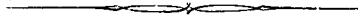


MEMOIRS
OF THE
COLLEGE OF SCIENCE

KYOTO IMPERIAL UNIVERSITY

SERIES A



Vol. VIII

1925



KYOTO

CONTENTS OF VOLUME VIII.

	PAGE.
Kashichi Ono ,—Studies on Camphor Oil, V. On the Sesquiterpenes and Sesquiterpenalcohols of the Japanese Camphor Oil.	1
Kaoru Matsumiya ,—On Organic Compounds of Antimony. Part I. Reaction between α -Naphthylmagnesium Bromide and Inorganic Antimony Compounds. Tri- α -naphthylstibine and Some of its Derivatives.	11
Akira Shimomura ,—Action of Acid Anhydrides on Benzidine.	19
Shigeru Komatsu and Masao Kurata ,—Studies on Catalytic Action, XI. Catalytic Activity of Reduced Copper, I.	35
Shigeru Komatsu, Naobiko Matsunami, and Motaro Ishimasa ,—On Kakishibu, II.	43
Shigeru Komatsu and Hidenosuke Ueda ,—Constitution of Polysaccharides, III. On Plant Mucilage, I.	51
Shigeru Komatsu and Hidenosuke Ueda ,—On the Chemistry of Japanese Plants, V. Chemical Composition of <i>Hydrogena paniculata</i> , Sieb., I.	59
Shigeru Komatsu and Takehiko Yukimoto ,—Studies in the Camphor Series, V. Catalytic Action of Reduced Copper and Reduced Nickel on laevo-Menthol.	65
Toshima Araki ,—Ueber die Erklärungshypothesen der Cepheidenerscheinung.	75
Nobuji Sasaki ,—Ueber die Dissoziation mehratomiger Salze, II.	131
Shigeru Komatsu and Choji Tanaka ,—Studies on Catalytic Action, XIV. A Comparative Study of the Catalytic Activity of Reduced Copper, Reduced Nickel and Thoria, II.	135
Shigeru Komatsu and Masao Kurata ,—Studies on Catalytic Action, XV. Catalytic Activity of Reduced Copper, II.	147
Shunzo Koidzumi ,—The Electrolytic Oxidation of Alcohols, II. Electrolytic Chlorination of Ethyl-alcohol.	155
Takeshi Shibata and Bunzoh Kamifuku ,—A Dry Method of Determining Zinc contained in Brass, Bronze and other	

	PAGE.
similar Alloys.	167
Daidzi Iitsuka ,—Revision of the Equilibrium Diagram of the Copper-Zinc System.	179
Shintaro Araki ,—On the Equilibria in the Systems consisting of Ammonium Chromate, Ammonium Sulphate and Water, and Ammonium Chromate, Potassium Chromate and Water at 25°C.	213
Shigeru Komatsu and Ryuzaburo Nodzu ,—On the Chemistry of Japanese Plants, VII. The Phytochemical Study of the Yamamomo-Fruit (<i>Myrica rubra</i> S. and Z.).	223
Shigeru Komatsu and Naohiko Matsunami ,—On Kakishibu, III. Constitution of Shibuol, II.	231
Tohoru Hara and Shigeru Komatsu ,—Studies on Catalytic Action, XVI. A New Synthesis of Nitriles.	241
Shigeru Komatsu and Masao Kurata ,—Studies on Camphor Series, VII. Catalytic Formation of Menthols and Menthones from l-Menthol.	247
Shigeru Komatsu and Seiichi Yamada ,—On the Chemistry of Japanese Plant, IV. Saturated Fatty Acids in Camphor Seed Fat (<i>Laurus camphora</i> , Nees.).	253
Shigeru Komatsu and Ginosuke Nakajima ,—A Contribution to the Process of Japanese Paper-Making.	257
Bunsaku Arakatsu ,—The Theory of General Relativity in a Physically Flat Space.	263
Shigeru Komatsu and Teikichi Hiraidzumi ,—On the Beckmann Rearrangement, XIV. Distillation of the Sodium Salts of Oximes under Reduced Pressure.	273
Kinji Ando ,—The System, Water and the Nitrates of Potassium and Ammonium at 25°C.	283
Ryohei Inouye ,—The Equilibrium in the System consisting of Potassium Sulphate, Potassium Nitrate and Water at 25°C.	287
P. P. von Weimarn and Senji Utzino ,—Die Wirkungen von Elektrolyten auf die Lebensdauer dispersoider, nach der mechanischen Methode hergestellter Schwefellösungen.	291
Kaoru Matsumiya and Minoru Nakai ,—On Organic Compounds of Arsenic. Part II. Reaction between the Grignard Reagent and Arsenic Trioxide.	307
Shinsuke Tanaka ,—On the Arrangement of the Micro-crystals in Rolled Platinum Plate. Part I.	319
Takeo Fujiwara ,—On the Arrangement of Micro-crystals in Aluminium Wire.	339

