CATALOGUE
OF
SCIENTIFIC PAPERS
1800—1900

SUBJECT INDEX

VOLUME I

PURE MATHEMATICS

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ROYAL SOCIETY OF LONDON

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PURE MATHEMATICS

CAMBRIDGE :

AT THE UNIVERSITY PRESS

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ARRANGED FOR A COMMITTEE OF THE ROYAL SOCIETY
UNDER THE SUPERINTENDENCE OF

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DIRECTOR OF THE CATALOGUE

with the assistance of

R. J. DALLAS, M.A.

KING'S COLLEGE, CAMBRIDGE

PREFACE

WHEN the plan for a Catalogue of Scientific Papers was drawn up in 1857 by the Royal Society, it was also contemplated that a Subject Index to the papers should be made. During the compilation of the well known twelve volumes of the Catalogue of Authors (1800—1883) much material was collected for the Subject Index by the Committee of the Society which had charge of the work, but nothing was printed.

In 1898 it was determined to undertake the continuation for the period 1884—1900, and at the same time to prepare material for a Subject Index for these last seventeen years of the century. It was afterwards decided that one Index should be made to the papers of the whole of the Nineteenth Century; and to bring this Index into relation with the International Catalogue of Scientific Literature, which deals with publications subsequent to 1900, the Index was to be arranged in accordance with the schedules of the different sciences which form the basis of the International Catalogue.

The extent of the work for the period 1884—1900 proved to be so great that the resources of the Royal Society would have been quite inadequate for its completion. Its continuation has been made possible by liberal donations received from various sources. The Catalogue is especially indebted to Dr Ludwig Mond, F.R.S., a member of the Committee entrusted with its preparation, who has encouraged and forwarded its progress in every way for many years past; in particular, in addition to similar generous donations at earlier stages, Dr Mond recently undertook to provide an extremely liberal subsidy during the three years 1907—9, which has enabled the work to be pressed forward rapidly.

The Subject Index will be published as separate Index-volumes for each of the seventeen Sciences of the Schedules of the International Catalogue, viz. Mathematics, Mechanics, Physics, Chemistry, Astronomy, Meteorology, Mineralogy, Geology, Geography, Palaeontology, Biology, Botany, Zoology, Anatomy, Anthropology, Physiology, and Bacteriology.

The practical advantage which will accrue from thus classifying the literature of each Science seems to be amply sufficient, in spite of unavoidable imperfections, to justify the great expense that has been involved. In the past a student interested in a single branch of the subject would probably consult special Treatises and Reports from which he could obtain references to the more important memoirs. But it often happens that such references are transferred simply from one treatise to another, and

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experience shows that important contributions that have once dropped out of sight may for a long time, or indeed ever afterwards, be overlooked. When the whole literature is set out systematically and exhaustively under appropriate headings as in the present volume, such accidents are guarded against so far as seems to be possible.

The present volume dealing with Pure Mathematics is the first instalment of the Subject Index: it contains 38748 entries referring to 700 serials. It is believed that these entries cover all the contents of the serials indexed with the exception of about 750 short notes (mostly falling under 6810 and 7210) which were not thought of sufficient permanent interest to be entered.

The Index titles for papers published from 1884 to 1900 inclusive have been made by Referees familiar with the subjects, who have consulted the original papers and have made the titles from the contents of the papers and not merely from their headings. It was intended that the Index entries for the papers from 1800 to 1883 should be made from the titles as printed in the Catalogue of Authors, but it was soon found that many of the titles were too indefinite for such minute classification, and reference has had to be made to the original papers in a large number of cases. The latter part of this work was commenced by the late Mr George Griffith of Harrow, whose untimely death was a great loss to the Committee.

The entries in the Index are arranged so that reference can be made to the complete titles in the Catalogue of Scientific Papers. Generally the author's name together with the date will indicate the volume in which the title of the paper may be found. These clues are insufficient when the paper is anonymous or occurs in Volume XII or in the additions to Volume VI. They are also at fault for titles marked with an asterisk showing that they belong to previous volumes; in these cases the number of the volume is given in the Index entry in small Roman numerals within brackets.

When an error has been found in an author's name in the Catalogue, it is corrected in the Index by a reference made to the error.

The Index contains references to some papers of dates earlier than 1884 which were omitted in previous volumes of the Catalogue: these are indicated by an asterisk placed before the date; the full titles of these papers will be given in the continuation of the Catalogue of Authors.

When an author's personal name does not appear in the heading of an original paper, no attempt has been made to find the name for the Index, but this will be done for the Catalogue of Authors.

The Catalogue of Authors for the period 1884 to 1900 is in preparation; the material will not however be quite complete until the Subject Indexes for the various Sciences have been reduced into order.

Entries on the same subject are arranged, so far as possible, in order of

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date irrespective of the authors' names, with the endeavour to present the subject in the historical form. This grouping of the entries, involving modifications of titles prepared by different Referees, or by the same Referee at different times, has been one of the most difficult problems in the preparation of the Index.

The abbreviations of the names of the serials used in the Royal Society Catalogue have been further shortened for the Index. As the abbreviations are not uniform in all the volumes, it will be found that the same journal may be indicated by several different abbreviations, but in each case the one selected is that which was used in the volume in which the title of the paper occurs.

In the case of serials commencing since 1883, the abbreviations adopted in the International Catalogue have been used as a guide.

The list of serials will, it is hoped, be a valuable feature of the Index. It has been drawn up by the Director and contains the names of 701 serials from which the entries in the Index have been taken. Each title is preceded by the abbreviation which represents the serial in the Index; the date of commencement of the serial is given, and if it is extinct the date of the last volume is added. There are appended symbols representing the names of twenty-three British Libraries in some of which the serials may be found; where the set is incomplete the symbol is followed by *i*. The information from which this list has been compiled was obtained, in the first instance, from published catalogues; subsequently the list was submitted to the custodians of many of the libraries, who kindly marked many serials which had not been found in the catalogues used. The thanks of the Committee for this valuable assistance are due to Mr F. Jenkinson of the Cambridge University Library, Mr E. W. B. Nicholson of the Bodleian Library, the Librarian of the Radcliffe Library, the Librarian of the Patent Office, Dr B. Daydon Jackson and Mr A. W. Kappel of the Linnean Society, Mr W. H. Wesley of the Royal Astronomical Society, Mr C. V. Crook of the Geological Museum, Mr F. W. Clifford of the Chemical Society, and Mr R. W. Chambers of University College, London; Mr R. Lloyd Praeger obtained the information from the five libraries in Dublin, and Dr Hugh Marshall, F.R.S., from two libraries in Edinburgh and two in Glasgow.

Although much care has been expended in making this list as accurate as possible, it is probable that some errors will still be found and the Director will be thankful to any one who will send corrections: portions of the list will be required for the subsequent volumes of the Index.

The subjects are arranged under the registration numbers adopted in the International Catalogue; a copy of Schedule A, Mathematics, is prefixed to the Index, with indication of the pages on which the titles for the

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different sections occur. It has occasionally been found convenient, in order to save repetition in printing, to group entries under a sub-heading which is not contained in the International Catalogue Schedule. Where this has been done the sub-heading is printed in italics. In some of these cases the words of the sub-heading are understood to exist before the entries following them, and consequently these entries commence with small letters. These minor classifications, being often made mechanically on the basis of the explicit mention of the sub-heading, are not to be taken as exhaustive; cognate entries may be found elsewhere under the same main heading. The unit of classification is thus the complete numbered heading.

The first portion of the present volume of the Index having been sent to press before the whole of the material had been sorted, some slips belonging to earlier sections were discovered during the arrangement of the later ones. These titles have been placed in an Appendix under their appropriate registration numbers.

The following referees have assisted at various times in the preparation of the Subject Index in Pure Mathematics :—the late Professor J. D. Everett, F.R.S., Mr R. J. Dallas, Miss Alice Everett, Mr R. Hargreaves, Miss W. M. Hudson, Mr H. Knapman, Miss E. Perrin and Mr G. Harold Wilson. The Committee is indebted to them for much valuable help.

The arrangement of the contents of this volume for the press has been made by Mr R. J. Dallas, M.A., of King's College, Cambridge. To him and to Miss Bremner and the members of the Catalogue Staff thanks are due for careful and conscientious work.

At the request of the other members of the Committee, Mr G. B. Mathews, F.R.S., examined the whole of the proof-sheets, and made suggestions for their improvement: he was also consulted from time to time about questions of arrangement, head lines and sub-headings.

When the time for going to press approached, the Committee learned with much satisfaction that the Syndics of the Cambridge University Press were willing to undertake the complete risk of printing and publishing, as regards both the Catalogue of Scientific Papers and the Subject Index. It will be the care of the Committee, and it is hoped of the Scientific world generally, to use their best endeavours that this public-spirited action shall not result in financial loss.

Finally the thanks of the Committee are due to the officials of the Cambridge Press for their unflinching courtesy in the discharge of a complex task.

March 1908.

SUBJECT INDEX OF PURE MATHEMATICS

LIST OF SERIAL PUBLICATIONS

WITH THE ABBREVIATIONS OF THEIR TITLES USED IN THE INDEX, AND
LIBRARIES WHERE THE SERIALS CAN BE CONSULTED.

The date following the title of a serial indicates the year of its commencement; if a second date is given it marks the termination of the serial.

The letters following the dates indicate libraries where the serials are to be found: if the serial is incomplete, the symbol of the library is followed by *i*.

B.M.	British Museum.	Glasg.P.S.	Royal Philosophical Society of Glasgow.
Camb.P.S.	Cambridge Philosophical Library.	Glasg.U.	Glasgow University.
Camb.U.	Cambridge University Library.	Linn.S.	Linnean Society.
Chem.S.	Chemical Society.	Math.S.	Mathematical Society.
Dub.N.L.I.	National Library of Ireland, Dublin.	N.H.M.	Natural History Museum.
Dub.R.C.S.	Royal College of Science, Dublin.	Oxon.B.	Bodleian, Oxford.
Dub.R.D.S.	Royal Dublin Society.	Oxon.B.(R.)	Deposited in Radcliffe.
Dub.R.I.A.	Royal Irish Academy, Dublin.	Oxon.R.	Radcliffe, Oxford.
Dub.T.C.	Trinity College, Dublin.	P.O.	Patent Office, London.
Edinb.R.S.	Royal Society of Edinburgh.	R.A.S.	Royal Astronomical Society.
Edinb.U.	Edinburgh University.	R.S.	Royal Society.
Geol.M.	Geological Survey Museum, Jermyn St.	U.C.L.	University College, London.

Abv. Mm. S. Ém.	Mémoires de la Société d'Émulation d'Abbeville. Abbeville.
Abv. S. Mm.	1833— B.M.; Camb.U.i.; Dub.T.C.; Edinb.R.S.i.; Linn.S.i.; N.H.M.i.; Oxon.B.i.; R.S.i.
A. C.	Annales de Chimie, ou Recueil de Mémoires concernant la Chimie et les Arts qui en dépendent. Paris. 1789— B.M.; Camb.U.; Chem.S.; Dub.R.D.S.i.; Dub.T.C.i.; Edinb.R.S.; Edinb.U.; N.H.M.; Oxon.B.i.(R.); P.O.; R.S.; U.C.L.
Ac. Cæs. Leop. N. Acta ...	Nova Acta physico-medica Academiæ Cæs. Leopoldino-Carolinæ Naturæ Curiosorum. Erlangen, Bonn, Breslau. 1758— Camb.P.S.; Camb.U.; Chem.S.i.; Dub.T.C.; Edinb.R.S.i.; Edinb.U.; Linn.S.i.; Math.S.i.; N.H.M.; Oxon.R.; R.A.S.i.; R.S.; U.C.L.i. <i>See Ac. Nt. C. N. Acta and Cæs. Leop. Ac. N. Acta.</i>
Acireale Ac. At.	Atti e Rendiconti dell' Accademia di Scienze, Lettere e Arti dei Zelanti e PP. dello Studio di Acireale. 1890— Camb.P.S.i.; N.H.M.i.; R.S.i.
A. Cond. Pon. Chauss. ...	Annales des Conducteurs des Ponts et Chaussées; recueil de mémoires, etc., concernant le Service de Conducteurs des Ponts et Chaussées. Paris. 1857— P.O.
A. Cons. Arts et Mét. ...	Annales du Conservatoire des Arts et Métiers. Paris. 1861— B.M.; Camb.U.; Glasg.P.S.i.; Oxon.B.; P.O.; R.S. <i>See Par. A. Cons.</i>
Ac. Nt. C. N. Acta	<i>See Ac. Cæs. Leop. N. Acta and Cæs. Leop. Ac. N. Acta.</i>
Acta Mth.	Acta Mathematica. Stockholm. 1882— B.M.; Camb.P.S.; Camb.U.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.U.; Math.S.; Oxon.R.; R.A.S.; R.S.; U.C.L.

