#### PROCEEDINGS

AT THE

# MEETINGS OF THE CHEMICAL SOCIETY, SESSION 1876–77.

November 2nd, 1876.

Professor Abel, President, in the Chair.

Thomas H. Johnson, Fairfield, Liverpool; Otto Hehner, Holborn Viaduct, E.C.; George C. Thomson, Garnet Hill, Glasgow; Henry A. Bernays, Old Charlton, London; William J. Fuller, Bristol; and Gustav Auerbach, Sudbury, Harrow, were elected Fellows.

The following papers were read:-

- "On the Oxides of Potassium:" by Sydney Lupton.
- "On certain Bismuth Compounds:" by M. M. P. Muir.
- "On Phospho and Arseno-Cyanogen:" by W. R. Hodgkinson.
- "A Secondary Oxidized Product formed during the reduction of Stannic Ethide:" by W. R. Hodgkinson and G. C. Matthews.
- "A Preliminary Notice on Pigmentum nigrum, the Black Colouring Matter contained in Hair and Feathers:" by W. R. Hodgkinson and H. C. Sorby.

### November 16th, 1876.

Professor Abel, President, in the Chair.

"Edward H. W. Swete, Rainbow Hill, Worcester; and Channell Law, Champion Park, Camberwell, were elected Fellows.

The following papers were read:—

- "On Barwood:" by the late Professor Anderson.
- "The Alkaloïds of the Aconites, Part I, on the Crystallisable Alkaloïds contained in Aconitum Napellus:" by Dr. C. R. A. Wright.

- "On Potassium Triiodide:" by G. S. Johnson.
- "On the Coal Gas of the Metropolis:" by T. S. D. Humpidge.

#### December 7th, 1876.

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

Walter Charles Davis, Westury Park, Bristol; John Clark, Bath Street, Glasgow; Thomas Tyrer, Battersea, S.W.; F. H. Marshall, Middlesbrough-on-Tees; John Wood, Maryport, Cumberland; J. F. King, Edinburgh; and Charles Cecil Capel, Foot's Cray, Kent, were elected Fellows.

The following papers were read:-

- "On Coleïn:" by A. H. Church.
- "On Phenylenediamine:" by Otto N. Witt.
- "On Calcium Sulphate:" by J. B. Hannay.
- "Additional Notes on Potassium Triiodide:" by G. S. Johnson.

#### December 21st, 1876.

Professor Abel, President, in the Chair.

The following papers were read:—

- "A further Study of Fluid Cavities:" by W. N. Hartley.
- "On Thymoquinone:" by H. E. Armstrong.
- "On High Melting Points, with special reference to those of Metallic Salts," Part II: by T. Carnelley.
  - "On the Estimation of Urea:" by G. Turner.
- "On the Corrosion of Lead by the New River Company's Water:" by G. Bischof.

## January 18th, 1877.

Professor Odling, Vice-President, in the Chair.

William Hampton, Hanley; D. W. Ladley, Cloudalkin, Dublin; and John Comyns Leach, Newton Blandford, were elected Fellows.

The following papers were read:—

- "On some Derivatives of Dithymoltrichlorethane:" by Dr. Jäger.
- "Preliminary Account of some Reactions in Organic Chemistry, and their Ultimate bearings:" by H. W. Hake and C. T. Kingzett.

"On Dinitroso-orcin and Dinitro-orcin:" by J. Stenhouse and C. E. Groves.

"On High Melting Points, with special reference to those of Metallic Salts, Part III:" by T. Carnelley.

#### February 1st, 1877.

Professor Abel, President, in the Chair.

A. G. Phillips, Liverpool, and F. Kopfer, Tübingen, Germany, were elected Fellows.

The following papers were read:-

- "On Kekulé's and Ladenburg's Benzene Symbols:" by H. E. Armstrong.
- "On the Formation of Coumarin, of Cinnamic Acid, and of other analogous Acids from the Aromatic Aldehydes:" by W. H. Perkin.