Jôyô Kanitani ,—On the Projective Line Element upon a Hypersurface.	357
Masayoshi Ishibashi ,—Electrolytic Reduction of Oximes, III. Benzil- dioxime.	383
Kaoru Matsumiya ,—On Organic Compounds of Arsenic. Part III. Reaction between Arsenic Trichloride and α -Naphthyl Com- pounds of Mercury.	391
Akira Shimomura ,—Low Temperature Carbonisation of Coal. Part I. Treatment of Coal at 500° in Fischer's Aluminium Retort.	397

INDEX OF AUTHORS TO VOLUME VIII.

	PAGE.
Ando, K.,—The System, Water and the Nitrates of Potassium and Ammonium at 25.0°. ...	283
Arakatsu, B.,—The Theory of General Relativity in a Physically Flat Space.	263
Araki, S.,—On the Equilibria in the Systems consisting of Ammonium Chromate, Ammonium Sulphate and Water, and Ammonium Chromate, Potassium Chromate and Water at 25° C.	213
Araki, T.,—Ueber die Erklärungshypothesen der Cepheidenerscheinung.	75
Fujiwara, T.,—On the Arrangement of Micro-crystals in Aluminium Wire.	339
Hara, T. and Komatsu, S.,—Studies on Catalytic Action, XVI. A New Synthesis of Nitriles.	241
Hiraizumi, T.,—See Komatsu, S.	
Iitsuka, D.,—Revision of the Equilibrium Diagram of the Copper-Zinc System.	179
Inouye, R.,—The Equilibrium in the System Consisting of Potassium Sulphate, Potassium Nitrate and Water at 25.0°.	287
Ishibashi, M.,—Electrolytic Reduction of Oximes, III. Benzildioxime.	383
Ishimasa, M.,—See Komatsu, S.	
Komatsu, S.,—See Hara, T.	
———, —, and Hiraizumi, T.,—On the Beckmann Rearrangement, XIV. Distillation of the Sodium Salts of Oximes under Reduced Pressure.	273
———, —, and Kurata, M.,—Studies on Catalytic Action, XI. Catalytic Activity of Reduced Copper, I.	35
———, —, and Kurata, M.,—Studies on Catalytic Action, XV. Catalytic Activity of Reduced Copper, II.	147
———, —, and Kurata, M.,—Studies on Camphor Series, VII. Catalytic Formation of Menthols and Menthones from l-Menthol.	247
———, —, and Matsunami, N.,—On Kakishibu, III. Constitution of Shibuol, II. ...	231
———, —, Matsunami, N., and Ishimasa, M.,—On Kakishibu, II.	43
———, —, and Nakajima, G.,—A Contribution to the Process of Japanese Paper- Making.	257
———, —, and Nodzu, R.,—On the Chemistry of Japanese Plants, VII. The Phytochemical Study of the Yamamomo-Fruit (<i>Myrica rubra</i> S. and Z.).	223
———, —, and Tanaka, C.,—Studies on Catalytic Action, XIV. A Comparative Study of the Catalytic Activity of Reduced Copper, Reduced Nickel and Thoria, II. ...	135
———, —, and Ueda, H.,—Constitution of Polysaccharides, III. On Plant Mucilage, I. ...	51
———, —, and Ueda, H.,—On the Chemistry of Japanese Plants, V. Chemical Com- position of <i>Hydrangena paniculata</i> , Sieb., I.	59
———, —, and Yamada, S.,—On the Chemistry of Japanese Plant, IV. Saturated Fatty Acids in Camphor Seed Fat. (<i>Laurus camphora</i> , Nees.)	253
———, —, and Yukitomo, T.,—Studies in the Camphor Series, V. Catalytic Action of Reduced Copper and Reduced Nickel on laevo-Menthol.	65