List of Serial Publications

- A. der Hydrog.** ..... Annalen der Hydrographie und Maritimen Meteorologie. Herausgegeben von der Deutschen Seewarte in Hamburg. Berlin. 1873— B.M.; P.O.i.
- A. di C.** ..... Annali di Chimica. Milano. 1845—1900. B.M.; Chem.S.i.; P.O.i.
- Aer. J.** ..... The Aeronautical Journal. London. 1897— B.M.; Camb.U.i.; P.O.; R.S.
- A. Gén. Civ.** ..... Annales du Génie Civil; Recueil de Mémoires sur les Mathématiques pures et appliquées; l'Astronomie, la Chimie, la Physique, etc. Paris. 1862—80. B.M.; Camb.U.; Dub.R.C.S.i.; P.O.
- A. Hydrog.** ..... Annales Hydrographiques. Recueil d'avis, instructions, documents, et mémoires relatifs à l'Hydrographie et à la Navigation. Paris. 1849— B.M.; Ebinb.R.S.i.; Oxon.B.; R.A.S.i.; R.S.i.
- Aix Ac. Mm.** ..... { Mémoires de l'Académie des Sciences, Agriculture, Arts et Belles-lettres. Aix.
- Aix Mm.** ..... { 1819— B.M.; Dub.R.I.A.; N.H.M.i.; Oxon.B.i.; R.S.i.
- Aix Mm. Ac.** ..... { Transactions of the Albany Institute. Albany.
- Alb. I. T.** ..... { 1830— B.M.; N.H.M.; R.S.
- Allelod. S. T.** ..... The Transactions of the Allelodidactic Society. London. 1848. R.S.
- Am. Ac. Mm.** ..... Memoirs of the American Academy of Arts and Sciences. Cambridge and Boston. 1785— B.M.i.; Camb.P.S.; Camb.U.; Dub.R.D.S.i.; Dub.R.I.A.i.; Dub.T.C.i.; Edinb.R.S.; Linn.S.; N.H.M.; Oxon.R.; P.O.i.; R.A.S.; R.S.; U.C.L.i.
- See **Bost. Am. Ac. Mm. and Bost. Mm. Am. Ac.**
- Am. Ac. P.** ..... Proceedings of the American Academy of Arts and Sciences. Boston. 1846— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.R.D.S.; Edinb.R.S.; Glasg.P.S.; Glasg.U.i.; Linn.S.; N.H.M.; Oxon.B.; P.O.; R.A.S.; R.S.; U.C.L.i.
- Am. As. P.** ..... Proceedings of the American Association for the Advancement of Science. Washington, Salem. 1848— B.M.i.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Edinb.R.S.i.; Glasg.P.S.i.; Glasg.U.i.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.i.; R.S.
- Am. C.** ..... The American Chemist, a monthly Journal of theoretical Chemistry. New York. 1871—77. Chem.S.i.; N.H.M.; P.O.
- Am. Eng. & Railroad J.** ..... American Engineer and Railroad Journal. New York. 1893—95. B.M.; P.O.
- Amiens Ac. Mm.** ..... { Mémoires de l'Académie des Sciences, Agriculture, Commerce, Belles-lettres, et Arts du département de la Somme. Amiens.
- Amiens Mm.** ..... { 1835— B.M.; Camb.U.; Dub.T.C.i.; N.H.M.i.; Oxon.B.i.; R.S.i.
- Amiens Mm. Ac.** ..... {
- Amiens Mm. Ac. Sc.** ..... {
- A. Mines** ..... Annales des Mines, ou Recueil des Mémoires sur l'exploitation des Mines, et sur les Sciences et les Arts qui s'y rapportent. Paris. 1817— B.M.; Camb.U.; Chem.S.i.; Dub.R.I.A.; Edinb.R.S.; Edinb.U.i.; Glasg.P.S.i.; N.H.M.; Oxon.B.(R.); P.O.; R.S.
- Am. I. T.** ..... [Reports and Transactions] of the American Institute of the City of New York. Albany. 1841— B.M.i.; P.O.i.; R.S.i.
- Am. J. Mth.** ..... American Journal of Mathematics. Baltimore. 1878— B.M.; Camb.P.S.; Camb.U.; Dub.N.L.I.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.U.i.; Math.S.; Oxon.B.; Oxon.R.; R.A.S.; R.S.; U.C.L.
- Am. J. Sc.** ..... The American Journal of Science and Arts; Silliman. New Haven. 1818— B.M.; Camb.P.S.i.; Camb.U.; Chem.S.i.; Dub.N.L.I.i.; Dub.R.C.S.i.; Dub.T.C.i.; Edinb.R.S.; Edinb.U.; Geol.M.; Glasg.P.S.; Glasg.U.i.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.i.; R.S.
- See **Silliman J.**
- Am. Ph. S. P.** ..... Proceedings of the American Philosophical Society. Philadelphia. 1840— Camb.P.S.; Camb.U.i.; Chem.S.i.; Dub.R.I.A.; Edinb.R.S.; Glasg.P.S.i.; Glasg.U.i.; Linn.S.; Math.S.i.; N.H.M.i.; Oxon.B.; Oxon.R.i.; P.O.; R.A.S.; R.S.; U.C.L.
- Am. Ph. S. T.** ..... Transactions of the American Philosophical Society. Philadelphia. 1771— B.M.i.; Camb.P.S.; Camb.U.i.; Chem.S.i.; Dub.R.I.A.i;

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- Edinb.R.S.; Linn.S.; N.H.M.i.; Oxon.B.; Oxon.R.i.; P.O.; R.A.S.i.; R.S.; U.C.L.i.
- Am. S. CE. T.** ..... Transactions of the American Society of Civil Engineers. New York. 1871— P.O.
- Amst. Ak. Jb.** ..... Jaarboek van de Koninklijke Akademie van Wetenschappen gevestigd te Amsterdam. Amsterdam.
1857— B.M.; Camb.P.S.; Dub.R.D.S.; Dub.T.C.; Edinb.R.S.i.; Glasg.P.S.i.; Linn.S.; N.H.M.; R.A.S.i.; R.S.; U.C.L.i.
See **Amst. Jb. and Amst. Jb. Ak.**
- Amst. Ak. P.** ..... Koninklijke Akademie van Wetenschappen te Amsterdam. Proceedings of the Section of Sciences. Amsterdam.
1899— Camb.P.S.; Camb.U.; Chem.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Glasg.P.S.; Glasg.U.; Oxon.B.; R.A.S.; R.S.
- Amst. Ak. Vh.** ..... Verhandelingen der Koninklijke Akademie van Wetenschappen. Amsterdam.
1854— Camb.P.S.; Camb.U.; Dub.N.L.I.; Dub.R.I.A.i.; Edinb.R.S.; Glasg.P.S.i.; Glasg.U.; Linn.S.; N.H.M.; Oxon.B.; R.A.S.; R.S.; U.C.L.i.
- Amst. Ak. Vs.** ..... Verslagen der Zittingen van de Wis- en Natuurkundige Afdeling der Koninklijke Akademie van Wetenschappen. 1893, 1894.
Verslagen van de Zittingen der Wis- en Natuurkundige Afdeling van de Koninklijke Akademie van Wetenschappen. 1895, 1896.
Koninklijke Akademie van Wetenschappen te Amsterdam. Verslagen van de Gewone Vergaderingen der Wis- en Natuurkundige Afdeling. Amsterdam.
1897— B.M.; Camb.P.S.; Camb.U.; Dub.T.C.; Edinb.R.S.; Glasg.P.S.; Glasg.U.; N.H.M.; R.A.S.; R.S.
- Amst. Ak. Vs. M.** ..... Verslagen en Mededeelingen der Koninklijke Akademie van Wetenschappen. Afdeling Natuurkunde. Amsterdam.
1853—92. B.M.; Camb.P.S.; Camb.U.; Dub.T.C.; Edinb.R.S.; Glasg.P.S.; Linn.S.; N.H.M.; Oxon.B.i.; R.A.S.i.; R.S.; U.C.L.i.
See **Amst. Vs. Ak.**
- Amst. Ak. Wet. P.** ..... Processen-Verbaal van de Gewone Vergaderingen der Koninklijke Akademie van Wetenschappen, Afdeling Natuurkunde.
1865—84. Dub.R.D.S.; Linn.S.i.; R.A.S.; R.S.
- Amst. Arch. Wisk. Gn.** ..... Archief uitgegeven door het Wiskundig Genootschap. Amsterdam.
1856— B.M.; R.S.i.; U.C.L.i.
See **Arch. Wisk. Gn.**
- Amst. I.** ..... Het Instituut. Amsterdam.
1841—46. B.M.; Edinb.R.S.i.
- Amst. Jb.** ..... }
Amst. Jb. Ak. ..... } See **Amst. Ak. Jb.**
- Amst. Mengelwerk** ..... Mengelwerk van uitgeleezene en andere Wis- en Natuurkundige Verhandelingen; door het Genootschap der Mathematische Wetenschappen, etc. Amsterdam.
1796—1816. R.S.
See **Mengelwerk Wisk. Vh.**
- Amst. N. Vh.** ..... Nieuwe Verhandelingen der eerste Klasse van het Koninklijk Nederlandsche Instituut van Wetenschappen, Letterkunde, en Schoone Kunsten te Amsterdam. Amsterdam.
1827—52. B.M.; Camb.U.; Dub.T.C.; Edinb.R.S.; Linn.S.; N.H.M.; R.S.
- Amst. N. Ws. Ntk. Vh.** ..... Nieuwe Wis- en Natuurkundige Verhandelingen van het Genootschap te Amsterdam. Amsterdam.
1844—54. B.M.; R.S.
- Amst. Ts. Ws. Nt. Wet.** ..... Tijdschrift voor de Wis- en Natuurkundige Wetenschappen, Letterkunde, en Schoone Kunsten te Amsterdam. Amsterdam.
1847—52. B.M.; Camb.U.; Dub.T.C.; Edinb.R.S.i.; Linn.S.; Oxon.B.; R.S.
- Amst. Vh.** ..... (Verhandelingen der Eerste Klasse van het Koninklijk Nederlandsche Instituut van Wetenschappen, Letterkunde, en Schoone Kunsten te Amsterdam. Amsterdam.
1812—25. B.M.; Camb.U.; Dub.T.C.; Edinb.R.S.; N.H.M.; Oxon.B.; R.S.
- Amst. Vs. Ak.** ..... See **Amst. Ak. Vs. M.**
- A. Mt.** ..... Annali di Matematica pura ed applicata...; Tortolini. Roma, Milano. 1858— B.M.; Camb.U.i.; Dub.R.D.S.; Dub.T.C.; Edinb.U.; Glasg.U.i.; Math.S.i.; Oxon.B.(R.); R.S.; U.C.L.
See **Tortolini A.**