#### February 15th, 1877.

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

Michael Conroy, New Brighton, Cheshire; Arthur Pearson Luff, St. Mary's Hospital, Paddington; John Angell, Manchester; Joshua Bardsley, Lancashire; Matthew A. Adams, Maidstone, Kent; and Peter Townsend Austen, New York, were elected Fellows.

The following papers were read:—

- "On the Estimation of Urea by means of Hypobromite:" by A. Dupré.
- "On a New Carbometer for the Estimation of Carbonic Anhydride:" by S. T. Pruen and G. Jones.
- "On the Influence Exerted by Ammonium Sulphide in Preventing the Action of Various Solutions on Copper:" by F. W. Shaw and T. Carnelley.
- "An Experimental Inquiry as to the Changes which occur in the Composition of Water from Wells near the Sea:" by W. Watson.
- "On the Solvent Action of Various Saline Solutions on Lead:" by M. M. P. Muir.
  - "Derivatives of Di-isobutyl:" by W. Carleton Williams.
- "Notes on Madder Colouring Matters:" by E. Schunck and H. Roemer.

March 1st, 1877.

Professor Abel, President, in the Chair.

Edward Hunter, Manchester; F. C. C. Hewett, Halifax, Nova Scotia; William Terrell, Swansea; Alexander Kinninmont, Glasgow; John Borland, Rosebank, Kilmarnock; W. Handsel Griffiths, Dublin; and George A. C. Pearce, Danes Inn, W.C., were elected Fellows.

Professor Thorpe delivered a Lecture on the Theory of the Bunsen Lamp.

#### March 15th, 1877.

Professor Abel, President, in the Chair.

F. W. Young, Warrington, was elected a Fellow.

The following papers were read:—

- "Isomeric Nitrosoterpenes:" by W. A. Tilden and A. W. Shenstone.
- "Preparation of Copper-zinc Couples:" by J. H. Gladstone and A. Tribe.
  - "On Chromium Pig Iron:" by E. Riley.
  - "Note on Gardenin:" by J. Stenhouse and C. E. Groves.
- "Additional Note on a Process for Estimating Bismuth Volumetrically:" by M. M. P. Muir.
  - "On Certain Bismuth-compounds:" by M. M. P. Muir.
- "On the Estimation of Urea by means of Hypobromite:" by Maxwell Simpson and C. O'Keefe.

March 30th. (Anniversary Meeting). See vol. i, p. 493.

April 5th, 1877.

Professor Odling, Vice-President, in the Chair.

Professor N. S. Maskelyne delivered a Lecture "On the Discrimination of Crystals by their Optical Characters."

#### April 19th, 1877.

Dr. Gladstone, President, in the Chair.

The following papers were read:—

"On the Estimation of Manganese in Spiegeleisen, and of Manganese and Iron in Manganiferous Iron Ores:" by E. Riley.

"On a Method of Detecting Small Quantities of Bismuth:" by M.

M. P. Muir.

"On Certain Bismuth-compounds," Part V: by M. M. P. Muir.

"Notes on Madder Colouring Matters, Munjistin, Purpurin, and Purpuroxanthic Acid:" by E. Schunck and H. Roemer.

#### May 3rd, 1877.

Dr. Gladstone, President, in the Chair.

The following papers were read:-

"On some points in Gas Analysis:" by J. W. Thomas.

"Experiments on the Decomposition of Nitric Oxide by Pyrogallate of Potash:" by Dr. Russell and W. Lapraik.

"Contributions to the History of the Naphthalene Series. No. 1. Nitros- $\beta$ -Naphthal:" by J. Stenhouse and C. E. Groves.

"On Asbestos Cardboard and its uses in the Laboratory:" by W. N. Hartley.

