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PROCEEDINGS

AT THE

MEETINGS OF THE CHEMICAL SOCIETY.

SESSION 1871-72.

November 2nd, 1871.

Dr. Frankland, President, in the Chair.

Mr. R. Gerstl, University College, was duly elected a Fellow of the Society.

The following papers were read:-

- "On a Process for the Estimation of Fluorine:" by Mr. Archibald Liversidge.
 - "On Anthraflavic Acid:" by Mr. W. H. Perkin.
 - "On the Distillation of Wood:" by Mr. Watson Smith.

November 16th.

Professor Odling, Vice-President, in the Chair.

The following papers were read:—

"On Burnt Iron and Steel:" by Mr. W. H. Johnson, B.Sc.

"On an Improved Siphon:" by Mr. F. Hart.

December 7th.

Dr. Frankland, President, in the Chair.

The following gentlemen were duly elected Fellows of the Society:—

Charles Thomas Woodcote, Stoke Bishop; Benjamin Tanner, Liverpool; Hugh Paterson, Warrington, Cumberland; Frederick Hicks, Magdalen College, Oxford; George Joseph Warner, Manchester; William John Wilson, Great Portland Street, W.; vol. xxv.

William Gray, Blackheath Park; Robert Irvine, Leith, N.B.; Regnald C. Woodcock, Durham; Donald Munro, Glasgow.

The following papers were read:—

- "On Essential Oils," Part II: by Dr. J. H. Gladstone.
- "Observations on Nitrochlorophenols:" by Dr. H. E. Armstrong.

December 21st.

Dr. Williamson, Vice-President, in the Chair.

The following gentlemen were duly elected Fellows of the Society:—

William W. Abney, Rochester, Kent; Jonathan Ingle Calvert, Lancashire; Christopher Childs, 4, Oxford Terrace, Hyde Park; Frederick Montague Page, Lisle Street, Leicester Square.

The following papers were read:-

- "On Eulyte and Dyslyte:" by Mr. H. Bassett.
- "On the Nitration-products of Dichlorophenol-sulphonic Acids," No. IV: by Dr. H. E. Armstrong.

January 18th, 1872.

Dr. Frankland, President, in the Chair.

The following gentlemen were duly elected Fellows of the Society:—

Julian Louis Vanderstraaten, Keppell Street, Russell Square; John Millar Thompson, King's College; Charles W. Vincent, Royal Institution; Robert Barton, Melbourne; David Watson, Washington, Co. Durham; William Thompson, Royal Institution, Manchester; William Forster, Arundel Street, Haymarket; Henry James Helm, Forest Hill; Thomas W. Fletcher, Warrington; George Thomas Glover, Belfast; Thomas Eltoft, Haverstock Hill.

Mr. D. Howard read a paper "On Quinicine."

February 1st.

Dr. Frankland, President, in the Chair.

The following gentlemen were duly elected Fellows of the Society:—

William H. Chandler, Pennsylvania; Charles F. Chandler,

New York; Benjamin P. Medcalf, Coleman Street; John Watts, Royal Institution.

The following papers were read:—

- "On the Crystalline principle of Barbadoes Aloes:" by Dr. W. A. Tilden.
- "On the Relation between the Atomic Hypothesis and the Condensed Symbolic Expression of Chemical Facts and Changes known as Dissected (Structural) Formulæ:" by Dr. C. R. A. Wright.

February 15th.

Dr. Frankland, President, in the Chair.

The following gentlemen were duly elected Fellows of the Society:—

Ludwig Mored, Farnworth, Warrington; Edward Kinch, Royal Agricultural College, Cirencester; Edward Packard, Jun., Bramford, Ipswich; John Ruffle, Plaistow, Essex; Frederick John Barrett, Wolverhampton; Edward Handfield Morton, Newport; Ross Scott, Bayswater.

Dr. Roscoe gave an account of his researches on the compounds of Tungsten.

March 7th.

Dr. Debus, Vice-President, in the Chair.

The following gentlemen were duly elected Fellows of the Society:—

Henry Baden Pritchard, Royal Arsenal, Woolwich; James Ballantyne Hannay, Glasgow; J. Vincent Taylor, Westminster; George Smithers Packer, New Cross; Robert William Atkinson, University College; Walter William Fischer, Corpus Christi College, Oxford.

