. 135.
- Mizushima, S. and Kubo, M.** Quantum mechanical resonance and internal rotation. 148.
- Morino, Y.** On the transition points of 1,2-dihalogenoethane. 122.
 — and Shimizu, H. Raman spectra and the transition point of diiodoethane. 121.
- Morita, T. and Titani, T.** The re-measurement of the concentration of heavy hydrogen in ordinary water. 128.
 — and Titani, T. The exchange reaction between oxygen and the water vapour or carbonic anhydride in the presence of platinum. 146.
 — See Titani, T.
- Muraoka, H. and Ômori, T.** Bubbling method of electroosmosis measurement. 203.
- Muto, T.** On the quantum theory of the phosphorescence of crystalphosphor. II. 21.
 — On the theory of the thermoelectric properties of alloys. 36.
- Mutô, Y.** On the effect of other ions upon the surface activity of aqueous solutions of organic ions with hydrophobic groups. 102.
- Nagakura, T.** On the method of treating the reaction between very light nuclei. 68.
- Nagaoka, H. and Mishima, T.** High terms of Paschen series in hydrogen and deuterium. 145.
 — and Misima, T. Excitation of the Balmer and Paschen series of hydrogen and heavy hydrogen by electrodeless discharge. 164.
- Nakazima, K. and Okuno, T.** The chemical equilibrium in the heterogeneous system $\text{MgO}(s) + \text{Cl}_2(g) \rightleftharpoons \text{MgCl}_2(s) + \frac{1}{2}\text{O}_2(g)$ at high temps. 176.
- Nishizawa, K.** See Amagasa, M.
- Nitta, I. and Watanabe, T.** Electron density and interatomic distances in tetragonal pentaerythritol. 156.

- Noguti, T. Electrolytic winning of heavy water. IV. 6.
- Noma, S. See Araki, G.
- Ogawa, E. Catalytic reactions in the magnetic fields. (II-IV). 51.
- Ogawa, M. See Sugino, K.
- Okaya, T. and Hasegawa, M. On the determination of the viscosity by the torsional vibration. I. 127.
- Okazaki, A. The Faraday effect and the conductivity of electrolytic solutions. 178.
- The Faraday effect of strong electrolytes in aqueous solutions. VII. NH_4Cl , BaCl_2 , NaNO_3 , KNO_3 , Na_2SO_4 , ZnSO_4 and NaClO_4 . 179.
- Okuno, T. See Nakazima, K.
- Okuyama, H. See Sata, N.
- Ômori, T. See Muraoka, H.
- Osakada, T. See Takei, T.
- Osida, I. On the thermal conductivity of liquid. 140.
- Ôyama, Y. and Iwase, K. Studies on absorption of gas in form of bubbles. 52.
- Saito, M. The mean free path in gases contained in a vessel. 155.
- Sakata, S. and Tanikawa, Y. On the capture of the mesotron by the atomic nucleus. 72.
- See Yukawa, H.
- Sakuraba, S. See Aoyama, S.
- Sameshima, J. Oiliness of liquid. 4.
- Sano, I. On the adsorption of ammonia by platinum black. 198.
- On the catalytic decomposition of hydrogen peroxide by colloidal platinum-carbonyl. 199.
- On the catalytic decomposition of oxalic acid by colloidal platinum-carbonyl. 204.
- Sano, K. On the dissociation pressures of hydrates. IV. Vapour pressures of $\text{MnCl}_2 \cdot 4\text{H}_2\text{O}$ and $\text{MnCl}_2 \cdot 2\text{H}_2\text{O}$. 177.
- Thermo-dynamical studies on chlorides. V. Reduction equilibrium of chromous chloride by hydrogen. 186.
- The vapour pressure of dissociated water from hydrates. VI. The vapour pressure of dissociation of $\text{MgCl}_2 \cdot 4\text{H}_2\text{O}$ and $\text{MgCl}_2 \cdot 2\text{H}_2\text{O}$. 193.
- A thermo-dynamical study of chlorides. VIII. The reduction equilibrium of manganese chloride by hydrogen. 194.
- Sasaki, N. and Fukuda, M. The velocity distribution in an atomic beam and the free path as a function of velocity. 154.
- Sasaki, T. On the nature of foam. I. Stability of the foam produced by the aqueous solutions of alcohols and acids. 98.
- On the nature of foam. II. The foam formation of ternary system, acetic acid-ethyl ether-water. 104.
- Studies on the oiliness of liquids. VI. Measurements of the kinetic friction coefficients by the method of sliding velocity. 134.
- On the nature of foam. V. Phase inversion and foam formation of emulsion consisting of acetic acid, benzene, and water. 201.
- Sata, N. and Okuyama, H. The colloid-chemical studies on systems of three-liquid components. III. On the emulsification between two immiscible liquids with equal specific gravity. 202.
- Satô, H. See Ishikawa, F.
- Satô, M. On the energy states of valency electrons in some metals. Selectivity of photo-electron transition in zinc, and the selection rule, $\Delta l = \pm 1$. 16.
- On the energy states of the valency electrons in some metals. I. 10. Anomalous changes of various properties of zinc with temperature. 97.
- Satô, T. See Takagi, Y.
- Satoh, S. The heats of formation of various nitrides. 86.
- The specific heats of manganese nitrides. 88.