## May 17th, 1877.

W. Crookes, F.R.S., Vice-President, in the Chair.

The following papers were read:-

- "On a Slight Modification of Hofmann's Vapour-density Apparatus:" by M. M. P. Muir and S. Suguira.
- "Note on the Fluid contained in a Cavity in Fluor-spar:" by J. W. Mallet.
- "Examination of Substances by the Time Method:" by J. B. Hannay.
- "On the Dehydration of Hydrates by the Time Method. Part I. Iron and Aluminium Hydrates:" by W. Ramsay.
- "On the Transformation of Aurin into Rosaniline:" by R. S. Dale and C. Schorlemmer.

May 31st, 1877.

#### Extraordinary General Meeting.

June 7th, 1877.

Dr. Gladstone, President, in the Chair.

The following papers were read :--

- "On the Gases enclosed in Lignite-coal and Mineral-resin from Bovey Heathfield:" by J. W. Thomas.
  - "An Apparatus for Gas Analysis: " by E. Frankland.
- "On Narcotine, Cotarnine, and Hydrocotarnine:" Part V, by C. R. A. Wright.
  - "On Otto of Limes:" by C. H. Piesse and C. R. A. Wright.
- "On Primary Normal Heptyl Alcohol and some of its Derivatives:" by C. F. Cross.
- "On the Transformation of Aurin into Rosaniline: " by R. S. Dale and C. Schorlemmer.

#### June 21st, 1877.

## Dr. Gladstone, President, in the Chair.

F. H. T. Allen, Wakefield; H. S. Bell, South Kensington; C. T. V. Buck, Christ Church, Oxford; J. Y. Buchanan, Edinburgh; A. E. N. Franchimont, Leyden, Holland; J. Gardener, Camden-square, N.W.; W. Lapraik, Southgate-road, N.; G. A. Milne, Malton, Yorkshire; J. Napier, Ipswich; C. G. Neison, Royal Veterinary College, N.W.; J. L. Nolters, Netley; J. H. Poland, Blackheath, S.E.; J. Scarf, City of London School, E.C.; H. Senier, Finsbury Park, N.; H. G. Stacey, High Holborn, W.C.; S. G. Thomas, Wandsworth, S.W.; B. Thomp'son, Northampton; F. W. Jones, Camden-road, N.W.; A. Watt, Liverpool; W. Webster, jun., Lee, S.E.; and J. R. Young, Warrington, were elected Fellows.

The following papers were read:-

- "On the Action at a High Temperature of certain Volatile Metallic Chlorides on certain Hydrocarbons:" by Watson Smith.
- "On the Action of Alkaline Oxalates on the Earthy Carbonates, and of Solutions of Alkaline Carbonates on the Earthy Oxalates:" by Watson Smith.

- "On Thallious Platinocyanide:" by R. J. Friswell and A. J. Greenaway.
  - "On Crystallised Barium Silicate:" by E. W. Prévost.
  - "Note on Anethol and its Homologues:" by W. H. Perkin.
  - "Note on Persulphocyanic Acid:" by R. W. Atkinson.
  - "On the Oxidation-products of Aloïns:" by W. Tilden.

### Donations to the Library, 1876–77:—

- "Chemical and Physical Researches:" by Thos. Graham, D.C.L., F.R.S.; edited by James Young, F.R.S., and R. Angus Smith:
  - from the Editors. "Experimental Researches in Pure, Applied, and Physical Chem-
- istry:" by E. Frankland, F.R.S.: from the Author.
  - "Inorganic Chemistry." 2 vols.: by T. E. Thorpe, Ph.D., F.R.S.: from the Author.
- "Chemistry, General, Medical, and Pharmaceutical:" by John Attfield. 7th Edition: from the Publisher.
  - "The Primer of Chemistry, including Analysis:" by A. Vacher: from the Author.
- "Chemical Handicraft:" by J. J. Griffin: from Messrs. Griffin.
  "The History, Products, and Processes of the Alkali Trade:" by Chas. T. Kingzett: from the Author.
  - "Instruction in Photography:" by Capt. Abney, F.R.S.:

from the Author.