The following papers were read:—

- "On the Reduction of Ethylic Oxalate by Sodium Amalgam:" by Dr. Debus.
- "On Metastannic Acid and the Detection and Estimation of Tin:" by Mr. A. H. Allen.
- "Note on the quantity of Cæsium contained in the Water of the Hot Spring found in Wheal Clifford:" by Col. Philip Yorke.

March 21st.

Prof. Odling, Vice-President, in the Chair.

The following gentlemen were duly elected Fellows of the Society:—

George Atwood, San Francisco; Edward Northway Butt, Curzon Street, Mayfair; William Moss Bouron, Stockton-on-Tees.

A paper was read "On the Non-existence of the Hyponitrous Acid discovered by Dr. Divers:" by M. Maumené.

March 30th.

Anniversary Meeting. (See page 341.)

April 4th.

Dr. Frankland, President, in the Chair.

The following gentlemen were duly elected Fellows of the Society:—

William Frederick Donkin, Oxford; Charles D. Hunter, Bridge of Allan, N.B.; Reginald Le Neve Foster, Bradford, Manchester; Alexander Noble, Glasgow; W. Little, Lincolnshire; William Henry Walbourne, Dalston.

Dr. Schorlemmer delivered a lecture on the Chemistry of the Hydrocarbons.

April 18th.

Dr. Frankland, President, in the Chair.

The following gentlemen were duly elected Fellows of the Society:---

Thomas Tyrer, Battersea; F. W. Fison, Christ Church, Oxford; George Blundell Longstaff, New College, Oxford; John Robins, Portsdown Road, Maida Vale; T. R. Ogalvie, Greenock; Mark Finch, Chemical Works, Victoria Docks; A. J. Dickinson, Deptford.

The following papers were read:-

"On Benzyl Isocyanate and Isocyanurate;" also "On a Compound of Sodium and Glycerin:" by Mr. E. A. Letts.

"On the Carbonic Acid in Sea Water:" by Prof. Himly.

May 2nd.

Dr. Frankland, President, in the Chair.

The following gentlemen were duly elected Fellows of the Society:—

Richard Anderson, Riddingston, Glasgow; George Cordwent, Taunton, Somerset.

Mr. E. Riley delivered a lecture on The Manufacture of Iron and Steel.

May 16th.

Dr. Debus, Vice-President, in the Chair.

The following gentlemen were duly elected Fellows of the Society:—

C. H. W. Biggs, Reading; J. G. Johnson, Forest Hill; J. A. Ormered, Jesus College, Oxford; Earnest H. Jacob, Corpus Christi College, Oxford.

The following papers were read:—

- "On the Influence of Pressure on Fermentation, Part I:" by Mr. H. T. Brown.
 - "On the Electrolysis of Sugar Solution:" by Mr. H. T. Brown.
- "On the Determination of the Solubility and Specific Gravity of certain Salts of Sodium and Potassium:" by Messrs. D. Page and A. D. Keightley.
- "An Examination of a Recent Attack upon the Atomic Theory:" by Mr. R. W. Atkinson.
- "On the Transformation-products of Starch:" by Mr. C. O'Sullivan.

June 6th.

Dr. Gilbert, in the Chair.

The following gentlemen were duly elected Fellows of the Society:—

G. E. Barker, Sheffield; H. Smith, Manchester; R. H. Davis, Harrogate; Richard Weaver, Leicester; Francis Henry de Rheims, junr., Plumstead.

The following papers were read :--

"On a Remarkable Salt deposited from the Mother-liquors obtained in the Manufacture of Soda:" by Prof. E. T. Thorpe.

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- "On the Composition of Ceylon Jargons:" by Mr. M. H. Cochran.
- " On a Double Sulphide of Gold and Silver: " by Mr. M. M. Pattison Muir.
- "On the Solvent Action of Various Saline Solutions upon Lead:" by Mr. M. M. Pattison Muir.
 - "On the Magnetic Sand of Mount Etna:" by Mr. J. B. Hannay.
 - "New Tests for some Organic Fluids:" by Mr. J. A. Wanklyn.
 - "Dendritic Spots on Paper:" by Mr. A. Liversidge.
 - "On Chinoline and Leucoline: "by Mr. C. G. Williams.
 - "On some Derivatives of Chinoline:" by Mr. Dewer.
- "On the Action of Phosphoric Acid on Morphine:" by Dr. Wright.
- "On a Secondary Colouring Matter Produced in the Preparation of Alizarin from Anthracene:" by Mr. W. H. Perkin.
- "On the Effects of Temperature on the Absorption of Gases by Charcoal:" by Mr. J. Hunter.
- "On the Nitration-products of Dibromophenol-sulphonic Acids," No. V. "On Bromo-phenol-sulphonic Acid," No. VI. "On the Formation of Substituted Nitrophenol-sulphonic Acids," No. VII: by Dr. H. E. Armstrong.