List of Serial Publications

- A. Mth.** ..... Annals of Mathematics. University of Virginia. Charlottesville, Va. 1884— Camb.P.S.; Camb.U.; Dub.R.I.A.i.; Edinb.R.S.; Math.S.i.; Oxon.B.
- Amt. Mch. S. J.** ..... The [Quarterly] Journal of the Amateur Mechanical Society. London. 1872—79. B.M.; P.O.
- Angers Mm. S. Ag.** ..... Mémoires de la Société d'Agriculture, Sciences, et Arts. Angers. 1831— B.M.; N.H.M.i.; Oxon.B.i.; R.S.i.
- Angers S. Sc. Bil.** ..... Bulletin de la Société d'Études Scientifiques d'Angers. Angers. 1872— B.M.; N.H.M.
- A. Pon. Chauss.** ..... Annales des Ponts et Chaussées. Mémoires et documents relatifs à l'Art des Constructions et au Service de l'Ingénieur. Paris. 1831— B.M.; Camb.U.; Edinb.U.i.; Glasg.P.S.i.; Glasg.U.i.; P.O.; R.S.i.
See Par. A. Pon. Chauss.
- A. Ps. C.** ..... Annalen der Physik und Chemie; Poggendorff. Leipzig. 1824— B.M.; Camb.P.S.i.; Camb.U.; Chem.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.P.S.i.; Glasg.U.i.; N.H.M.; Oxon.B.(R.); P.O.; R.S.; U.C.L.i.
See Pogg. A.
- Arch. f. Ap.** ..... Archiv für Anthropologie. Zeitschrift für Naturgeschichte und Urgeschichte des Menschen. Braunschweig. 1867— B.M.; Camb.U.; Dub.N.L.I.; N.H.M.i.; Oxon.R.; R.S.
- Arch. Mth. Ntvd.** ..... Archiv for Mathematik og Naturvidenskab. Kristiania. 1876— B.M.; Camb.U.; Dub.R.I.A.i.; Edinb.R.S.; Math.S.i.; N.H.M.; Oxon.B.; Oxon.R.i.; R.S.
- Arch. Mth. Ps.** ..... Archiv der Mathematik und Physik; Grunert. Greifswald, Leipzig. 1841— B.M.; Camb.U.; Dub.N.L.I.; Dub.R.C.S.; Edinb.U.; Glasg.U.; Math.S.i.; Oxon.B.(R.); R.S.; U.C.L.i.
See Grunert Arch.
- Arch. Néerl.** ..... Archives Néerlandaises des Sciences Exactes et Naturelles. La Haye, Harlem. 1866— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Geol.M.i.; Glasg.P.S.; Glasg.U.; Linn.S.; Math.S.; N.H.M.; Oxon.R.; P.O.; R.S.; U.C.L.i.
- Arch. Sc. Ps. Nt.** ..... Bibliothèque Universelle. Archives des Sciences Physiques et Naturelles. Genève. 1846— B.M.; Camb.U.; Chem.S.i.; Dub.N.L.I.i.; Dub.R.D.S.i.; Dub.R.I.A.i.; Edinb.R.S.; Edinb.U.; Glasg.U.; N.H.M.; Oxon.B.; P.O.; R.S.
See Bb. Un. Arch.
- Arch. Wisk. Gn.** ..... *See Amst. Arch. Wisk. Gn.*
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- Bordeaux Ac. Sc. Sé. Pbl.** ... { Séances publiques de l'Académie Royale des Sciences, Belles-lettres,
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- Bordeaux Ac. Sé. Pbl.** ... { 1819—37. N.H.M.
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- Bordeaux Mm. S. Sc.** ... { Mémoires de la Société des Sciences Physiques et Naturelles de
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- Bost. J. Ph.** ..... { See **Am. Ac. Mm. and Bost. Mm. Am. Ac.**
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- Bost. Mm. Am. Ac.** ..... { 1824—26. B.M.
- Braunsch. Vr. Nt. Jbr.** ..... { See **Am. Ac. Mm. and Bost. Am. Ac. Mm.**
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1858— B.M.; Camb.U.i.
- Brugnatelli G.** ..... Giornale di Fisica, Chimica, e Storia Naturale; Brugnatelli, etc. Pavia.
1808—27. B.M.; Camb.U.; Dub.T.C.; N.H.M.i.; Oxon.B.; P.O.; R.S.
- Brünn Vh.** ..... Verhandlungen des Naturforschenden Vereins zu Brünn. Brünn.
1863— Camb.U.i.; Dub.R.I.A.; Linn.S.; N.H.M.; R.S.
- Brux. Ac. Bll.** ..... Bulletins de l'Académie Royale des Sciences, etc., de Belgique. Bruxelles.
1834— B.M.i.; Camb.U.; Chem.S.i.; Dub.R.I.A.; Edinb.R.S.; Glasg.P.S.i.; Glasg.U.i.; Linn.S.; Math.S.i.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.; R.S.
- See **Brux. Bll. Ac.**
- Brux. Ac. Cent. Anniv.** ... Centième Anniversaire de Fondation (1772—1872) de l'Académie Royale de Belgique. Bruxelles.
1872. B.M.; Camb.U.; Edinb.R.S.; Glasg.P.S.; Linn.S.; N.H.M.; P.O.; R.A.S.; R.S.
- Brux. Ac. Mm.** ..... {Mémoires de l'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique. Bruxelles.
- Brux. Ac. Sc. Mm.** ..... {
1820— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.i.; Edinb.U.; Linn.S.i.; N.H.M.; Oxon.B.(R); P.O.i.; R.A.S.i.; R.S.
- See **Brux. Mm. Ac. Sc.**
- Brux. A. Tr. Pbl.** ..... Annales des Travaux Publics de Belgique. Bruxelles.
1843— B.M.; P.O.
- Brux. A. Un.** ..... Annales des Universités de Belgique. Bruxelles.
1842—59. Camb.U.; Oxon.B.; P.O.; R.S.i.
- Brux. Bll. Ac.** ..... See **Brux. Ac. Bll.**
- Brux. Mm. Ac. Sc.** ..... See **Brux. Ac. Sc. Mm.**
- Brux. Mm. Cour.** ..... {Mémoires Couronnés et Mémoires des Savants Etrangers, publ. par l'Acad. Roy. des Sciences, etc. de Belgique. 4to. Bruxelles.
- Brux. Mm. Cour. 4^o** ..... {
1818— B.M.i.; Camb.P.S.; Camb.U.; Dub.T.C.; Edinb.R.S.i.; Edinb.U.; Glasg.U.i.; Linn.S.i.; N.H.M.; Oxon.B.; P.O.i.; R.A.S.i.; R.S.
- Brux. Mm. Cour. 8^o** ..... Mémoires Couronnés et autres Mémoires, publ. par l'Acad. Roy. des Sciences, etc. de Belgique. 8vo. Bruxelles.
1840— B.M.; Camb.P.S.; Camb.U.; Dub.T.C.; Edinb.R.S.; Glasg.U.i.; Linn.S.i.; N.H.M.; Oxon.B.; P.O.; R.A.S.i.; R.S.
- Brux. Obs. A. (As.)** ..... Annales de l'Observatoire Royal de Belgique. Bruxelles.
1834— B.M.; Camb.U.; Dub.R.D.S.; Dub.R.I.A.; Edinb.R.S.; Glasg.P.S.i.; Glasg.U.i.; Oxon.B.i.; R.A.S.; R.S.; U.C.L.i.
- Brux. S. As. Bll.** ..... Bulletin de la Société Belge d'Astronomie. Comptes Rendus des Séances mensuelles de la Société et Revue des Sciences d'Observation. Astronomie, Météorologie, Géodésie et Physique du Globe. Bruxelles.
1896— R.A.S.
- Brux. S. Sc. A.** ..... Annales de la Société Scientifique de Bruxelles. Bruxelles.
1877— B.M.; Dub.N.L.I.i.; Edinb.R.S.; N.H.M.
- Bucarest Ac. Rom. A.** ... Analele Academiei Romane. Bucuresci.
1880— B.M.; Camb.U.i.; N.H.M.i.
- Bucarest S. Sc. Bl.** ..... Buletinul Societății de Științe Fizice (Fizica, Chimia și Mineralogia) din Bucuresci-România.
[1892]—[1896].
Buletinul Societății de Științe din Bucuresci-România. Bucuresci. (Bulletin de la Société des Sciences Bucarest-Roumanie.)
[1897]— Glasg.P.S.; Glasg.U.; N.H.M.; R.S.i.; U.C.L.i.
- Cadiz Period. M. Ci.** ..... Periódico mensual de Ciencias matemáticas y físicas. Cadiz.
1848. B.M.; R.S.
- Caen Ac. Mm.** ..... Mémoires de l'Académie des Sciences, Arts et Belles-Lettres de Caen. Caen.
1811— B.M.i.; Camb.U.i.; Dub.T.C.i.; N.H.M.i.; Oxon.B.i.; R.S.i.
- Cæs. Leop. Ac. N. Acta.** Nova Acta physico-medica Academiæ Cæs. Leopoldino-Carolinæ naturæ Curiosorum. Erlangen, Bonn, Breslau.

List of Serial Publications

- 1758— Camb.P.S.; Camb.U.; Chem.S.i.; Dub.T.C.; Edinb.R.S.i.;
Edinb.U.; Linn.S.i.; Math.S.i.; N.H.M.; Oxon.R.; R.A.S.i.; R.S.
See **Ac. Cæs. Leop. N. Acta.**
Proceedings of the California Academy of Natural Sciences. San
Francisco.
- Calif. Ac. P.** ..... 1854— B.M.i.; Camb.P.S.i.; Dub.R.I.A.; Edinb.R.S.i.; Glasg.P.S.;
Linn.S.i.; N.H.M.; P.O.i.; R.S.i.
- Camb. and Dubl. Mth. J.** The Cambridge and Dublin Mathematical Journal; Thomson and
Ferrers. Cambridge.
1846—54. B.M.; Camb.P.S.i.; Camb.U.; Dub.T.C.i.; Edinb.R.S.;
Edinb.U.; N.H.M.; Oxon.B.; R.S.; U.C.L.
- Camb. Mm. Anal. S.** ..... Memoirs of the Cambridge Analytical Society. Cambridge.
1813. B.M.; Camb.U.; Edinb.R.S.; P.O.; R.A.S.; R.S.; U.C.L.
- Camb. (M.) Mth. M.** ..... The Mathematical Monthly; Runkle. Cambridge (Massachusetts).
1859—61. B.M.; Camb.U.; Oxon.B.; P.O.; R.A.S.i.; R.S.; U.C.L.
See **Camb. (U.S.) Mth. M.**
- Camb. Mth. J.** ..... The Cambridge Mathematical Journal. London.
1839—45. B.M.; Camb.P.S.; Camb.U.; Dub.T.C.; Edinb.U.;
Glasg.U.; Math.S.i.; Oxon.B.i.; R.S.; U.C.L.
- Camb. Ph. S. P.** ..... Proceedings of the Cambridge Philosophical Society. Cambridge.
1866— B.M.i.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.R.D.S.;
Edinb.R.S.; Edinb.U.; Glasg.P.S.i.; Glasg.U.i.; Linn.S.i.;
Math.S.i.; N.H.M.; Oxon.B.i.; Oxon.R.i.; P.O.; R.A.S.i.;
R.S.; U.C.L.
- Camb. Ph. S. T.** ..... Transactions of the Cambridge Philosophical Society. Cambridge.
1822— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.T.C.i.;
Edinb.R.S.; Edinb.U.; Glasg.P.S.i.; Glasg.U.; Linn.S.; Math.
S.i.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.; R.S.; U.C.L.
- Camb. (U.S.) Mth. M.** ... *See* **Camb. (M.) Mth. M.**
- Card. Nt. S. T.** ..... Cardiff Naturalists' Society. Reports and Transactions. Cardiff.
1868— B.M.i.; Camb.U.i.; Dub.R.D.S.; Geol.M.i.; Glasg.P.S.i.;
Linn.S.; N.H.M.; Oxon.B.i.; R.S.i.
- Carl Rpm.** ..... Repertorium für physikalische Technik, für mathematische und
astronomische Instrumentenkunde; Carl. München.
1865—91. B.M.; Camb.U.i.; Dub.N.L.L.i.; Oxon.R.; P.O.; R.S.
See **Exner Rpm.**
- Časopis** ..... Časopis pro Pěstování Matematiky a Fysiky. Prag.
1872— B.M.
- Catania Ac. Gioen. At.** ... Atti dell' Accademia Gioenia di Scienze Naturali in Catania. Catania.
1825— B.M.; Camb.U.i.; Dub.R.I.A.; Edinb.R.S.i.; Linn.S.i.;
N.H.M.; Oxon.B.; R.S.
- Catania Ac. Gioen. Bll.** ..... Bulletino mensile della Accademia Gioenia di Scienze Naturali in
Catania. Catania.
1888— Dub.R.I.A.; N.H.M.; R.S.
- Catania At. Ac. Gioen.** ... *See* **Catania Ac. Gioen. At.**
- CE. I. P.** ..... Minutes of Proceedings of the Institution of Civil Engineers, con-
taining Abstracts of the Papers and of the Discussions. London.
1837— B.M.; Camb.P.S.; Camb.U.; Dub.R.C.S.; Dub.R.D.S.;
Dub.R.I.A.; Edinb.R.S.; Edinb.U.; Glasg.P.S.i.; Glasg.U.;
Oxon.B.; Oxon.R.i.; P.O.; R.S.; U.C.L.
See **I. CE. P.**
- Chambéry Mm. Ac. Sav.** Mémoires de la Société Académique de Savoie. Chambéry.
1825— Camb.U.; Dub.R.I.A.; Dub.T.C.; N.H.M.; Oxon.B.; R.S.i.
See **Sav. Ac. Mm. and Sav. Mm. Ac.**
- Charleston Md. J.** ..... Charleston Medical Journal and Review; Gaillard, de Saussure, etc.
Charleston.
1846—60. B.M.
- Chemnitz B.** ..... Bericht der Naturwiss. Gesellsch. zu Chemnitz. Chemnitz.
1859— Edinb.R.S.i.; N.H.M.; R.S.i.
- Cherb. Mm. S. Ac.** ..... Mémoires de la Société Académique de Cherbourg. Cherbourg.
1833— B.M.; Camb.U.i.; Edinb.R.S.i.; N.H.M.i.; Oxon.B.i.
- Cherb. Mm. S. Sc.** ..... } Mémoires de la Société Impériale des Sciences Naturelles de Cher-
bourg. Cherbourg.
- Cherb. S. Sc. Mm.** ..... } 1852— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Edinb.R.S.i.;
Linn.S.; N.H.M.; R.A.S.i.; R.S.
- Cherb. S. Sc. Nt. Mm.** ... }
- Chile A. Un.** ..... Anales de la Universidad de Chile. Santiago de Chile.
1843— B.M.i.; Dub.T.C.; N.H.M.i.; Oxon.B.i.
See **Santiago de Chile Un. A.**

List of Serial Publications

- Chili S. Sc. Act.** ..... Actes de la Société Scientifique du Chili (Sociedad científica de Chile). Santiago. 1892— B.M.; Dub.R.D.S.i.; Dub.R.I.A.i.; Edinb.R.S.i.; Linn.S.i.; N.H.M.; R.S.i.
- Christiania F.** ..... Forhandler i Videnskabs-Selskabet i Christiania. Christiania. 1859— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Edinb.R.S.; Glasg.P.S.; N.H.M.; Oxon.B.; R.S.; U.C.L.i.
- Christiania Skr. (Mth.-
Nt. Kl.)** ..... Skrifter udgivne af Videnskabsselskabet i Christiania. Mathematisk-Naturvidenskabelig Klasse. Christiania. 1894— B.M.; Camb.P.S.; Dub.R.I.A.i.; Edinb.R.S.; Glasg.P.S.; N.H.M.; Oxon.B.; R.S.; U.C.L.i.
- Ciel et Terre** ..... Ciel et Terre. Revue populaire d'Astronomie, de Météorologie et de Physique du Globe. Bruxelles. 1881— B.M.; Edinb.R.S.i.; R.A.S.
- Civing.** ..... Der Civingenieur: Zeitschrift für das Ingenieurwesen. Freiberg, Leipzig. 1854— B.M.; Camb.U.i.; Dub.R.I.A.i.; P.O.
- C. N.** ..... The Chemical News and Journal of Physical Science. London. 1860— Camb.P.S.; Camb.U.i.; Chem.S.; Dub.N.L.I.i.; Dub.R.D.S.i.; Dub.R.C.S.i.; Edinb.U.; Geol.M.; Glasg.P.S.; N.H.M.; Oxon.B.i.; Oxon.R.; P.O.; R.S.; U.C.L.i.
- Cn. I. P.** ..... Proceedings of the Canadian Institute, Toronto. Toronto. 1879—90; 1897— B.M.; Camb.P.S.i.; Dub.R.D.S.; Edinb.R.S.i.; Edinb.U.; Glasg.P.S.; Math.S.i.; N.H.M.; Oxon.B.; P.O.; R.A.S.i.; R.S.
- Cn. I. T.** ..... Transactions of the Canadian Institute. Toronto. 1889— B.M.; Camb.P.S.; Dub.R.D.S.; Edinb.R.S.; Edinb.U.; Glasg.P.S.; Linn.S.; Math.S.i.; N.H.M.; P.O.; R.A.S.; R.S.
- Cn. J.** ..... The Canadian Journal of Industry, Science, and Art. Toronto. 1853—78. B.M.i.; Dub.R.I.A.; Edinb.R.S.; N.H.M.; P.O.; R.A.S.i.; R.S.
- Cn. R. S. P. & T.** ..... Proceedings and Transactions of the Royal Society of Canada. Montreal. 1883— Camb.P.S.; Camb.U.; Chem.S.; Dub.R.D.S.i.; Dub.R.I.A.i.; Dub.T.C.i.; Edinb.R.S.; Geol.M.i.; Glasg.P.S.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.; R.S.; U.C.L.
- Coimbra I.** ..... O Instituto, jornal científico e litterario; Forjaz. Coimbra. 1853— B.M.
- Con. des Temps** ..... Connaissance des Temps, à l'usage des Astronomes et des Navigateurs. Paris. 1679— B.M.i.; Camb.U.; Dub.T.C.; Oxon.B.; R.A.S.i.; R.S.
- Conn. Ac. T.** ..... Transactions of the Connecticut Academy of Arts and Sciences. New Haven. 1866— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Edinb.R.S.; Glasg.P.S.; Linn.S.; Math.S.i.; N.H.M.; Oxon.R.; P.O.; R.A.S.; R.S.
- Conn. Mm. Ac.** ..... Memoirs of the Connecticut Academy of Arts and Sciences. New Haven. 1810—16. Linn.S.i.; N.H.M.i.; R.S.
- Cornwall Pol. S. Rp.** ..... Reports and Transactions of the Royal Polytechnic Society of Cornwall. Falmouth. 1833— B.M.; Camb.U.i.; Dub.R.D.S.; Edinb.R.S.i.; Glasg.P.S.i.; Glasg.U.i.; Linn.S.; N.H.M.; Oxon.B.i.; P.O.; R.S.; U.C.L.i.
- Cornwall R. I. J.** ..... Journal of the Royal Institution of Cornwall. Truro. 1864— B.M.; Camb.U.i.; Dub.R.D.S.; Edinb.R.S.; Glasg.P.S.i.; N.H.M.; Oxon.B.i.; P.O.; R.A.S.i.; R.S.i.; U.C.L.i.
- C. R.** ..... Comptes Rendus hebdomadaires des Séances de l'Académie des Sciences. Paris. 1835— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.R.D.S.; Edinb.R.S.i.; Edinb.U.; Geol.M.i.; Glasg.P.S.i.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.i.; P.O.; R.A.S.; R.S.; U.C.L.
- Crc. Ac. Sc. Bll.** ..... Bulletin International de l'Académie des Sciences de Cracovie. Cracovie. 1889— B.M.; Camb.U.; Chem.S.; Dub.R.I.A.i.; Edinb.R.S.; Glasg.U.; N.H.M.; Oxon.B.; Oxon.R.i.; R.A.S.i.; R.S.; U.C.L.i.
- Crelle J.** ..... Journal für die reine und angewandte Mathematik; Crelle. Berlin. 1826— B.M.; Camb.U.; Dub.N.L.I.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.U.; Math.S.i.; Oxon.B.(R.); R.S.; U.C.L.
- Crelle J. Mth.** }