	PAGE.
Kamifuku, B.,—See Shibata, T.	
Kanitani, J.,—On the Projective Line Element upon a Hypersurface.	357
Koidzumi, S.,—The Electrolytic Oxidation of Alcohols, II. Electrolytic Chlorination of Ethylalcohol.	155
Kurata, M.,—See Komatsu, S.	
Matsumiya, K.,—On Organic Compounds of Arsenic. Part III. Reaction between Arsenic Trichloride of Mercury.	391
———, —, —On Organic Compounds of Antimony. Part I. Reaction between α -Naphthylmagnesium Bromide and Inorganic Antimony Compounds. Tri- α -naphthylstibine and Some of its Derivatives.	11
———, —, and Nakai, M.,—On Organic Compounds of Arsenic. Part II. Reaction between the Grignard Reagent and Arsenic Trioxide.	307
Matsunami, N.,—See Komatsu, S.	
Nakai, M.,—See Matsumiya, K.	
Nakajima, G.,—See Komatsu, S.	
Nodzu, R.,—See Komatsu, S.	
Ono, K.,—Studies on Camphor Oil, V. On the Sesquiterpenes and Sesquiterpenalcohols of the Japanese Camphor Oil.	1
Sasaki, N.,—Ueber die Dissoziation mehratomiger Salze, II.	131
Shibata, T., and Kamifuku, B.,—A Dry Method of Determining Zinc contained in Brass, Bronze and other similar Alloys.	167
Shimomura, A.,—Action of Acid Anhydrides on Benzidine.	19
———, —, —Low Temperature Carbonisation of Coal. Part I. Treatment of Coal at 500° in Fischer's Aluminium Retort.	397
Tanaka, C.,—See Komatsu, S.	
Tanaka, S.,—On the Arrangement of the Micro-crystals in Rolled Platinum Plate. Part I.	319
Ueda, H.,—See Komatsu, S.	
Utzino, S.,—See Weimarn, P. P. von.	
Weimarn, P. P. von., und Utzino, S.,—Die Wirkungen von Elektrolyten auf die Lebensdauer dispersoider, nach der mechanischen Methode der gestellter Schwefellösungen.	291
Yamada, S.,—See Komatsu, S.	

INDEX OF SUBJECTS TO VOLUME VIII.