June 20th.

Dr. Frankland, President, in the Chair.

The following gentlemen were duly elected Fellows of the Society:—

J. Emilius Shadwell, Christ Church, Oxford; Walter Weldon, Putney; Walter Stuart, jun., Edinburgh; John Ferguson, University of Glasgow; Charles Armbruster, Shepherd's Bush; George J. Snelus, Workington; R. Wormell, Brixton.

A Lecture was delivered "On Deacon's Method of obtaining Chlorine, as illustrating some Principles of Chemical Dynamics:" by Mr. H. Deacon.

Donations to the Library: Session 1871—1872:—

- "The Royal Society's Catalogue of Scientific Papers;" Part V: from the Royal Society.
- "Air and Rain; the beginning of a Chemical Climatology:" by Dr. R. Angus Smith: from the Author.
- "Black's Lectures on Chemistry;" 2 vols. 4to, MSS: from John Glover, Esq.

- "Supplement to Watts's Dictionary of Chemistry:" from the Author.
- "A Practical Treatise on Soaps:" by Campbell Morfitt: from the Author.
- "The Chemical Phenomena of Iron Smelting:" by I. Lowthian Bell: from the Author.
- "The Connection of certain Phenomena with the Origin of Mineral Veins:" by J. A. Phillips: from the Author.
- "On a Third Nitraniline:" by J. F. Walker and Th. Zincke: from the Authors.
- "On some Points in the Chemistry of Sugar-refining:" by William Wallace, Ph.D.: from the Author.
- "On Protoplasmic Life:" by F. C. Calvert, F.R.S.: from the Author.
- "Report of the Committee on the Treatment and Utilisation of Sewage," re-appointed at Liverpool in 1870: from the Committee.
- "The New Patent Sewage of Towns:" by J. B. Pow: from the Author.
- "The Hygiene of Air and Water:" by William Procter, M.D.: from the Author.
- "The Metric System:" by Mr. Stevenson, M.P.: from the Author.
- "On Teaching Universities and Examining Boards:" by Dr. Lyon Playfair, C.B.: from the Author.
- "Psychic Force and Modern Spiritualism:" by William Crookes, F.R.S.: from the Author.
- "On Prussian Experimental Stations:" by E. Packard: from the Author.
- "On the Change of Volume of Liquids under Constant Pressure:" by C. M. Guldsberg: from the University of Christiania.
- "On the Theory of Indefinite Combinations:" by C. M. Guldsberg: from the University of Christiania.
- "Report of New Chemico-Agricultural Investigations at the Agricultural College of Aas:" by A. Rosing: from the University of Christiania.
- "Storm Atlas of the Norwegian Meteorological Institute:" from the University of Christiania.
- "Geological Survey of the State of Ohio; with Maps and Sections:" from the Executive Department of the State.
- "Address to the American Association for the Advancement of Science," August 16, 1871: by T. Sterry Hunt: from the Author.
- "Circular No. 3 of the War Department, Surgeon-General's Office (U.S.); Report of Surgical Cases in the Army:" from the Department.

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- "Lecture on Water," delivered before the American Institute of the City of New York: from the Author.
- "Cruise of the School-ship 'Mercury' in the Tropical Atlantic Ocean:" from the Department of Public Charities and Correction, New York.
- "Sur un nouveau dissolvant de l'Iodure plombique:" par D. Tommasi: from the Author.
- "Action de l'Iodure plombique sur quelques Acétates métalliques:" pur D. Tommasi: from the Author.
- "Revue de Géologie pour les Années 1868 et 1869:" par MM. Delesse et de Lapparent: from the Authors.
- "Les Oscillations des Côtes de la France:" par M. Delesse: from the Author.