"Composition of Foods, Waters, Minerals, Manures, and Miscellaneous Substances:" compiled by E. T. Kensington, F.C.S.:

from the Author.

- "Food-tables:" by J. B. Lyon, Surgeon-Major: from the Author.
- "A Treatise on the Law relating to the Pollution and Obstruction of Watercourses:" by Clement Higgins, M.A., F.C.S.:

from the Author.

- "Anthracene; its Constitution, Properties, Manufacture, and Derivatives:" by G. Auerbach: translated and edited by Wm. Crookes, F.R.S.: from the Editor.
- "Report to the Secretary of State for the Home Department on the Subject of Testing Petroleum:" by F. A. Abel: from the Author.
- "Report of the Royal Commissioners appointed to Inquire into the Spontaneous Combustion of Coal in Ships:" from F. A. Abel, Esq.
- "Contributions from the Chemical Laboratory of Harvard College:" by J. P. Cooke: from the Author.
- "New South Wales, its Resources and Progress:" by authority of the Commissioners of the Philadelphia Exhibition of 1876:"

from Prof. Liversidge.

- "Mines and Mineral Statistics of New South Wales:" compiled by the Hon. John Lucas, M.P.: from Prof. Liversidge.
  - "Mineral Map and General Statistics of New South Wales:"

from Prof. Liversidge.

- "Smithsonian Contributions to Knowledge." Vols. xx and xxi:
  from the Smithsonian Institution.
- "Ausführliches Lehrburch der Chemie:" von H. E. Roscoe und C. Schorlemmer. Band I: from the Authors.
- "Chemische Mittheilungen aus dem Laboratorium der technischen Chemie in Prag.:" von Dr. Franz. Stolba: from the Author.
- "Recherches sur les substances explosives; combustion de la Poudre:" par MM. Noble et Abel; traduit de l'Anglais par MM. le Lieut.-Col. Aloncle et le Commandant Heden:

from F. A. Abel, Esq.

"Études sur les Echinoïdes:" par S. Loüen (Atlas):

from the Royal Swedish Academy of Science.

Pamphlets:—

"Nature of the Physical Forces: by Edward Vogel:"

from the Author.

"Transverse Absorption of Light:" by William Akroyd:"

from the Author.

- "Experiments on the Maximum Elasticity and Density of Vapours:" by A. Morton: from the Author.
  - "Examples of Pseudocrystallisation:" by Prof. Liversidge:

from the Author.

- "A New Form of Polariscope, and its Application to the Observation of the Sky:" by H. H. M. Bosanquet: from the Author.
- "On the Effect of Heat on the Chloride, Bromide, and Iodide of Silver:" by G. F. Rodwell:" from the Author.
- "Note on the Resistance of Materials, as affected by Flow and Rapidity of Distortion:" by R. H. Thurston:

from the American Society of Civil Engineers.

- "The Rate of Set of Metals subjected to Strain for considerable Periods of Time:" by R. H. Thurston: from the Author.
  - "On the Formation of Moss Gold and Silver:" by A. Liversidge: from the Author.
- "Scheele's Green: its Composition as usually prepared, and some Experiments upon Arsenite of Copper:" by P. S. Sharples:

from the Author

- "Schweinfurt Green:" by P. S. Sharples: from the Author.
- "On Franklandite, a New Mineral Borate:" by J. Emerson Reynolds: from the Author.
- "On the Composition of Lievrite, as determined by Mr. Early's Method:" by J. Emerson Reynolds: from the Author.

"On a Remarkable Example of a Contorted Slate:" by A. Liversidge: from the Author.

"Fossiliferous Siliceous Deposit from the Richmond River, N.S.W.:" by A. Liversidge: from the Author.

"On the So-called 'Greenstones of Western Cornwall:" by J. A. Phillips: from the Author.