List of Serial Publications

- C. S. J.** ..... The Quarterly Journal of the Chemical Society of London. London.
1849— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.R.C.S.;
Dub.R.D.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Geol.M.i.;
Glasg.P.S.; N.H.M.i.; Oxon.B.; Oxon.R.i.; P.O.; R.S.;
U.C.L.
- Cuyper Rv. Un.** ..... Revue Universelle des Mines, de la Métallurgie, des Travaux Publics,
des Sciences, et des Arts, appliqués à l'Industrie; de Cuyper.
Paris et Liège.
1857— B.M.; Camb.U.; Dub.R.I.A.i.; Glasg.P.S.i.; Glasg.U.i.;
N.H.M.; P.O.
- Cztg. Opt.** ..... *See Rv. Un. Mines.*
Central-Zeitung für Optik und Mechanik. Leipzig.
1880— Edinb.U.i.; P.O.i.; R.S.i.
- D. Alpvr. Z.** ..... Zeitschrift des Deutschen [und des Oesterreichischen] Alpenvereins.
München.
1870— B.M.; Camb.U.; Oxon.B.
- Danzig N. Schr.** ..... Neueste Schriften der Naturforschenden Gesellschaft in Danzig.
Danzig.
1820—62. B.M.i.; Dub.R.I.A.i.; N.H.M.; Oxon.R.; R.S.
- Danzig Schr.** ..... Schriften der Naturforschenden Gesellschaft in Danzig. Danzig.
1863— Camb.P.S.; Camb.U.i.; Dub.R.D.S.i.; Dub.R.I.A.i.;
Edinb.R.S.i.; Linn.S.i.; N.H.M.; Oxon.R.i.; R.S.
- Delft Éc. Pol. A.** ..... Annales de l'École Polytechnique de Delft. Leide.
1885—97. Camb.P.S.; Camb.U.; Chem.S.i.; Dub.R.D.S.; Dub.
R.I.A.; Edinb.R.S.; Math.S.; R.A.S.; R.S.
- Des Moines Anal.** ..... The Analyst: a monthly Journal of Pure and Applied Mathematics.
Des Moines, Iowa.
1874—83. Camb.U.; Edinb.R.S.; R.S.
- Devon. As. T.** ..... Reports and Transactions of the Devonshire Association for the
Advancement of Science, Literature, and Art. Plymouth and
London.
1862— Camb.U.i.; Geol.M.; Linn.S.; N.H.M.; Oxon.B.; Oxon.
R.i.; P.O.; R.S.
- D. Gs. Ostas. Mt.** ..... Mittheilungen der Deutschen Gesellschaft für Natur- und Völkerkunde
Ostasiens. Yokohama.
1873— B.M.; Edinb.R.S.i.
- Dijon Ac. Mm.** ..... Mémoires de l'Académie des Sciences, Arts, et Belles-lettres de
Dijon. Dijon.
- Dijon Ac. Sc. Mm.** ..... 1769— B.M.i.; Camb.U.; Dub.R.D.S.i.; Dub.R.I.A.i.; Dub.T.C.i.;
Edinb.R.S.i.; N.H.M.; Oxon.B.i.; R.A.S.; R.S.i.
- Dijon Mm. Ac.** ..... Séances publiques de l'Académie des Sciences, Arts, et Belles-lettres
de Dijon. Dijon.
- Dijon Ac. Sé.** ..... 1810—29. B.M.i.; N.H.M.
- Dijon Sé. Ac.** ..... Polytechnisches Journal; Dingler. Stuttgart.
- Dingler** ..... 1820— B.M.; Camb.U.; Chem.S.i.; Dub.N.L.I.i.; Dub.R.C.S.i.;
Dub.R.D.S.i.; Edinb.R.S.; Glasg.P.S.i.; Glasg.U.i.; P.O.;
R.S.i.
- D. Mth. Vr. Jbr.** ..... Jahresbericht der deutschen Mathematiker-Vereinigung. Berlin,
Leipzig.
1890— Camb.U.; Dub.R.I.A.; Edinb.R.S.i.; Math.S.i.; Oxon.B.;
R.S.
- D. Nf. B.** ..... Bericht über die Versammlung der Deutschen Naturforscher und
Aerzte.
1822—83. Irregular, *see* Tageblatt. Camb.U.i.; N.H.M.i.; Oxon.
R.i.; R.S.i.
- D. Nf. Tbl.** ..... *See D. Nf. Vsm. B.*
Tageblatt der...Versammlung Deutscher Naturforscher und Aerzte.
1836— Irregular, *see* Ber. and Verh. Camb.U.; N.H.M.; Oxon.
R.i.
- D. Nf. Vh.** ..... Verhandlungen der Gesellschaft Deutscher Naturforscher und Aerzte.
Leipzig.
1890— Camb.U.; N.H.M.; Oxon.R.
- D. Nf. Vsm. B.** ..... *See D. Nf. B.*
- Dn. Vd. Selsk. Skr.** ..... Det Kongelige Danske Videnskabernes Selskabs Skrifter. Kiöbenhavn.
1801—18. B.M.; Camb.P.S.i.; Camb.U.; Edinb.R.S.; N.H.M.;
Oxon.B.; R.S.
- See Kiöb. Dn. Vd. Selsk. Skr.*

List of Serial Publications

- Dorpat Sb.** ..... Sitzungsberichte der Naturforscher-Gesellschaft zu Dorpat. Dorpat.
1861— Dub.R.I.A.i.; Edinb.R.S.i.; Geol.S.; N.H.M.; R.S.i.
- Douai Mm. S. Ag.** ..... Mémoires de la Société d'Agriculture, de Sciences, et d'Arts, séant à Douai. Douai.
1826— B.M.; Camb.U.i.; Oxon.B.i.; R.S.i.
- Doubs S. Mm.** ..... Mémoires et Comptes Rendus de la Société [Libre] d'Émulation du Doubs. Besançon.
1841— B.M.; N.H.M.i.
- Dresden Isis Sb.** ..... { Sitzungsberichte der Naturwissenschaftlichen Gesellschaft Isis in
Dresden Sb. Isis ..... { Dresden. Dresden.
1861— Camb.U.i.; Dub.T.C.; Geol.S.; N.H.M.
- Dubl. Ph. J.** ..... The Dublin Philosophical Journal and Scientific Review. Dublin.
1825—26. B.M.; Dub.R.D.S.; Dub.T.C.; Edinb.R.S.i.; N.H.M.; Oxon.B.; Oxon.R.; R.S.i.
- Dubl. R. S. J.** ..... Journal of the Royal Dublin Society. Dublin.
1856—75. B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.N.L.I.; Dub.R.C.S.; Dub.R.D.S.; Dub.R.I.A.; Geol.M.; Glasg.U.i.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.i.; P.O.; R.A.S.; R.S.
- Dubl. S. Sc. P.** ..... The Scientific Proceedings of the Royal Dublin Society. Dublin.
1877— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.N.L.I.; Dub.R.C.S.; Dub.R.D.S.; Dub.R.I.A.; Edinb.R.S.; Geol.M.; Glasg.P.S.; Linn.S.; Math.S.i.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.; R.S.; U.C.L.i.
- Dubl. S. Sc. T.** ..... The Scientific Transactions of the Royal Dublin Society. Dublin.
1877— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.N.L.I.; Dub.R.C.S.; Dub.R.D.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Geol.M.; Glasg.P.S.; Linn.S.; Math.S.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.; R.S.; U.C.L.i.
- Dunkerque Mm. S. Encour.** ..... Mémoires de la Société Dunkerquoise pour l'Encouragement des Sciences, des Lettres, et des Arts. Dunkerque.
1853— B.M.; Oxon.B.; R.S.i.
- Edinb. J. Sc.** ..... The Edinburgh Journal of Science, exhibiting a view of the progress of discovery in Natural Philosophy, Chemistry, Mineralogy, Geology, Botany, etc.; David Brewster. Edinburgh.
1824—1832. B.M.; Camb.U.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.P.S.i.; Glasg.U.; N.H.M.; Oxon.B.i.; Oxon.R.; P.O.; R.S.
- Edinb. Mth. S. P.** ..... Proceedings of the Edinburgh Mathematical Society. London and Edinburgh.
1883— B.M.; Camb.P.S.; Camb.U.; Edinb.R.S.; Edinb.U.; Glasg.U.; Math.S.; R.S.i.
- Edinb. N. Ph. J.** ..... The Edinburgh New Philosophical Journal, exhibiting a view of the progressive Improvements, etc. in the Sciences, etc.; Robert Jameson. Edinburgh.
1826—64. B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.T.C.i.; Edinb.R.S.; Edinb.U.; Glasg.P.S.; Linn.S.i.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.i.; R.S.
- Edinb. Ph. J.** ..... The Edinburgh Philosophical Journal, exhibiting a view of the Progress of Discovery in Natural Philosophy, etc.; David Brewster and Robert Jameson. Edinburgh.
1819—26. B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.P.S.; Linn.S.; N.H.M.; Oxon.B.i.; Oxon.R.; P.O.; R.A.S.; R.S.; U.C.L.i.
- Edinb. P. R. S.** ..... { Proceedings of the Royal Society of Edinburgh. Edinburgh.
Edinb. R. S. P. ..... { 1845— B.M.i.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.N.L.I.; Edinb.R.S.; Edinb.U.; Geol.M.i.; Glasg.P.S.; Linn.S.; Math.S.i.; N.H.M.; Oxon.B.i.; Oxon.R.; P.O.i.; R.A.S.; R.S.; U.C.L.i.
- Edinb. R. S. T.** ..... Transactions of the Royal Society of Edinburgh. Edinburgh.
1788— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.N.L.I.; Dub.R.I.A.; Edinb.R.S.; Edinb.U.; Geol.M.i.; Glasg.P.S.; Glasg.U.; Linn.S.; Math.S.i.; N.H.M.; Oxon.B.i.; Oxon.R.; P.O.i.; R.A.S.; R.S.; U.C.L.
- Edinb. Sc. S. Arts T.** ..... See **Edinb. T. R. S.**
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1841— B.M.i.; Camb.U.; Dub.R.D.S.; Edinb.R.S.; Edinb.U.; Glasg.P.S.; Glasg.U.; P.O.; R.S.
- See **Edinb. T. Sc. S. Arts and S. Sc. Arts T.**