	PAGE.
Acid Anhydrides, Action of, on Benzidine. (<i>Shimomura</i>).	19
Alcohols, The Electrolytic Oxidation of, II. (<i>Koidzumi</i>).	155
Aluminium Wire, On the Arrangement of the Micro-crystals in Rolled, (<i>Fujiwara</i>). ...	319
Ammonium Chromate, On the Equilibrium in the System consisting of, Ammonium Sulphate and Water at 25°C. (<i>Araki</i>).	213
———, On the Equilibrium in the System consisting of, Potassium Chromate and Water at 25°C. (<i>Araki</i>).	213
Ammonium Sulphate, On the Equilibrium in the System consisting of Ammonium Chromate, and Water at 25°C. (<i>Araki</i>).	213
Antimony, On Organic Compounds of, Part I. (<i>Matsumiya</i>).	11
Antimony Compounds, Reaction between α -Naphthyl-magnesium Bromide and Inorganic, (<i>Matsumiya</i>).	11
Arrangement of the Micro-crystals, On the, in Rolled Platinum Plate. Part I. (<i>Tanaka</i>). ...	319
———, On the, in Aluminium Wire, (<i>Fujiwara</i>).	339
Arsenic, On Organic Compounds of, Part II. (<i>Matsumiya and Nakai</i>).	307
———, ———, Part III. (<i>Matsumiya</i>).	391
Arsenic Trichloride, Reaction between, and α -Naphthyl Compounds of Mercury. (<i>Matsumiya</i>).	391
Arsenic Trioxide, Reaction between the Grignard Reagent and, (<i>Matsumiya and Nakai</i>). ...	307
Beckmann Rearrangement, On the, XIV. (<i>Komatsu and Hiraidzumi</i>).	273
Benzidine, Action of Acid Anhydrides on, (<i>Shimomura</i>).	19
Benzildioxime. (<i>Shibashi</i>).	383
Camphor Series, Studies in the, V. (<i>Komatsu and Yukimoto</i>).	65
———, Studies on, VII. (<i>Komatsu and Kurata</i>).	247
Camphor Seed Fat, Saturated Fatty Acids in, (<i>Komatsu and Yamada</i>).	253
Camphor Oil, Studies on, V. (<i>Ono</i>).	1
———, On the Sesquiterpenes and Sesquiterpenalcohols of the Japanese, (<i>Ono</i>). ...	1
Catalytic Action, Studies on, XI. (<i>Komatsu and Kurata</i>).	35
———, ———, XIV. (<i>Komatsu and Tanaka</i>).	135
———, ———, XV. (<i>Komatsu and Kurata</i>).	147
———, ———, XVI. (<i>Hara and Komatsu</i>).	241
——— of Reduced Copper and Reduced Nickel on laevo-Menthol. (<i>Komatsu and Yukitomo</i>).	65
Catalytic Activity of Reduced Copper, I. (<i>Komatsu and Kurata</i>).	35
———, II. (<i>Komatsu and Kurata</i>).	147
Catalytic Activity of Reduced Copper, A Comparative Study of the, Reduced Nickel and Thoria, II. (<i>Komatsu and Tanaka</i>).	135
Catalytic Formation of Menthols and Menthones from l-Menthol. (<i>Komatsu and Kurata</i>). ...	247
Cepheidenerscheinung, Ueber die Erklärungshypothesen der, (<i>Araki</i>).	75