"Remarks on the Sedimentary Formations of New South Wales:" by the Rev. W. B. Clarke: from Prof. Liversidge.

"Notes on the Iron and Coal Deposits, Walleraway, and on the Diamond Fields:" by Prof. Liversidge: from the Author.

"On Rain-fall, Evaporation and Percolation:" by Dr. Gilbert:

from the Author.

- "On the Rainfall for 25 years (1851—1875) as observed at the Radcliffe Observatory, Oxford: "by the Rev. R. Main: from the Author.
- "The Composition of the Water supplied to London during 1876:" by C. M. Tidy: from the Author.
  - "The Main Drainage of Oxford:" by W. H. White:

from the Author.

"On the Mineral Water discovered in Sinking the Artesian Well at St. Clement's, Oxford:" by Joseph Prestwich, M.A., F.R.S.:

from the Author.

- "Influence of Chemical Constitution and Physiological Activity:" by J. Emerson Reynolds, M.D.: from the Author.
- "On some Points in connection with Animal Nutrition:" by J. H. Gilbert: from the Author.
- "The Formation of Fat in the Animal Body:" by J. B. Lewis and J. H. Gilbert: from the Authors.
- "On the Analysis of Milk: its Composition, and the Quality of the Milk sold in Dublin and its Suburbs:" by E. H. Cook:

from the Author.

- "On Noctilucin:" by Dr. T. L. Phipson: from the Author.
- "Note on the Administration of Phosphorus:" by Edward Squibb, M.D.: from the Author.
- "The Use and Value of Arsenic in the treatment of Diseases of the Skin:" from the Author.
- "On some Points in the Chemistry of Vegetables:" by Dr. Gilbert: from the Author.
- "Report on the Sugar Cane Disease in the Mary River District, Queensland:" by Prof. Liversidge: from the Author.
  - "On the Estimation of Nitrous and Nitric Acids:" by G. Lunge: from the Author.
  - "Milk Analysis:" by P. S. Sharples: from the Author.
  - "On Boiler Incrustation and Corrosion:" by F. J. Rowan:

from the Author.

- "Sewage Utilisation:" by Dr. Gilbert: from the Author.
- "A Plan for rendering Salted Meat more Nutritious, thereby preventing Scurvy:" by Robt. Galloway: from the Author.
- "Truth in Extremis:" a Plea against the Murder of Science by the Gold-Poison:" by a Searcher: from the Author.
- "American Contributions to Chemistry: an Address delivered on the occasion of the celebration of the Centennial of Chemistry at Northumberland, Pa., Aug. 1, 1874:" by Benjamin Silliman, of Yale College: from the Author.
- "Ueber verschiedene Amylene und Amylalkohole:" von A. Wischnegradsky: from the Author.
- "Die Naturgesetze, und ihr Zussammenhang mit den Abstracten Wissenschaften:" von Hermann Scheffler, 2 Theile:

from the Author.

- "La Loi de Dulong et Petit:" par A. Terreil: from the Author.
- "Sur les Equivalents Chimiques et les Poids Atomiques, comme Bases d'un Système de Notation:" par C. Marignac:

from the Author.

"Expériences Pratiques de la Boussole Circulaire, faites à bord des navires de l'Etat et de la Marine Mercantile:" par E. M. Duchemin:

from the Author.

- "Sur une méthode générale de Synthèse d'Hydrocarbures, d'Acetones," &c.: par C. Friedel et J. Crafts: from the Authors.
- "Sur l'Isodibutylene, l'une des variétés Isomériques de l'Octylène:" par M. Boutlerow: from the Authors.
- "Recherches sur les Acides Tetra- et Trithioniques:" par M. M. W. Springet et A. Lèvy: from the Authors.
- ." Saggi di Esperienze Agrarie: "fatte dal Prof. E. Becchi.—Fascicoli, 1—5: from the Author.
- "Nuove Ricerche Chimiche su l'Acqua Salso-iodica di Castrocaro:" fatte dal Prof. E. Becchi: from the Author.
- "Ricerche Chimiche su l'Acqua Ferro-Manganesifera delle Piazzule di Proprietà della Contessa Luisa Cappini:" fatte dal Prof. E. Becchi: from the Author.