Periodicals:-

- "Philosophical Transactions" for 1871: from the Royal Society.
- "List of Officers and Fellows of the Royal Society for 1871:" from the Royal Society.
 - "Quarterly Journal of Science," 1871-72: from the Editor.
- "Pharmaceutical Journal and Transactions," Third Series, Vol. II: from the Pharmaceutical Society.
 - "Journal of the Society of Arts," 1871-72: from the Society.
 - "Chemical News," 1871-72: from the Editor.
 - "The Chemist and Druggist," 1871-72: from the Editor.
- "The Photographic Journal," 1871-72: from the Photographic Society.
- "Memoirs of the Royal Astronomical Society," Vol. XXXIX: from the Society.
- "Monthly Notices of the Royal Astronomical Society," 1871-72: from the Society.
- "General Index to the first Thirty-eight Volumes of the Memoirs of the Royal Astronomical Society:" from the Society.
- "Quarterly Journal of the Geological Society," 1871-72: from the Society.
 - "Nature," 1871-72: from the Editor.
 - "The Food Journal," 1871-72: from the Editor.
 - "Year-book of Pharmacy" for 1870: from the Editor.
 - "The British Pharmacist" for 1871: from the Editor.
- "Transactions of the American Philosophical Society." New Series. Vol. XIV, Part 3: from the Society.
 - "The American Chemist," 1871-72: from the Editor.
 - "Les Mondes," 1871-72: from the Editor.
 - "Revue Scientifique," 1871-72: from the Editor.

Archives Néerlandaises des Sciences exactes et Naturelles."
Tome VI. Livraisons 4 et 5 : from the Editor.

- "Bulletin de l'Académie Impériale des Sciences de St. Petersbourg," Tome XVI, Nos. 2-5: from the Academy.
- "Denkschriften der Kaiserlichen Akademe der Wissenschaften (Mathematisch-naturwissentschaftliche Klasse) Band: from the Academy.
- "Journal of the Iron and Steel Institute," from October, 1871, to May, 1872: from the Institute.
 - "Journal of the London Institution," 1871-72: from the Institution.
- "Proceedings of the Literary and Philosophical Society of Manchester," 1871: from the Society.
- "Annual Report of the Royal Cornwall Polytechnic Society for 1871:" from the Society.
- "Transactions of the Royal Society of Edinburgh," Vol. XXVI, Parts 2 and 3: from the Society.
 - "Proceedings of the same," Session, 1870-71: from the Society.
- "Proceedings of the Philosophical Society of Glasgow," 1870-71: from the Society.
- "Journal of the Chemico-Agricultural Society of Ulster," Dec., 1871, and June, 1872: from the Society.
- "American Journal of Science and Arts," from July, 1871, to June, 1872: from the Editors.
- "Journal of the Franklin Institute," from June, 1871, to May, 1872: from the Institute.
- "Annual Reports of the Commissioner of Patents (United States)," 1868, 4 volumes: from the Commissioner.
- "Archives of Science, and Transactions of the Orleans County Society of Natural History (Vermont, United States)," April, 1871: from the Society.
- "Sitzungsberichte der Kaiserlichen Akademie der Wissenchaften zu Wien (Mathematisch-naturwissenschaftliche Klasse)," Erste Abtheilung, Band lvii, Hefte 3, 4, 5; Band lxiii, Hefte 1—5; Zweite Abtheilung, Band lxii, Hefte 4, 5; Band lxiii, Hefte 1—5; from the Academy.
 - "Kurze Anzeige derselben," 1871-72; from the Academy.
 - "Journal für praktische Chemie," 1871-72: from Prof. Kolbe.
- "Berichte der deutschen chemischen Gesellschaft zu Berlin," 1871-72: from the Society.
 - "Zeitschrift für Chemie," siebenter Band: from the Editor.
- "Verhandlungen der physikalisch-medicinischen Gesellschaft zu Erlangen," März—August, 1871: from the Society.
- "Verhandlungen der physicalisch-medicinischen Gesellschaft zu Würzburg," 2ter Band, 4tes Heft: from the Society.

- "Verhandlungen der naturforschenden Gesellschaft zu Basel," Fünfter Theil, 1871: from the Society.
- "Nieuwe Verhandelingen van het Bataafsch Genootschap der proefondervindelijke Wijsbegeerte te Rotterdam:" from the Society.
- "Oversigt over det Kongelige Danske Viderskabernes Selskabs Forhandlinger, og dets Medlemmers Arbeeten," 1871: from the Academy.