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- Edinb. T. R. S.** ..... See **Edinb. R. S. T.**
Edinb. T. Sc. S. Arts ..... See **Edinb. Sc. S. Arts T. and Sc. S. Arts T.**
Educ. Times ..... The Educational Times, and Journal of the College of Preceptors. London.
 1847— B.M.; Camb.P.S.i.; Camb.U.i.; Dub.N.L.I.; Math.S.i.; Oxon.B.i.; Oxon.R.i.; R.S.i.
Elect. ..... The Electrician. London.
 1862— B.M.i.; Camb.P.S.i.; Camb.U.i.; Dub.N.L.I.i.; Dub.R.C.S.i.; Edinb.R.S.i.; Edinb.U.i.; Glasg.P.S.i.; Glasg.U.i.; Oxon.B.i.; Oxon.R.i.; P.O.; R.S.i.; U.C.L.i.
Elekttech. Z. ..... Elektrotechnische Zeitschrift. Berlin, München.
 1880— B.M.; Glasg.U.; P.O.
Eng. S. T. ..... Transactions of the Society of Engineers. London.
 1860— B.M.; Camb.U.; Dub.N.L.I.; Dub.R.C.S.; Glasg.P.S.i.; Oxon.B.; P.O.; R.S.i.
Ens. Mth. ..... L'Enseignement Mathématique. Revue Internationale. Paris.
 1899— Math.S.
Épinal (Vosg.) A. ..... Annales de la Société d'Émulation du département des Vosges. Épinal.
 1831— B.M.; R.S.i.
Erdm. J. Pr. C. ..... Journal für praktische Chemie; Erdman, etc. Leipzig.
 1834— B.M.; Camb.U.; Chem.S.; Dub.N.L.I.i.; Dub.R.C.S.i.; Dub.R.D.S.i.; N.H.M.; Oxon.B.; Oxon.R.; R.S.; U.C.L.i.
Erfurt Ak. Jb. ..... Jahrbücher der königlichen Akademie gemeinnütziger Wissenschaften zu Erfurt. Erfurt.
 1860— B.M.; N.H.M.
Erfurt N. Acta ..... Nova Acta Academiæ Electoralis Moguntinæ Scientiarum utilium quæ Erfurti est. Erfurti.
 1799—1809. B.M.i.; Camb.U.; N.H.M.; Oxon.B.i.; R.S.
Erlang. Ps. Md. S. Sb. ..... { Sitzungsberichte der Physikalisch-Medicinischen Societät zu Erlangen.
Erlang. Sb. Ps. Md. S. ..... {
 1864— B.M.; Camb.P.S.; Dub.R.D.S.; Edinb.R.S.i.; Glasg.U.i.; Linn.S.i.; Math.S.i.; N.H.M.; R.S.i.
Erman Arch. Rs. ..... Archiv für wissenschaftliche Kunde von Russland; Erman. Berlin.
 1841—67. B.M.; Camb.U.; N.H.M.; Oxon.B.; R.S.i.
Eure J. d'Ag. ..... Journal d'Agriculture, de Médecine et des Sciences accessoires. Evreux.
 1824—29. B.M.; R.S.
Eure Rec. S. Ag. ..... Recueil de la Société d'Agriculture, Sciences, Arts, et Belles-lettres du département de l'Eure. Evreux.
 1830—39. B.M.; Camb.U.; Oxon.B.; R.S.
Eure Rec. Tr. ..... Recueil des Travaux de la Société Libre d'Agriculture, des Sciences, des Arts et des Belles-Lettres du département de l'Eure. Evreux.
 1841— B.M.; Camb.U.; R.S.
Eure S. Ag. Rec. ..... See **Eure Rec. S. Ag.**
Évk. ..... A'Magyar Tudós Társaság' Évkönyvei. Pest. Continued as: A'Magyar Tudományos Akadémia Évkönyvei. Budá.
 1833—89. B.M.; Edinb.R.S.i.; N.H.M.; Oxon.B.; R.A.S.i.; R.S.; U.C.L.i.
Exner Rpm. ..... Repertorium der Physik; Exner. München, Leipzig.
 1865—91. B.M.; Camb.U.i.; Dub.N.L.I.i.; Edinb.U.; Oxon.R.; P.O.; R.S.
 See **Carl Rpm.**
Férussac Bil. Sc. Mth. ..... Bulletin des Sciences Mathématiques, Astronomiques, Physiques, et Chimiques; Baron de Férussac. Paris.
 1824—31. B.M.; Edinb.U.i.; Oxon.R.; P.O.; U.C.L.
Finist. S. Sc. Bil. ..... Bulletin de la Société d'Études Scientifiques du Finistère. Morlaix.
 1879— N.H.M.
Firenze Ac. Georg. At. ..... { Atti della R. Accademia economico-agraria dei Georgofili. Firenze.
Firenze At. Ac. Georg. ..... {
Firenze Opusc. Sc. ..... { Collezione d' Opuscoli scientifici, etc. Firenze.
 1807—18. B.M.; N.H.M.
Förster Al. Bauztg. ..... Allgemeine Bauzeitung; Förster. Wien.
 1836— B.M.; Camb.U.; P.O.
Franklin I. J. ..... Journal of the Franklin Institute of the State of Pennsylvania. Philadelphia.
 1828— B.M.; Camb.U.; Chem.S.i.; Dub.R.I.A.; Glasg.P.S.i.; Oxon.B.; P.O.; R.A.S.i.; R.S.; U.C.L.i.

List of Serial Publications

- Fr. Cg. Md. Chir.** ..... Congrès Médico-Chirurgical de France. Paris.
1863— B.M.
- Fr. Cg. Sc.**..... Sessions des Congrès Scientifiques de France.
1833—79. B.M.; Camb.U.; N.H.M.
- Freiburg B.** ..... Berichte über die Verhandlungen der Naturforschenden Gesellschaft
zu Freiburg i. B. Freiburg i. B.
1855— B.M.; Camb.U.i.; Dub.R.I.A.; Linn.S.i.; N.H.M.;
Oxon.R.; R.S.
- Fr. S. Ag. Mm.** ..... Mémoires d'Agriculture, d'Économie rurale et domestique publiés
par la Société d'Agriculture. Paris.
1801— B.M.; Edinb.R.S.i.; Oxon.B.
- Fr. S. Mn. Bil.** ..... Bulletin de la Société Minéralogique de France. Meulan, Paris.
1878— B.M.; Dub.T.C.; Geol.M.; N.H.M.; Oxon.R.; R.S.
- Fschr. Mth.** ..... Jahrbuch über die Fortschritte der Mathematik. Berlin.
1868— B.M.; Camb.U.; Dub.N.L.I.; Dub.R.C.S.; Edinb.U.;
Glasg.P.S.i.; Glasg.U.; Math.S.; Oxon.R.; R.S.; U.C.L.
- Fschr. Ps.** ..... Die Fortschritte der Physik. Berlin.
1845— Camb.P.S.; Camb.U.; Chem.S.; Dub.N.L.I.i.; Dub.R.I.A.i.;
Edinb.R.S.i.; Edinb.U.; Glasg.U.; Oxon.B.(R.); P.O.; R.A.S.i.;
R.S.; U.C.L.
- Gand. A. Ac.**..... Annales Academiæ Gandavensis. Gandavi. (Ghent.)
1819—31. B.M.; Camb.U.; N.H.M.; Oxon.B.
- G. Arcad.** ..... Giornale Arcadico di Scienze, etc. Roma.
1819— B.M.; N.H.M.i.; Oxon.B.
- Gard Aperçu Tr.**..... Notice [ou Aperçu analytique] des Travaux de l'Académie Royale du
Gard. Nîmes.
1807—? B.M.; Camb.U.; Oxon.B.
See Gard Not. Tr. Ac. and Gard Tr. Ac.
- Gard Mm. Ac.**..... Mémoires de l'Académie du Gard. Nîmes.
1832— B.M.; Camb.U.; Oxon.B.; R.S.i.
- Gard Not. Tr. Ac.** }
Gard Tr. Ac. } *See Gard Aperçu Tr.*
- Gen. I. Nt. Mm.** ..... Mémoires de l'Institut National Gênois. Genève.
1854— B.M.; Camb.U.; Dub.R.D.S.; N.H.M.i.; Oxon.B.; R.S.
- Gen. Mm. S. Ps.** ..... Mémoires de la Société de Physique et d'Histoire Naturelle de
Genève. Genève.
1821— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Dub.T.C.;
Edinb.R.S.; Glasg.U.i.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.i.;
R.A.S.i.; R.S.; U.C.L.i.
- See Gen. S. Ps. Mm.*
- Genova Mm. Ac.**..... Memorie dell' Accademia Imperiale delle Scienze di Genova. Genova.
1809—14. Camb.U.i.; N.H.M.i.; R.S.
- Genova Mm. I. Ligure** ... Memorie dell' Istituto Ligure. Genova.
1806. B.M.; Camb.U.; R.S.
- Genova Un. At.** ..... Atti della R. Università di Genova. Genova.
1869— B.M.; Camb.U.; N.H.M.
- See Gen. Mm. S. Ps.*
- Gergonne A. Mth.** ..... Annales de Mathématiques, pures et appliquées; Gergonne. Nîmes
et Paris.
1810—31. B.M.; Dub.T.C.; Edinb.U.i.; Glasg.U.; Oxon.B.(R.);
R.A.S.i.; R.S.; U.C.L.
- Gg. S. J.** ..... Journal of the Royal Geographical Society of London. London.
1832—80. B.M.; Camb.P.S.i.; Camb.U.; Dub.R.D.S.; Dub.R.I.A.;
Edinb.R.S.; Edinb.U.; Geol.M.; Glasg.P.S.; Glasg.U.; Linn.S.;
N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.S.
- Gg. S. P.** ..... Proceedings of the Royal Geographical Society of London. London.
1857—92. Camb.P.S.i.; Camb.U.; Dub.T.C.; Edinb.R.S.; Geol.M.;
Glasg.P.S.i.; Glasg.U.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.;
P.O.i.; R.A.S.i.; R.S.
- Giamb. Vico**..... Il Giambattista-Vico, giornale scientifico. Napoli.
1857. N.H.M.; Oxon.B.i.
- See Il Giamb. Vico.*
- Giessen Oberh. Gs. B.** ... Berichte der Oberhessischen Gesellschaft für Natur- und Heilkunde.
Giessen.
1847— B.M.i.; Camb.P.S.; Dub.R.D.S.i.; Dub.R.I.A.i.; Edinb.
R.S.i.; Glasg.P.S.i.; Linn.S.i.; N.H.M.; P.O.i.; R.S.i.

List of Serial Publications

- Gilbert A.** ..... *Annalen der Physik*; Gilbert. Halle und Leipzig.
1799—1824. Camb.U.; Chem.S.; Edinb.U.; N.H.M.; Oxon.B.(R.); P.O.; R.S.
- Gill Tech. Rep.** ..... *The Technical Repository*; Gill. London.
1822—27. B.M.; Camb.U.; Edinb.R.S.i.; Oxon.B.; P.O.; R.S.i.
- Glasg. I. Eng. T.** ..... *Transactions of the Institution of Engineers [and Shipbuilders] in Scotland*. Glasgow.
1857— Camb.U.i.; P.O.; U.C.L.i.
{ *Proceedings of the Philosophical Society of Glasgow*. Glasgow.
1841— B.M.; Camb.P.S.; Camb.U.; Dub.R.D.S.; Dub.R.I.A.;
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P.O.i.; R.A.S.; R.S.
- Glasg. P. Ph. S.** .....
Glasg. Ph. S. P. ..... {
- Gleanings Sc.** ..... *Gleanings in Science*. Calcutta.
1829—31. B.M.; Edinb.R.S.i.; N.H.M.; U.C.L.i.
- Gl. Mg.** ..... *The Geological Magazine or Monthly Journal of Geology*. London.
1864— B.M.; Camb.U.; Dub.N.L.I.; Dub.R.C.S.; Geol.M.;
Glasg.P.S.; Glasg.U.; Linn.S.; N.H.M.; Oxon.R.; P.O.i.; U.C.L.
- Gl. S. QJ.** ..... *The Quarterly Journal of the Geological Society of London*. London.
1845— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.N.L.I.;
Geol.M.; Glasg.U.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.; P.O.;
R.A.S.; R.S.; U.C.L.
- G. Mt.** ..... *Giornale di Matematiche ad uso degli Studenti delle Università Italiane*; Battaglini. Napoli.
1863— B.M.; Camb.U.; Dub.R.C.S.i.; Dub.R.I.A.i.; Math.S.i.;
Oxon.B.; R.S.; U.C.L.i.
- Görl. Ab.** ..... *Abhandlungen der Naturforschenden Gesellschaft zu Görlitz*. Görlitz.
1827— B.M.; Camb.U.i.; Dub.R.D.S.i.; Dub.R.I.A.i.; N.H.M.;
R.S.
- Göteb. Hndl.** ..... *Göteborgs Kongl. Vetenskaps och Vitterhets Samhälles Handlingar*. Göteborg.
1850— B.M.; Camb.P.S.i.; Dub.R.D.S.i.; Dub.R.I.A.i.; Edinb.
R.S.i.; N.H.M.; R.S.i.
- Gött. Ab.** ..... *Abhandlungen der k. Gesellschaft der Wissenschaften*. Göttingen.
1843— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Edinb.R.S.i.;
Glasg.U.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.; R.S.; U.C.L.i.
- Gött. Cm.** ..... *Commentationes Societatis Regiæ Scientiarum Göttingensis*. Göttingæ.
1778—1808. B.M.i.; Camb.U.; Dub.R.I.A.i.; Edinb.R.S.; Glasg.
U.i.; N.H.M.; Oxon.B.; R.S.; U.C.L.
Commentationes recentiores Societatis, etc. Göttingæ.
1808—37. B.M.; Camb.U.; Edinb.R.S.i.; N.H.M.; Oxon.B.;
Oxon.R.; R.A.S.i.; R.S.; U.C.L.
- Gött. Nr.** ..... *Nachrichten von der k. Gesellschaft der Wissenschaften und der Georg-Augusts-Universität zu Göttingen*. Göttingen.
1845— B.M.; Camb.P.S.; Camb.U.i.; Dub.R.D.S.i.; Dub.R.I.A.i.;
Dub.T.C.i.; Edinb.R.S.; Glasg.U.; Linn.S.; Math.S.i.; N.H.M.;
Oxon.B.; Oxon.R.; R.A.S.i.; R.S.
- Gött. Stud.** ..... *Göttinger Studien*; Krische. Göttingen.
1845—47. N.H.M.; Oxon.B.i.; R.S.i.
- Gould As. J.** ..... *The Astronomical Journal*; Gould. Cambridge, Mass.
1851—61. B.M.; Camb.U.; Glasg.U.i.; Oxon.B.; Oxon.R.i.;
R.A.S.; R.S.
See As. J.
- 's Gravenh. I. Ing. Ts. ...** *Tijdschrift van het Koninklijk Instituut van Ingenieurs*. 's Gravenhage.
1869— B.M.
- Grenoble Ac. Delph. Bll.** *Bulletin de l'Académie Delphinale, ou Société des Sciences et Arts de Grenoble*. Grenoble.
1846— B.M.; Camb.U.i.; Oxon.B.; R.S.i.
- Groningen A. Ac.** ..... *Annales Academiæ Groninganae*. Groningæ.
1815—37. B.M.i.; Camb.U.; Dub.T.C.; Oxon.B.; R.S.
- Gruithuisen N. Analekt.** *Neue Analekten für Erd- und Himmelskunde*. Gruithuisen. München.
1832—36. B.M.; R.A.S.; R.S.
- Grunert Arch.** ..... *Archiv der Mathematik und Physik*; Grunert. Greifswald, Leipzig.
1841— B.M.; Camb.U.; Dub.N.L.I.; Dub.R.C.S.; Edinb.U.;
Glasg.U.; Math.S.i.; Oxon.B.(R.); R.S.; U.C.L.i.
See Arch. Mth. Ps.