- The heat of formation of manganese nitrides. 89.
- The specific heats of thorium nitride, lithium nitride, and zinc nitride. 94.
- and Sogabe, T. The specific heats of some solid aliphatic acids and their ammonium salts and the atomic heat of nitrogen. 192.
- Sekiguchi, Y. See Tamamushi, B.
- Seya, K. The decomposition of ammonia by iron catalyst. 214.
- Shiba, K. The most probable values of e , e/m , and A . III. 64.
- Shibata, Z. See Tajiri, I.
- Shida, S. On the photochemical decomposition of ammonia. 172.
- Shikata, M. See Ueda, S.
- Shimadzu, S. Arrangement of the micro-crystals of silver bromide electro-deposited on the anode silver plate. 141.
- Shimidu, H. See Morino, Y.
- Shiota, R. See Itaka, I.
- Shishido, S. See Yamaguchi, Y.
- Sidei, T. Infra-red absorption spectra and molecular structures of polar liquids. 19.
- Shigetomi, S. On the solubility of sodium amide in liquefied ammonia. 44.

- and Morita, T. The isotopic exchange reaction of gaseous oxygen. III. The exchange reaction between oxygen and water vapour by copper oxide. 133.
- Toriumi, T. and Hara, R. On the transition point of calcium sulphate in water and concentrated sea water. 38.
- , Kuwahara, T. and Hara, R. On the calcium sulphate in sea water II. Solubilities of calcium sulphate hemihydrate in sea water of various concentrations at 65–150°C. 39.
- Toyama, O. The kinetics of the hydrogenation of ethylene with nickel. 170.
- Tsuchida, R. Absorption spectra of co-ordination compounds. I–II. 12.
- A new simple theory of valency. 112.
- Extended co-ordination theory. I. Configuration of simple compounds of typical elements. 125.
- Extended co-ordination theory of valency. (II) Configuration of carbon compounds. 142.
- and Kobayashi, M. Spectrochemical study of microscopic crystals. I. Application of microscopes in spectrography. II. 11.
- and Kobayashi, M. Absorption spectra of co-ordination compounds. III. Special bands of chromium complexes. 13.
- and Kobayashi, M. Extended co-ordination theory of valency. (III) Valence bonds in carbon compounds. 143.
- and Tsumaki, T. Absorption spectra of salicylaldehyde-ethylenediamine and related compounds. 25.
- See Kashimoto, S.
- See Kuroya, H.
- Tsumaki, T. Co-ordinate valency rings. III. Some inner complex salts of iron and manganese. 10.
- See Tsuchida, R.
- Tsutsumi, S. The relation between the surface dispersity of catalysts and the catalytic activities. 48.
- Studies on nickel catalysts for the conversion of water gas. 111.
- The promoter and supporter. V. Change of the active surface of a catalyst by adding a promoter and supporter. 163.
- Uchida, S. See Kawakami, M.
- Ueda, R. Cathode-ray investigation of thin layers formed on some single crystals. I. Oxidized surface of molybdenite. 46.
- Ueda, S. and Shikata, M. Researches on the electric boundary layer disturbance. XIV. The biological water elucidated from the view-point of the adsorption and dispersion of electromagnetic wave. I. 190.
- Uehara, Y. Studies on luminescent materials. Part I. Theory of zinc sulphide-copper crystal-phosphor. 81.
- Uyeo, S. See Higasi, K.
- Uzumasa, Y. and Doi, K. Absorption spectra of rhodanates of metals. II. Rhodanate complexes of molybdenum. 29.
- Watanabe, T. See Nitta, I.
- Watase, Y. and Itoh, J. The β -ray spectrum of RaE. 24.
- See Kikuchi, S.
- Yamada, H. Diffusion potential difference. 85.
- Yamaguchi, S. See Kikuchi, S.
- Yamaguchi, Y. and Shishido, S. On the electric conductance of fused salts. Polarization capacity and cell constant. 92.
- Yamamoto, T. Studies on the growth of crystals. IX. The amount of foreign cations in the crystal formed in their presence in relation to their concentration in solutions. 45.
- Yamamoto, Y. A study of the electrode potentials of metals in aqueous solutions of nitric acid. 188.
- A study of the electrode potentials of metals in aqueous solns. of copper nitrate. 189.
- Yamasaki, F. and Simma, K. β -ray spectra of Cu⁶², Cu⁶⁴ and Cu⁶⁶. 70.
- Yamasaki, K. Absorption spectra of metallic complex salts of 2,2'-Dipyridyl. II. 26.
- Yamanouchi, T. On atomic energy levels of pⁿp configurations. 73.
- On atomic energy levels of dⁿp configurations. 74.
- On atomic energy levels of pⁿd configurations. 78.
- Current-carrying capacity of bare conductors. 82.
- Yoritaka, T. A new formula of dilution. 131.
- Yoshida, J. See Makino, S.
- Yoshida, K. and Horoki, K. The influence of kaolin and porcelain clay on the equilibrium of hydrogen ion. 151.
- The effect of X-ray on various electric potentials. 187.
- Yosioka, K. Sound velocity in heavy water and compressibility. 7.
- Yuasa, T. On the bands of the aluminium fluorite (AlF). 23.
- Yukawa, H., Sakata, S., Kobayashi, M. and Taketani, M. On the interaction of elementary particles. IV. 18.