	PAGE.
Constitution of Polysaccharides, III. (<i>Komatsu and Ueda</i>).	51
Constitution of Shibuol, II. (<i>Komatsu and Matsunami</i>).	231
Coal, Low Temperature Carbonisation of, Part I. (<i>Shimomura</i>).	397
—, Treatment of, at 500° in Fischer's Aluminium Retort. (<i>Shimomura</i>).	397
Copper-Zinc System, Revision of the Equilibrium Diagram of the, (<i>Iitsuka</i>).	179
Dissoziation, Ueber die, mehratomiger Salze, II. (<i>Sasaki</i>).	131
Distillation of the Sodium Salts of Oximes under Reduced Pressure. (<i>Komatsu and Hiraidzumi</i>).	273
Electrolytic Chlorination of Ethylalcohol. (<i>Koidzumi</i>).	155
Electrolytic Reduction of Oximes, III. (<i>Ishibashi</i>).	383
Elektrolyten, Die Wirkungen von, auf die Lebensdauer dispersoider, nach der mechanischen Methode hergestellter Schwefellösungen. (<i>Weimarn und Utsino</i>).	291
Equilibrium, On the, in the System consisting of Ammonium Chromate, Ammonium Sulphate and Water at 25°C. (<i>Araki</i>).	213
—, —, in the System consisting of Ammonium Chromate, Potassium Chromate and Water at 25°C. (<i>Araki</i>).	213
—, The, in the System Consisting of Potassium Sulphate, Potassium Nitrate and Water at 25.0° (<i>Inouye</i>).	287
Diagram, Revision of the, of the Copper-Zinc System. (<i>Iitsuka</i>).	179
Ethylalcohol, Electrolytic Chlorination. (<i>Koidzumi</i>).	155
Fatty Acids, Saturated, in Camphor Seed Fat, (<i>Komatsu and Yamada</i>).	253
Fischer's Aluminium Retort, Treatment of Coal at 500° in, (<i>Shimomura</i>).	397
General Relativity, The Theory of, in a Physically Flat Space. (<i>Arakatsu</i>).	263
Grignard Reagent, Reaction between the, and Arsenic Trioxide, (<i>Matsumiya and Nabai</i>).	307
Hydrangena paniculata, Sieb., Chemical Composition of, I. (<i>Komatsu and Ueda</i>).	59
Hypersurface, On the Projective Line Element upon a, (<i>Kanitani</i>).	357
Inorganic Antimony Compounds, Reaction between α -Naphthylmagnesium Bromide and, (<i>Matsumiya</i>).	11
Japanese Camphor Oil, On the Sesquiterpenes and Sesquiterpenalcohols of the, (<i>Ono</i>).	1
Japanese Paper-Making, A Contribution to the Process of, (<i>Komatsu and Nakajima</i>).	257
Japanese Plant, On the Chemistry of, IV. (<i>Komatsu and Yamada</i>).	253
Japanese Plants, On the Chemistry of, V. (<i>Komatsu and Ueda</i>).	59
—, —, —, VII. (<i>Komatsu and Nodzu</i>).	223
Kakishibu, On, II. (<i>Komatsu, Matsunami and Ishimasa</i>).	43
—, —, III. (<i>Komatsu and Matsunami</i>).	231
laevo-Menthol, Catalytic Action of Reduced Copper and Reduced Nickel on, (<i>Komatsu and Yukitomo</i>).	65
<i>Laurus camphora</i> , Ness. (<i>Komatsu and Yamada</i>).	253
Lebensdauer, Die Wirkungen von Elektrolyten auf die, dispersoider, nach der mechanischen Methode hergestellter Schwefellösungen. (<i>Weimarn und Utsino</i>).	291
Line Element, On the Projective, upon a Hypersurface. (<i>Kanitani</i>).	357
l-Menthol, Catalytic Formation of Menthols and Menthones from, (<i>Komatsu and Kurata</i>).	247
Low Temperature Carbonisation of Coal, Part I. (<i>Shimomura</i>).	397
Menthol, Catalytic Action of Reduced Copper and Reduced Nickel on laevo-, (<i>Komatsu and Yukitomo</i>).	65
Menthols, Catalytic Formation of, and Menthones from l-Menthol. (<i>Komatsu and Kurata</i>).	247
Menthol, Catalytic Formation of Menthols and Menthones from l-, (<i>Komatsu and Kurata</i>).	247
Menthones, Catalytic Formation of Menthols and, from l-Menthol. (<i>Komatsu and Kurata</i>).	247
Mehratomiger Salze, Ueber die Dissoziation, II. (<i>Sasaki</i>).	131
Mercury, Reaction between Arsenic Trichloride and α Naphthyl Compounds of, (<i>Matsumiya</i>).	391