List of Serial Publications

- G. Teix. J. Sc.** ..... *Journal de Ciencias Mathematicas e Astronomicas*, publicado pelo Dr Francisco Gomes Teixeira. Coimbra.
1878— *Math.S.*; *R.S.i.*
- Haarl. Ms. Teyl. Arch.**.... *Archives du Musée Teyler*. Haarlem.
1866— *B.M.*; *Camb.P.S.*; *Camb.U.*; *Dub.R.I.A.i.*; *Edinb.R.S.*; *Glasg.P.S.*; *N.H.M.*; *Oxon.R.*; *R.A.S.*; *R.S.*
- Haarl. Ntk. Vh. Mtsch.**.... *Natuurkundige Verhandelingen van de [Bataafsche] Hollandsche Maatschappij der Wetenschappen te Haarlem*. Haarlem.
1799— *B.M.*; *Camb.U.i.*; *Dub.R.D.S.*; *N.H.M.*; *R.S.*
- Haidinger Ab.**..... *Naturwissenschaftliche Abhandlungen*; Haidinger. Wien.
1847—51. *Camb.U.*; *Chem.S.i.*; *Edinb.R.S.i.*; *Linn.S.*; *N.H.M.*; *R.A.S.i.*; *R.S.*
- Haidinger B.** ..... *Berichte über die Mittheilungen von Freunden der Naturwissenschaften in Wien*; Haidinger. Wien.
1847—51. *Camb.U.*; *Chem.S.i.*; *Edinb.R.S.*; *Linn.S.*; *N.H.M.*; *R.A.S.*; *R.S.*
- Hain. Mm. S.** ..... } *Mémoires et Publications de la Société des Sciences, des Arts et des*
Hain. S. Mm. ..... } *Lettres du Hainaut*. Mons.
1839— *B.M.*; *Dub.T.C.i.*; *N.H.M.*; *Oxon.B.i.*; *R.S.i.*
- Hall Bij.** ..... *Bijdragen tot de Natuurkundige Wetenschappen*; Hall, etc. Amsterdam.
1826—32. *B.M.*; *Camb.U.*; *N.H.M.*; *R.S.*
- Halle Ab. Nt. Vr.** ..... *Abhandlungen des Naturwissenschaftlichen Vereins für Sachsen und Thüringen in Halle*; Giebel. Berlin.
1860— *B.M.*; *Camb.U.*; *N.H.M.i.*; *R.S.i.*
- Halle Nf. Gs. B.** ..... *Bericht der Naturforschenden Gesellschaft zu Halle*. Halle.
1856— *Camb.U.i.*; *Dub.R.D.S.i.*; *Dub.R.I.A.i.*; *Oxon.R.i.*; *R.S.*
- Halle Z.**..... } *Zeitschrift für die gesammten Naturwissenschaften*; herausgegeben
Halle Z. Nw. ..... } von dem Naturwissenschaftlichen Vereine für Sachsen und Thüringen in Halle; Giebel. Berlin.
1853— *B.M.*; *Camb.U.i.*; *Dub.R.D.S.i.*; *Dub.R.I.A.i.*; *Dub.T.C.i.*; *Edinb.R.S.*; *Linn.S.*; *N.H.M.*; *Oxon.B.*; *Oxon.R.*; *R.S.*
- See Z. Nw.*
- Hamb. Mth. Gs. Mt.** ..... *Mitteilungen der Mathematischen Gesellschaft in Hamburg*. Leipzig.
1889— *Math.S.*
- Hammerschmidt Al.**..... *Allgemeine Oesterreichische Zeitschrift für den Landwirth, Forstmann und Gärtner*; Hammerschmidt. Wien.
- Hann. Archt.-Vr. Z.** ..... } *Zeitschr. des Architekten- und Ingenieur-Vereins zu Hannover*.
Hann. Z. Archt.-Vr. ..... } Hannover.
1855— *Camb.U.i.*; *P.O.*
- Heidl. Nt. Md. Vh.**..... } *Verhandlungen des Naturhistorisch-Medicinischen Vereins zu Heidelberg*. Heidelberg.
Heidl. Vh. Nt. Md. ..... }
1857— *Camb.U.i.*; *Chem.S.i.*; *Dub.R.I.A.*; *Linn.S.i.*; *N.H.M.i.*; *R.S.i.*
- Helsingf. Acta.**..... *Acta Societatis Scientiarum Fennicæ*. Helsingfors.
1842— *B.M.*; *Camb.P.S.*; *Camb.U.i.*; *Dub.R.I.A.*; *Edinb.R.S.i.*; *N.H.M.*; *Oxon.B.*; *R.A.S.*; *R.S.*
- Helsingf. Bd.** ..... *Bidrag till Kännedomen af Finlands Natur och Folk, utgifna af Finska Vetenskaps-Societeten*. Helsingfors.
1858— *B.M.*; *Camb.P.S.i.*; *Camb.U.*; *Dub.R.I.A.*; *Edinb.R.S.i.*; *N.H.M.*; *Oxon.B.*; *R.A.S.*; *R.S.*
- Helsingf. Öfv.** ..... *Öfversigt af Finska Vetenskaps-Societetens Förhandlingar*. Helsingfors.
1853— *B.M.*; *Camb.P.S.i.*; *Camb.U.i.*; *Dub.R.D.S.*; *Dub.R.I.A.*; *Edinb.R.S.i.*; *Glasg.U.i.*; *N.H.M.*; *Oxon.B.*; *R.A.S.*; *R.S.*
- Hermbstädt Ms.**..... *Museum des Neuesten und Wissenswürdigsten aus dem Gebiete der Naturwissenschaft, der Künste, der Fabriken, der Manufakturen, der technischen Gewerbe, der Landwirthschaft, der Produktenwaaren und Handelskunde, und der bürgerlichen Haushaltung, etc.*; Hermbstädt. Berlin.
1814—18. *B.M.*; *R.S.*
- Hertha** ..... *Hertha, Zeitschrift für Erd-, Völker-, und Staaten-Kunde*; Berghaus und Hoffmann. Stuttgart und Tübingen.
1825—29. *B.M.*; *Camb.U.*; *Oxon.B.*; *R.S.*; *U.C.L.i.*
- I. Act. J.** ..... *Journal of the Institute of Actuaries*. London.
1869— *B.M.*; *Camb.U.*; *Dub.N.L.I.i.*; *Oxon.B.*; *R.A.S.i.*

List of Serial Publications

- I. CE. P.** ..... Minutes of Proceedings of the Institution of Civil Engineers, containing Abstracts of the Papers and of the Discussions. London.
1837— B.M.; Camb.P.S.i.; Camb.U.; Dub.R.C.S.; Dub.R.D.S.;
Dub.R.I.A.; Edinb.R.S.; Edinb.U.; Glasg.P.S.i.; Glasg.U.;
Oxon.B.; Oxon.R.i.; P.O.; R.S.; U.C.L.
See CE. I. P.
- I. Égypt. Bil.** ..... Bulletin de l'Institut Égyptien. Caire.
1859— Camb.P.S.i.; Camb.U.i.; N.H.M.; U.C.L.i.
- I. Égypt. Mm.** ..... Mémoires ou Travaux Originaux présentés et lus à l'Institut Égyptien
publiés sous les auspices de S. A. Mohammed Saïd, vice-roi
d'Égypte, sous la direction de M. le Docteur B. Schnepf. Paris
& Caire.
1862— Camb.P.S.i.; Camb.U.; N.H.M.
- I. Elect. E. J.** ..... Journal of the Institution of Electrical Engineers. London.
1889— B.M.; Camb.U.; Dub.R.D.S.; Edinb.R.S.i.; Edinb.U.;
Glasg.U.i.; Oxon.R.i.; P.O.; R.S.; U.C.L.
- Il Cim.** ..... Il Cimento, rivista di Scienze, Lettere, ed Arti. Torino.
1852—55. B.M.
- Il Giamb. Vico** ..... Il Giambattista-Vico, giornale scientifico. Napoli.
1857. N.H.M.; Oxon.B.i.
See Giamb. Vico.
- Il Polit.** ..... Il Politecnico; repertorio mensile di studj applicati alla prosperità
e coltura sociale.
Il Politecnico; repertorio di studj letterarj, scientifici e tecnici. Milano.
1839—44; 1860— B.M.; P.O.
- I. ME. P.** ..... Institution of Mechanical Engineers. Proceedings. Birmingham,
London.
1847— B.M.; Camb.P.S.i.; Camb.U.; Dub.R.D.S.; Glasg.U.;
P.O.; R.S.; U.C.L.
- I. Mn. Mtl. T.** ..... Transactions of the Institution of Mining and Metallurgy, London.
London.
1892— B.M.; Camb.U.i.; Geol.S.; N.H.M.; P.O.
- Il Progresso** ..... Il Progresso delle Scienze, Lettere, ed Arti. Napoli.
First series undated; Second series 1832— Camb.U.; Oxon.B.
- Ing.** ..... Der Ingenieur; Zeitschrift für das gesammte Ingenieurwesen;
Bornemann. Freiberg.
1848—50. B.M.; P.O.
- Inghirami Opusc.** ..... Nuova Collezione di Opuscoli e Notizie di Scienze; Inghirami.
Fiesole.
1820—23. B.M.
- Innsb. Nt. Md. B.** ..... Berichte des Naturwissenschaftlich-Medizinischen Vereins in Inns-
bruck. Innsbruck.
1870— B.M.; Camb.U.; Dub.R.D.S.i.; Dub.R.I.A.i.; Linn.S.i.;
N.H.M.; Oxon.R.; R.S.
- Intell. Obs.** ..... The Intellectual Observer; a Review of Natural History, Microscopic
Research, and Recreative Science. London.
1862—68. B.M.; Camb.U.; Linn.S.; N.H.M.; Oxon.B.i.; Oxon.R.;
P.O.; R.A.S.; R.S.i.
- Iowa Ac. Sc. P.** ..... Proceedings of the Iowa Academy of Sciences. Des Moines.
1875— B.M.i.; Edinb.R.S.i.; N.H.M.; Oxon.B.i.; P.O.; R.S.i.;
U.C.L.i.
- Ir. Ac. Cunningham Mm.** ..... Royal Irish Academy. "Cunningham Memoirs." Dublin.
1880— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.N.L.I.;
Dub.R.C.S.; Dub.R.D.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.i.;
Edinb.U.; Glasg.P.S.; Linn.S.; N.H.M.i.; Oxon.B.; Oxon.R.;
R.A.S.; R.S.i.; U.C.L.
- Ir. Ac. P.** ..... Proceedings of the Royal Irish Academy. (Science.) Dublin.
1841— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.N.L.I.;
Dub.R.C.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Edinb.U.;
Glasg.P.S.i.; Glasg.U.; Linn.S.; Math.S.i.; N.H.M.; Oxon.B.i.;
Oxon.R.; P.O.i.; R.A.S.; R.S.; U.C.L.i.
- Ir. Ac. T.** ..... Transactions of the Royal Irish Academy. Science. Dublin.
1787— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.N.L.I.;
Dub.R.D.S.; Dub.R.I.A.; Edinb.R.S.; Edinb.U.; Glasg.P.S.;
Glasg.U.i.; Linn.S.; Math.S.i.; N.H.M.; Oxon.B.i.; Oxon.R.;
P.O.i.; R.A.S.; R.S.; U.C.L.
- I. Rv.** ..... India Review and Journal of Foreign Science and the Arts. Calcutta.
1837—38. B.M.; N.H.M.i.