#### Periodicals:—

- "Philosophical Transactions for 1876:" from the Royal Society.
- "List of Officers and Fellows of the Royal Society for 1876:"

from the Royal Society.

- "Memoirs of the Royal Astronomical Society," Vol. xliii, 1875-1877: from the Society.
- "Transactions of the Royal Society of Edinburgh." Vol. xxvii. Part IV (1875-76).
  - "Proceedings of the same. Session 1875-1876:" from the Society.

- "Transactions of the Royal Irish Academy." Vol. xxvi, 1876:
  from the Academy.
- "Monthly Notices of the Royal Astronomical Society, 1876-77:"
  from the Society.
- "Proceedings of the Royal Institution of Great Britain," Vol. ix: from the Institution.
- "Reports of Friday Evening Lectures at the Royal Institution, 1876:" from the Institution.
  - "Quarterly Journal of Science," Vol. vii: from the Editor.
  - "Quarterly Journal of the Geological Society, 1876-77:"

from the Society.

"Journal of the Iron and Steel Institute, 1877:"

from the Institute.

- "Year-book of Pharmacy, 1876 and 1877:" from Professor Attfield.
- "Pharmaceutical Journal and Transactions." Third series, Vol vi: from the Pharmaceutical Society.
- "The Photographic Journal, Vols. i, ii:"

from the Photographic Society.

- "Journal of the Society of Arts, 1876-77:" from the Society.
- "The Textile Colourist." Edited by Charles O'Neile, F.C.S., 1877: from the Editor.
- "Report of the British Association for the Advancement of Science, 1875 (Bristol):" from the Association.
  - "The Mineralogical Magazine, 1877:"

from the Mineralogical Society.

- "Nature, 1876-77:" from the Editor.
- "The Chemical News, 1876-77:" from the Editor.
- "The Telegraphic Journal and Electrical Review, 1876–77:"

from the Editor.

- "Engineering, 1876-1877:" from the Editor.
- "The Druggist, 1877:" from the Editor.
- "The Chemist and Druggist, 1877:" from the Editor.
- "Forty-third and Forty-fourth Reports of the Royal Cornwall Polytechnic Society, 1875 and 1876:" from the Society.
- "Transactions of the Newcastle-on-Tyne Chemical Society:" Vol. iii. 1874-1877: from the Society.
- "Memoirs (Vol. v) and Proceedings (Vol. xv) of the Literary and Philosophical Society of Manchester:" from the Society.
  - "Annual Report of the Yorkshire Philosophical Society for 1875:" from the Society.
  - "Third Annual Report of the Yorkshire College of Science, Leeds:"
    from the College.
- "Journal of the Literary and Philosophical Society of Liverpool, 1875-1876:" from the Society.

- "Transactions (Vol. xii) and Proceedings (Vol. lii) of the Cambridge Philosophical Society: " from the Society.
  - "Western Review of Science and Industry, 1877:"

from the Editor.

"Transactions of the Philosophical Society of New South Wales, 1862–1868:" from the Society.

Transactions and Proceedings of the Royal Society of New South Wales." Vol. ix, 1876: from the Society.

"American Journal of Science and Arts." Vols. xii, xiii:

from the Editors.

- "Journal of the Franklin Institute, 1877:" from the Institute.
- "Transactions of the American Philosophical Society." Vol. xv. Part II. (1875): from the Society.
- "Proceedings of the American Philosophical Society, January to June, 1877:" from the Society.
  - "Smithsonian Report for 1876:" from the Smithsonian Institution.
- "Report of the Commissioner of Agriculture (U.S.) for 1875:" from the Commissioner.
  - "American Chemist, 1877:" from the Editor.
  - "Bulletin of the Bussy Institution, Boston," Part v, 1876:

from the Institution.