	PAGE.
Micro-crystals, On the Arrangement of the, in Rolled Platinum Plate. Part I. (<i>Tanaka</i>).	319
—————, —————, in Aluminium Wire. (<i>Fujiwara</i>).	339
<i>Myrica rubra</i> S. and Z. (<i>Koma and Nodzu</i>).	223
α -Naphthyl Compounds of Mercury, Reaction between Arsenic Trichloride and, (<i>Matsu- miya</i>).	391
α -Naphthylmagnesium Bromide, Reaction between, and Inorganic Antimony Compounds. (<i>Matsumiya</i>).	11
Nitrates of Potassium, The System: Water and the, and Ammonium at 25°o. (<i>Ando</i>).	283
Nitriles, A New Synthesis of, (<i>Hara and Komatsu</i>)	241
Organic Compounds of Antimony, On. Part I. (<i>Matsumiya</i>).	11
Organic Compounds of Arsenic, On. Part II. (<i>Matsumiya and Nakai</i>).	307
—————, —————, —————, Part III. (<i>Matsumiya</i>).	391
Oximes, Electrolytic Reduction of, III. (<i>Ishibashi</i>).	383
Paper-Making, A Contribution to the Process of Japanese, (<i>Komatsu and Nakajima</i>).	257
Physically Flat Space, The Theory of General Relativity in a, (<i>Arakatsu</i>).	263
Phytochemical Study of the Yamamoto-Fruit, The. (<i>Komatsu and Nodzu</i>).	223
Plant Mucilage, On. I. (<i>Komatsu and Ueda</i>).	51
Platinum Plate, On the Arrangement of the Micro-crystals in Rolled, Part I. (<i>Tanaka</i>).	319
Polysaccharides, Constitution of. III. (<i>Komatsu and Ueda</i>).	51
Potassium Chromate, On the Equilibrium in the System consisting of Ammonium Chromate, and Water at 25°C. (<i>Araki</i>).	213
Potassium Nitrate, The Equilibrium in the System consisting of Potassium Sulphate, and Water at 25.0°. (<i>Inouye</i>).	287
Potassium Sulphate, The Equilibrium in the System consisting of, Potassium Nitrate and Water at 25.0°. (<i>Inouye</i>).	287
Reaction between α -Naphthylmagnesium Bromide and Inorganic Antimony Compounds. (<i>Matsumiya</i>).	11
————— between Arsenic Trichloride and α -Naphthyl Compounds of Mercury (<i>Matsumiya</i>).	391
————— between the Grignard Reagent and Arsenic Trioxide. (<i>Matsumiya and Nakai</i>).	307
Reduced Copper, Catalytic Action of, and Reduced Nickel on laevo-Menthol. (<i>Komatsu and Yukitomo</i>).	65
—————, A Comparative Study of the Catalytic Activity of, Reduced Nickel and Thoria, II. (<i>Komatsu and Tanaka</i>).	135
—————, Catalytic Activity of, I. (<i>Komatsu and Kurata</i>).	35
—————, —————, —————, II. (<i>Komatsu and Kurata</i>).	147
—————, A Comparative Study of the Catalytic Activity of Reduced Copper, and Thoria, II. (<i>Komatsu and Tanaka</i>).	135
Reduced Nickel, Catalytic Action of Reduced Copper and, on laevo-Menthol. (<i>Komatsu and Yukitomo</i>).	65
Relativity, The Theory of General, in a Physically Flat Space. (<i>Arakatsu</i>).	263
Rolled Platinum Plate, On the Arrangement of the Micro-crystals in (<i>Tanaka</i>).	319
Saturated Fatty Acids in Camphor Seed Fat. (<i>Komatsu and Yamada</i>).	253
Schwefellösungen, Die Wirkungen von Elektrolyten auf die Lebensdauer dispersoider, nach der mechanischen Methode hergestellter, (<i>Weimarn und Utzino</i>).	291
Sesquiterpenalcohols, on the Sesquiterpenes and, of the Japanese Camphor Oil. (<i>Ono</i>).	1
Sesquiterpenes, On the, and Sesquiterpenalcohols of the Japanese Camphor Oil. (<i>Ono</i>)	1
Shiluo, Constitution of II. (<i>Komatsu and Matsunami</i>).	231
Sodium Salts of Oximes, Distillation of the, under Reduced Pressure. (<i>Komatsu and Hiraidzumi</i>).	273

	PAGE.
Synthesis of Nitriles, A New (<i>Hara and Komatsu</i>).	241
Thoria, A Comparative Study of the Catalytic Activity of Reduced Copper, Reduced Nickel and, II. (<i>Komatsu and Tanaka</i>).	135
Tri- α -Naphthylstibine and Some of its Derivatives. (<i>Matsumiya</i>).	11
Water, On the Equilibrium in the System consisting of Ammonium Chromate, Ammonium Sulphate and, at 25°C. (<i>Araki</i>).	213
———, On the Equilibrium in the System consisting of Ammonium Chromate, Potassium Chromate and, at 25°C. (<i>Araki</i>).	213
———, The Equilibrium in the System Consisting of Potassium Sulphate, Potassium Nitrate and, at 25.0°. (<i>Inouye</i>).	287
———, The System, and the Nitrates of Potassium and Ammonium at 25.0°. (<i>Ando</i>).	283
Yamamoto-Fruit, The Phytochemical Study of the, (<i>Komatsu and Nodzu</i>)	223
Zinc, A Dry Method of Determining, contained in Brass, Bronze and other similar Alloys. (<i>Shibata and Kamifuku</i>).	167