List of Serial Publications

- Isère S. Bl.** ..... Bulletin de la Société de Statistique, des Sciences Naturelles, et des Arts Industriels du département de l'Isère. Grenoble.
1838— B.M.i.; N.H.M.; Oxon.B.; R.S.i.
- I. & S. I. J.** ..... The Journal of the Iron and Steel Institute. London.
1872— Camb.U.; Chem.S.i.; Dub.R.D.S.; Dub.R.I.A.; Dub.T.C.; Edinb.U.; Geol.M.i.; Glasg.P.S.i.; Glasg.U.i.; Oxon.B.; P.O.; R.S.; U.C.L.
- Jap. As. S. T.** ..... Transactions of the Asiatic Society of Japan. Yokohama.
1872— B.M.; Camb.U.; Edinb.R.S.; N.H.M.; Oxon.B.; Oxon.R.; P.O.i.; R.S.
- Jb. Berg- Hw.** ..... Jahrbuch für das Berg- und Hüttenwesen im Königreiche Sachsen. Freiberg.
1873— B.M.; N.H.M.i.; P.O.
- J. Bt.** ..... The Journal of Botany. London.
1863— B.M.; Camb.U.; Dub.N.L.I.i.; Dub.R.C.S.; Glasg.U.; Linn.S.; N.H.M.; P.O.i.
- J. de Ps.** ..... Journal de Physique, de Chimie, et de l'Histoire Naturelle; de Lamétherie etc. Paris.
1794—1823. B.M.; Camb.U.; Glasg.U.i.; N.H.M.i.; Oxon.B.; Oxon.R.; R.S.; U.C.L.i.
- J. de Ps.** ..... Journal de Physique Théorique et Appliquée; D'Almeida. Paris.
1872— Camb.U.; Dub.R.C.S.; Glasg.U.i.; Oxon.R.; P.O.; R.S.
- Jena. Sb.** ..... Sitzungsberichte der Jenaischen Gesellschaft für Medicin und Naturwissenschaft. Jena.
1877—86. Edinb.R.S.i.; Linn.S.i.; Oxon.R.; R.S.
- Jena. Z.** ..... Jenaische Zeitschrift für Naturwissenschaft, herausg. von der Medicinisch-Naturwissenschaftlichen Gesellschaft zu Jena. Jena.
1864— B.M.; Camb.P.S.i.; Camb.U.; Chem.S.i.; Dub.N.L.I.i.; Dub.R.D.S.i.; Edinb.R.S.; Edinb.U.i.; Glasg.U.i.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.; R.S.; U.C.L.
- J. Gén. Civ.** ..... Journal du Génie Civil des Sciences et des Arts. Paris.
1828—48. B.M.i.; Camb.U.; P.O.
- J. H. Un. Cir.** ..... The Johns Hopkins University Circulars. Baltimore.
1879— Camb.P.S.; Camb.U.; Dub.N.L.I.i.; Dub.R.I.A.i.; Edinb.R.S.i.; Edinb.U.; Glasg.P.S.; Math.S.i.; N.H.M.; Oxon.B.; Oxon.R.; R.A.S.i.; R.S.; U.C.L.i.
- J. Micr. Sc.** ..... Quarterly Journal of Microscopical Science; Lankester and Busk. London.
1853— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.N.L.I.i.; Dub.R.C.S.; Edinb.R.S.; Edinb.U.; Glasg.P.S.; Linn.S.; N.H.M.; Oxon.B.i.; Oxon.R.; P.O.; R.S.; U.C.L.
- J. Mines** ..... Journal des Mines, ou Recueil de Mémoires sur l'exploitation des Mines, et sur les Sciences et les Arts qui s'y rapportent. Paris.
1794—1815. B.M.; Camb.U.; Dub.T.C.; Edinb.R.S.; Linn.S.i.; N.H.M.; Oxon.B.(R.); R.S.i.
- J. Ps. C.** ..... The Journal of Physical Chemistry. Ithaca, N.Y.
1896— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Edinb.R.S.; Edinb.U.; Glasg.U.; Oxon.R.; P.O.; R.S.i.
- J. Sav.** ..... Journal des Savants. Paris.
1816— B.M.; Camb.U.; Dub.N.L.I.; Dub.T.C.; Edinb.R.S.i.; Glasg.U.i.; Oxon.B.; Oxon.R.; P.O.i.; R.S.
- J. Tél.** ..... Journal Télégraphique publié par le Bureau International des Administrations Télégraphiques. Berne.
1869— P.O.
- Kan. Ac. Sc. T.** ..... Transactions of the Kansas Academy of Science. Topeka, Kansas.
1872— Camb.P.S.i.; Dub.R.I.A.; Edinb.R.S.i.; Glasg.P.S.i.; Linn.S.i.; N.H.M.; Oxon.B.i.; R.S.i.
- Kan. Un. Q.** ..... The Kansas University Quarterly. Laurence, Kansas.
1893— B.M.i.; Dub.R.D.S.i.; Dub.R.I.A.i.; Edinb.R.S.i.; Glasg.P.S.i.; Math.S.; N.H.M.; R.S.
- Karlsruhe Nt. Vr. Vh.** ... Verhandlungen des Naturwissenschaftlichen Vereins in Karlsruhe. Karlsruhe.
1864— B.M.i.; Dub.R.I.A.; N.H.M.
- Karsten Arch.** ..... Archiv für Mineralogie, Geognosie, Bergbau, und Hüttenkunde; Karsten. Berlin.
1829—55. B.M.; Edinb.R.S.i.; Geol.M.; N.H.M.; P.O.; R.S.

List of Serial Publications

- Kastner Arch. Ntl.** ..... Archiv für die gesammte Naturlehre; Kastner. Nürnberg.
1824—35. B.M.; N.H.M.; P.O.
- Kazan Mm. Un.** ..... Scientific Memoirs published by the Imperial University of Kazan.
Kazan.
1834— B.M.i.; Camb.U.; Dub.R.I.A.i.; Edinb.R.S.i.; Glasg.P.S.i.;
Linn.S.i.; R.S.i.
See **Kazan Un. Mm.**
- Kazan S. Nt. (Ps.-Mth.) P.** Proceedings of the Physico-Mathematical Section of the Naturalists'
Society of the Imperial University of Kazan. Kazan.
1883—90. R.S.
- Kazan S. Ps.-Mth. Bll.** ... Bulletin de la Société Physico-Mathématique de Kasan. Kasan.
1891— Dub.R.I.A.i.; Edinb.R.S.i.; R.S.i.
- Kazan Un. Bll.** ..... Bulletin of the Imperial University of Kazan. Kazan.
1865— B.M.i.; Camb.U.i.; Edinb.R.S.i.; Linn.S.i.
- Kazan Un. Mm.** ..... See **Kazan Mm. Un.**
- Kharkov Mth. S. Com.** ... Communications and Proceedings of the Mathematical Society of
the Imperial University of Kharkov. Kharkov.
1879?— R.S.i.
- Kiel Schr.** ..... Schriften der Universität zu Kiel. Kiel.
1855—80. B.M.; Camb.U.; Dub.R.I.A.; Edinb.R.S.i.; N.H.M.i.;
Oxon.B.; R.S.
- Kiøb. Dn. Vd. Selsk. Afh.** { Det Kongelige Danske Videnskabernes Selskabs naturvidenskabelige
og mathematiske Afhandlinger. Kiøbenhavn.
Kjøb. Dn. Vd. Selsk. Afh. { 1824—46. B.M.; Dub.T.C.; Edinb.R.S.; Linn.S.i.; N.H.M.; R.S.
- Kiøb. Dn. Vd. Selsk. Skr.** { Det Kongelige Danske Videnskabernes Selskab Skriver. Kiøbenhavn.
Kjøb. Dn. Vd. Selsk. Skr. { 1801—18. B.M.; Camb.P.S.i.; Camb.U.; Edinb.R.S.; N.H.M.;
Oxon.B.; R.S.
See **Dn. Vd. Selsk. Skr.**
- Kjøb. Dn. Vd. Selsk. Skr.** { Det Kongelige Danske Videnskabernes Selskabs Skrifter. Natur-
videnskabelig og Mathematisk Afdeling. Kjøbenhavn.
Kiøb. Skr. ..... { 1849— B.M.; Camb.U.i.; Edinb.R.S.; Linn.S.; N.H.M.; R.A.S.;
Kjøb. Skr. ..... { R.S.; U.C.L.i.
- Kiøb. Ov.** ..... { Oversigt over det Kongelige Danske Videnskabernes Selskabs For-
handlinger. Kjøbenhavn.
Kjøb. Ov. ..... { 1806— Camb.P.S.; Camb.U.i.; Chem.S.i.; Dub.R.D.S.i.; Dub.
R.I.A.i.; Dub.T.C.i.; Edinb.R.S.i.; Glasg.U.i.; Linn.S.i.;
Kjøb. Ov. ..... { N.H.M.i.; Oxon.R.; P.O.i.; R.A.S.i.; R.S.
- Königsb. Arch.** ..... Königsberger Archiv für Naturwissenschaften und Mathematik;
Bessell, etc. Königsberg.
1812. B.M.; Camb.U.; Linn.S.
- Königsb. Schr.** ..... Schriften der königlichen Physikalisch-Oekonomischen Gesellschaft
zu Königsberg. Königsberg.
1860— B.M.; Camb.P.S.; Dub.R.I.A.; Edinb.R.S.i.; Linn.S.;
N.H.M.; P.O.i.; R.S.
- Kosmos (Lw.)** ..... Kosmos. Czasopismo polskiego Towarzystwa przyrodników imienia
Kopernika. [Cosmos. The Journal of the Polish Society of
Naturalists founded in honour of Copernicus.] Lwow.
1876— B.M.; N.H.M.
- Krk. Ak. (Mt.-Prz.) Pam.** Pamiętnik Akademii Umiejętności w Krakowie. Wydział Mate-
matyczno-Przyrodniczy. [Memoirs of the Academy of Science
in Cracow. Section of Mathematics and Natural Science.]
Kraków.
1874— B.M.; Edinb.R.S.i.; N.H.M.
- Krk. Ak. (Mt.-Prz.) Rz.** ... Rozprawy... Wydziału Matematyczno-Przyrodniczego Akademii
Umiejętności. [Proceedings of the Section of Mathematics and
Natural Science of the Academy of Science.] Kraków.
Krk. Ak. (Mt.-Prz.) Rz. & Sp. ..... { 1874— B.M.; Edinb.R.S.i.; N.H.M.
- Krk. Roczn. Tow. Nauk.** { Rocznik Towarzystwa Naukowego z Uniwersytetem Krakowskim
Połączonego. Krakowie. [Annals of the Scientific Society of the
Polish University of Krakow. Krakow.]
Krk. Roczn. Uniwers. ... { 1817—72. B.M.
- Lanc. Hist. S. T.** ..... Proceedings and Papers of the Lancashire and Cheshire Historic
Society. Liverpool.
- Lanc. T. Hist. S.** ..... 1849—54. Continued as: Transactions, etc., 1855— B.M.;
Camb.U.i.; Dub.R.I.A.i.; Edinb.R.S.i.; Glasg.P.S.i.; Oxon.B.i.;
R.S.

List of Serial Publications

- Laus. Bil. S. Vd.** ..... { Bulletin des Séances de la Société Vaudoise des Sciences Naturelles.
Laus. S. Vd. Bil. ..... { Lausanne.
 1842— Dub.R.D.S.i.; Dub.R.I.A.i.; Edinb.R.S.i.; Linn.S.;
 N.H.M.; Oxon.B.i.; R.S.
Leic. S. T. ..... The Transactions of the Leicester Literary and Philosophical Society.
 Leicester.
 1835— Camb.U.; Dub.R.D.S.; Geol.S.; Glasg.P.S.; Linn.S.i.;
 N.H.M.i.; Oxon.B.; P.O.; U.C.L.
Leijd. A. Ac. ..... Annales Academiæ Lugduno-Batavæ. Leijden.
 1815—75. B.M.; Camb.U.; Dub.T.C.i.; N.H.M.; Oxon.B.; R.S.i.;
 U.C.L.i.
Leip. Ab. Jablon. Gs. ..... Abhandlungen bei Begründung der k. Sächsischen Gesellschaft der
 Wissenschaften am Tage der zweihundertjährigen Geburtsfeier
 Leibnizens; herausg. v. d. Jablonowski'schen Gesellschaft zu
 Leipzig. Leipzig.
 1846. Camb.U.; Dub.R.I.A.; Edinb.R.S.; N.H.M.; R.A.S.; R.S.
Leip. Ab. Mth. Ps. ..... Abhandlungen der Mathematisch-Physischen Classe der Königlich
 Sächsischen Gesellschaft der Wissenschaften. Leipzig.
 1852— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Edinb.R.S.;
 Glasg.U.; Math.S.i.; N.H.M.; Oxon.B.; P.O.; R.A.S.; R.S.;
 U.C.L.i.
 See **Leip. Mth. Ps. Ab.**
Leip. As. Gs. Vjschr. ..... Vierteljahrsschrift der Astronomischen Gesellschaft. Leipzig.
 1866— B.M.; Camb.P.S.i.; Camb.U.; Dub.R.I.A.; Edinb.R.S.;
 Oxon.R.; R.A.S.; R.S.
Leip. B. ..... Berichte über die Verhandlungen (Math.-Phys. Classe) der Königl.
 Sächsischen Gesellschaft der Wissenschaften zu Leipzig.
 Leipzig.
 1846— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Edinb.R.S.;
 Glasg.U.; Math.S.i.; N.H.M.; Oxon.B.; Oxon.R.; R.A.S.; R.S.;
 U.C.L.i.
 See **Leip. Mth. Ps. B.**
Leip. Jablon. Preisschr. ..... Preisschriften gekrönt und herausgegeben von der Fürstlich Jab-
 lonowski'schen Gesellschaft zu Leipzig. Leipzig.
 1847— B.M.; Camb.U.; Dub.R.I.A.; Edinb.R.S.i.; N.H.M.;
 Oxon.B.; R.A.S.i.; R.S.i.; U.C.L.i.
Leip. Mth. Ps. Ab. ..... See **Leip. Ab. Mth. Ps.**
Leip. Mth. Ps. B. ..... See **Leip. B.**
Le Mans S. R. Tr. ..... Analyse des Travaux de la Société [Royale] des Arts du Mans.
 Le Mans.
 1820. N.H.M.; R.S.
Les Mondes ..... Les Mondes, Revue hebdomadaire des Sciences et de leurs Appli-
 cations aux Arts, et à l'Industrie; l'Abbé F. Moigno. Paris.
 1863— B.M.; Camb.U.i.; Dub.N.L.I.i.; Glasg.P.S.i.; Oxon.R.;
 P.O.; R.S.i.
L'I. ..... L'Institut; Journal des Académies et Sociétés Scientifiques de la
 France et de l'Etranger. Paris.
 1833— B.M.i.; Camb.U.; Dub.T.C.; Edinb.R.S.i.; Glasg.P.S.i.;
 N.H.M.; Oxon.B.(R.); P.O.i.; R.S.i.
Liège A. Ac. ..... Annales Academiæ Leodiensis. Liège.
 1817—27. B.M.; Camb.U.; Dub.T.C.; N.H.M.; Oxon.B.; R.S.
Liège Mm. S. Sc. ..... { Mémoires de la Société [Royale] des Sciences, de l'Agriculture, et
Liège S. Sc. Mm. ..... { des Arts à Liège. Liège.
 1843— B.M.; Camb.U.; Dub.T.C.; Edinb.R.S.i.; Glasg.P.S.i.;
 Glasg.U.i.; Linn.S.i.; N.H.M.; Oxon.B.; P.O.; R.S.
Lille Mm. ..... { Mémoires de la Société [Royale] des Sciences, etc. à Lille. Lille.
Lille Mm. S. ..... { 1827— B.M.; Camb.U.; Dub.T.C.; N.H.M.; Oxon.B.; Oxon.R.;
Lille S. Mm. ..... { R.S.i.
Lille Tr. ..... Recueil des Travaux de la Société d'Amateurs des Sciences, de
 l'Agriculture, et des Arts à Lille. Lille.
 1819—27. B.M.; Camb.U.; Dub.T.C.; N.H.M.; Oxon.B.; Oxon.R.;
 R.S.
Lille Tr. Mm. ..... Travaux et Mémoires de l'Université de Lille. Lille.
 1889— Camb.P.S.; Camb.U.; Dub.R.D.S.; Dub.R.I.A.; N.H.M.;
 R.S.
Lindenau Z. ..... Zeitschrift für Astronomie und verwandte Wissenschaften; Lindenau.
 Tübingen.
 1816—18. B.M.; Camb.U.; R.A.S.; R.S.