- "Proceedings of the Academy of Natural Sciences at Philadelphia, 1876:" from the Academy.
- "Transactions of the American Medical Association, 1876:" from the Association.
- "Proceedings of the American Academy of Arts and Sciences, 1877:" from the Academy.
- "Memoirés et Comptes rendus de la Société des Sciences Medicales de Lyons." Tome xiv, 1874: from the Society.
  - "Moniteur Scientifique, 1876-77:" from the Editor.
  - "Revue Scientifique, 1877:" from the Editor.
  - "Les Mondes, 1875-76:" from the Editor.
- "Mémoires de l'Académie des Sciences et Lettres de Montpellier." Section des Sciences. Tomes 1875: from the Academy.
- "Bulletin de l'Académie Royale des Sciences de Belgique, 1875–1876:" from the Academy.
- "Annuaire de l'Académie Royale des Sciences de Belgique, 1875–1876 : " from the Academy.
- "Bulletin de l'Académie Imperiales des Sciences de St. Pétersbourg." Tome xxiv: from the Academy.
- "Bulletin de la Société Industrielle et Agricole d'Angers et du Département de Maine et Loire, 1875." 1er Trimestre:

from the Society.

- "Société Hollandaise des Sciences de Harlem: Notices historiques, &c." Janvier, 1876: from the Society.
- "Archives Néerlandaises des Sciences Exactes et Naturelles." Tome xi: from the Editor.
- "Atti della Real Accademia dei Lincei." Anno celxxiv (1876–77): from the Academy.
- "Memorie dell' Accademia delle Scienze dell' Istituto di Bologna." Serie 3. Tomi v, vi: from the Academy.
  - "Rendiconti delle Sessioni della stessa Accademia, 1874-75:"

from the Academy.

- "Monatsbericht der Königlich-preussischen Akademie der Wissenschaften zu Berlin." 14 Bände, 1862–1875, 1866–1877: from the Academy.
- "Denkschriften der Kaiserlichen Akademie der Wissenschaften." 34-ter Band: from the Academy.
- "Sitzungsberichte derselben," 1874. Zweite Abtheilung, Nos. 8—10. 1875; Zweite Abtheilung, Nos. 1—5.
- "Abhandlungen der Königlich-Bayerischen Akademie der Wissenschaften." 12-ter Band. Zweite Abtheilung. 1876:

from the Academy.

- "Sitzungsberichte derselben, 1876:" from the Academy.
- "Jenaische Zeitschrift für Naturwissenschaft." 12-ter Band. Supplement: from the Editor.
- "Muster-Zeitung, Zeitschrift für Färberei, Drückerei, Bleicherei, u. s. w." No. 39 (1875): from the Editor.
- "Verhandlungen der Naturforschenden Gesellschaft in Basel." 6-ter Theil. 2-ter Heft (1875): from the Society.
- "Verhandlungen der Physikal-Medicinischen Gesellschaft zu Würzburg." 11-ter Band. 1 und 2 Heft: from the Society.
- "Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich." 19-ter und 20-ter Jahrgang: from the Academy.
- "Archiv für die Naturkunde Liv-, Esth-, und Kur-lands." Band i. Heft 8: from the Philosophical Society of Dorpat.
- "Chemische Mittheilungen aus dem Laboratorium der Technischen Chemie in Prag:" von Dr. Franz Stolba: from the Author.
  - "Mandblaad voer Naturwetenschappen, January to May, 1877:" from the Philosophical Society of Amsterdam.
- "Oversigt over det Kongelige Danske Viderskabernes Selskabs Forhandlinger, og des Medlemmers Arbeeten:"

from the Royal Danish Academy of Sciences.

Kongl. Vetenskaps Akademiens Handlingar, 1874, 1875:"

from the Royal Swedish Academy of Sciences.