List of Serial Publications

- Liouv. J.** ..... { Journal de Mathématiques pures et appliquées, fondé par Joseph Liouville. Paris.
- Liouv. J. Mth.** ..... { 1836— B.M.; Camb.U.; Dub.R.I.A.; Edinb.R.S.i.; Edinb.U.; Glasg.P.S.i.; Glasg.U.; Math.S.i.; Oxon.B.(R.); R.S.; U.C.L.
- Lisb. A.** ..... Annaes das Sciencias e Lettras, publicados debaixo dos auspicios da Academia Real das Sciencias:—Sciencias mathematicas, physicas, historico-naturaes, e medicas. Lisboa.
- 1857— B.M.; Dub.R.I.A.; Edinb.R.S.i.; N.H.M.; R.A.S.i.; R.S.i.
See **A. Sc.**
- Lisb. Ac. Sc. Mm.** ..... Historia e Memorias da Academia Real das Sciencias de Lisboa. Lisboa.
- 1797— B.M.; Camb.U.; Edinb.R.S.; N.H.M.; Oxon.B.; R.A.S.; R.S.i.
See **Lisb. Mm., Lisb. Mm. Ac. Sc. and Lisb. Mm. Sc.**
- Lisb. J. Sc. Mth.** ..... Jornal de Sciencias mathematicas, physicas e naturaes. Publicado sob os auspicios da Academia R. das Sciencias de Lisboa. Lisboa.
- 1868— B.M.; Camb.U.; Dub.R.D.S.i.; Edinb.R.S.i.; Linn.S.; Math.S.i.; N.H.M.; Oxon.B.; R.A.S.; R.S.; U.C.L.i.
- Lisb. Mm.** }
Lisb. Mm. Ac. Sc. } ..... See **Lisb. Ac. Sc. Mm.**
Lisb. Mm. Sc. }
- L. Mth. S. P.** ..... Proceedings of the London Mathematical Society. London.
- 1865— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.U.; Math.S.; Oxon.B.i.; Oxon.R.; R.S.; U.C.L.
- Lndw. V.-St.** ..... Die landwirthschaftlichen Versuchs-Stationen. Organ für wissenschaftliche Forschungen auf dem Gebiete der Landwirthschaft. Dresden, Chemnitz.
- 1859— B.M.i.; Camb.U.; Chem.S.i.; Oxon.B.; P.O.i.; R.S.i.
- Lotos** ..... Lotos. Zeitschrift für Naturwissenschaften. Prag.
- 1851—95. B.M.; Camb.U.; Dub.R.I.A.i.; N.H.M.
- Louvain A. Ac.** ..... Annales Academiæ Lovaniensis. Bruxelles, Louvain.
- 1821—27. B.M.; Camb.U.; Dub.T.C.; Oxon.B.; R.S.
- Lpldina** ..... Leopoldina: amtliches Organ der Kaiserlichen Leopoldino-Carolinischen Deutschen Akademie der Naturforscher. Dresden.
- 1859— B.M.; Camb.P.S.; Camb.U.i.; Edinb.R.S.i.; Linn.S.; N.H.M.; R.A.S.i.; R.S.
- Lpool Lt. Ph. S. P.** ..... Proceedings of the Literary and Philosophical Society of Liverpool. London, Liverpool.
- 1844— B.M.; Camb.U.i.; Chem.S.i.; Dub.R.I.A.; Edinb.R.S.i.; Glasg.P.S.; Linn.S.; N.H.M.; Oxon.B.i.; P.O.i.; R.A.S.i.; R.S.; U.C.L.i.
- L. Ps. S. P.** ..... Proceedings of the Physical Society of London. London.
- 1874— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.R.C.S.; Dub.R.D.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.i.; Glasg.P.S.i.; Glasg.U.i.; Math.S.; Oxon.B.; Oxon.R.; P.O.; R.A.S.; R.S.; U.C.L.i.
- Lucca At. Ac.** ..... Atti della R. Accademia Lucchese di Scienze, Lettere, ed Arti. Lucca.
- 1821— B.M.; Camb.U.; Dub.T.C.i.; Oxon.B.i.
- Lum. Élect.** ..... La Lumière Électrique. Journal universel d'Électricité. Paris.
- 1879—94. B.M.; Glasg.U.i.; P.O.
- Lund. Acta Un.** ..... Acta Universitatis Lundensis. Lundens Universitets Års-skrift. Afdelningen för Matematik och Naturvetenskap. Lund.
- 1864— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Edinb.R.S.i.; Linn.S.i.; N.H.M.; Oxon.B.; R.S.
See **Lund. Un. Acta.**
- Lund Phys. Sällsk. Ts.** ..... Physiografiska Sällskapets Tidskrift. Lund.
- 1837—38. Camb.U.; N.H.M.; R.S.
See **Lund. Acta Un.**
- Lund. Un. Acta** ..... Publications de l'Institut Royal Grand-Ducal de Luxembourg.
- Lux. I. R. Pb.** ..... Section des Sciences Naturelles et Mathématiques: ci-devant "Société des Sciences Naturelles." Luxembourg.
- 1870— Dub.R.D.S.; Dub.R.I.A.; Edinb.R.S.i.; N.H.M.; R.S.i.
- Lux. S. Sc. Mm.** ..... { Société des Sciences Naturelles du Grand-Duché de Luxembourg. Luxembourg.
- Lux. S. Sc. Nt.** ..... { 1853—69. Dub.R.I.A.; R.S.
- Lyon Ac. Mm. (Sc.)** ..... { Mémoires de l'Académie des Sciences, Belles-Lettres et Arts de
- Lyon Ac. Sc. Mm.** ..... { Lyon. Classe des Sciences. Lyon, Paris.

List of Serial Publications

- 1845— B.M.; Camb.U.; Edinb.R.S.i.; Linn.S.i.; N.H.M.; Oxon.B.; R.S.i.
See Lyon Mm. Ac. and Lyon Mm. Ac. Sc.
- Lyon A. S. Ag.** ..... Annales des Sciences physiques et naturelles, d'Agriculture, et d'Industrie, publiées par la Société d'Agriculture, etc.
 Annales de la Société d'Agriculture, Histoire Naturelle et Arts Utiles de Lyon. Lyon.
 1838— B.M.; Camb.U.; Dub.R.I.A.; Linn.S.; N.H.M.; Oxon.B.; P.O.; R.S.
See Lyon S. A. Ag. and Lyon S. Ag. A.
- Lyon Mm. Ac.** ..... }
Lyon Mm. Ac. Sc. ..... } *See Lyon Ac. Mm. (Sc.) and Lyon Ac. Sc. Mm.*
Lyon S. A. Ag. ..... }
Lyon S. Ag. A. ..... } *See Lyon A. S. Ag.*
Lyon Un. A. ..... }
 Annales de l'Université de Lyon. Paris, Lyon.
 1891— B.M.; Edinb.R.S.; N.H.M.i.; R.S.i.
- Maclurian Lyceum Ct.**... Contributions of the Maclurian Lyceum to the Arts and Sciences. Philadelphia.
 1827—29. B.M.; Linn.S.i.; N.H.M.
- Mâcon Ac. A.** ..... Annales de l'Académie de Mâcon, Société des Arts, Sciences, Belles-Lettres et d'Agriculture. Mâcon.
 1851— B.M. R.S.i.
- Mâcon S. C. R.** ..... Compte Rendu des Travaux de la Société (d'Agriculture,) des Sciences, Arts et Belles-Lettres, de Mâcon. Mâcon.
 1807—52. B.M.i.; R.S.i.
- Madras Eng. Rp.** ..... Reports, etc. on various professional subjects connected with the duties of the Corps of Engineers of the Madras Presidency; Capt. J. T. Smith, F.R.S. Madras.
 1839—46. P.O.; R.S.
- Madras J.** ..... The Madras Journal of Literature and Science. Madras.
 1833— B.M.i.; Camb.U.; Dub.N.L.I.i.; Linn.S.i.; N.H.M.; Oxon.B.i.; P.O.; R.A.S.i.; R.S.i.; U.C.L.i.
 {Memorias de la Real Academia de Ciencias. Madrid.
 1850— B.M.; Camb.U.i.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Linn.S.i.; N.H.M.; Oxon.B.; R.A.S.i.; R.S.i.; U.C.L.i.
- Madrid Ac. Ci. Mm.** ..... }
Madrid Mm. ..... }
Madrid Rv. ..... } Revista de los Progresos de las Ciencias exactas, físicas, y naturales. Madrid.
 1850—86. B.M.; Dub.R.D.S.i.; Edinb.R.S.i.; N.H.M.; Oxon.R.i.; R.A.S.i.; R.S.i.
- Mag. Ak. Éts.** ..... Magyarakadémiai Értesítő. [Report of the Hungarian Academy.] Pest.
 1840—59. B.M.
- Mag. Ak. Éts. (Mth. Term.)** Magyar akademiai Értesítő. A matematikai és természettudományi osztályok közlönye. [Report of the Hungarian Academy. Communications of the Mathematical and Natural Science sections.] Pest.
 1860—65. B.M.; Camb.P.S.i.; R.S.
- Magdeb. Nt. Vr. Jbr. u. Ab.** ..... Jahresbericht und Abhandlungen des Naturwissenschaftlichen Vereins zu Magdeburg. Magdeburg.
 1869— B.M.; R.S.i.
- Mag. Tud. Ak. Étk. (Mth.)** Értekezések a Matematikai Osztály köréből. Kiadja a Magyar Tudományos Akadémia. [Memoirs on Mathematical subjects. Published by the Hungarian Academy of Science.] Pest.
 1867—94. B.M.; Edinb.R.S.i.; R.S.
- Mag. Tud. Ak. Éts.** ..... A Magyar Tudományos Akadémia Értesítője. [Report of the Hungarian Academy of Science.] Pest.
 1867— B.M.
- Majocchi A. Fis. C.** ..... Annali di Fisica, Chimica, e Matematiche, col Bulletino dell' Industria meccanica e chimica; Majocchi. Milano.
 1841—50. B.M.; R.S.
- Manch. Lt. Ph. S. Mm.**... Memoirs of the Literary and Philosophical Society of Manchester. London and Manchester.
 1785—1887. B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.R.D.S.; Dub.R.I.A.; Glasg.P.S.i.; Linn.S.; Math.S.i.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.i.; R.S.; U.C.L.i.
See Manch. Mm. Ph. S., Manch. Ph. S. Mm. and Manch. S. Mm.
- Manch. Lt. Ph. S. Mm. & P.** ..... Memoirs and Proceedings of the Manchester Literary and Philosophical Society. Manchester.

List of Serial Publications

- 1888— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.R.I.A.i.;
Edinb.R.S.; Glasg.P.S.; Linn.S.; Math.S.; N.H.M.; Oxon.B.;
Oxon.R.; P.O.; R.A.S.; R.S.; U.C.L.i.
- Manch. Lt. Ph. S. P.** ..... Proceedings of the Literary and Philosophical Society of Manchester.
Manchester.
- 1857—87. B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.R.D.S.;
Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Glasg.P.S.; Linn.S.; Math.
S.i.; N.H.M.; Oxon.B.; P.O.; R.A.S.; R.S.; U.C.L.i.
- See **Manch. Ph. S. P.**
- Manch. Mm. Ph. S.** ..... } See **Manch. Lt. Ph. S. Mm.**
- Manch. Ph. S. Mm.** ..... }
- Manch. Ph. S. P.** ..... See **Manch. Lt. Ph. S. P.**
- Manch. S. Mm.** ..... See **Manch. Lt. Ph. S. Mm.**
- Manch. S. P.** ..... See **Manch. Lt. Ph. S. P.**
- Marb. Schr.** ..... Schriften der Gesellschaft zur Beförderung der gesammten Natur-
wissenschaften zu Marburg. Marburg.
- 1823— B.M.i.; Camb.U.; N.H.M.; Oxon.R.; R.S.
- Mars. Fac. Sc. A.** ..... Annales de la Faculté des Sciences de Marseille. Marseille,
Paris.
- 1891— B.M.; Camb.P.S.; Dub.R.I.A.; Edinb.R.S.; Glasg.P.S.;
Linn.S.; Math.S.i.; N.H.M.; R.A.S.; R.S.
- Mathematician** ..... The Mathematician; Davies, etc. London.
- 1845—50. B.M.; Camb.U.; Dub.T.C.; Oxon.B.; R.S.
- Mathesis** ..... Mathesis. Recueil Mathématique.... Gand, Paris.
- 1881— B.M.; Camb.U.
- Mbl. Nt.** ..... Maanblad voor Natuurwetenschappen, uitgegeven door de Sectie voor
Natuurwetenschappen van het Genootschap ter Bevordering van
Natuur-, Genees- en Heelkunde. Amsterdam.
- 1871— N.H.M.
- Medley I. Eng.** ..... Professional Papers on Indian Engineering; Major J. G. Medley.
Roorkee.
- 1864—68. P.O.i.; R.S.
- Mengelwerk Wisk. Vh.** ..... Mengelwerk van uitgeleezene en andere Wis- en Natuurkundige Ver-
handelingen; door het Genootschap der Mathematische Weten-
schappen, etc. Amsterdam.
- 1796—1816. R.S.
- See **Amst. Mengelwerk.**
- Mess. Mth.** ..... The Messenger of Mathematics. Cambridge, London.
- 1862— B.M.; Camb.P.S.; Camb.U.; Dub.N.L.I.i.; Dub.R.C.S.i.;
Dub.R.D.S.i.; Edinb.R.S.i.; Edinb.U.; Glasg.U.; Math.S.i.;
Oxon.B.; Oxon.R.; R.S.; U.C.L.
- M.-et-L. Mm. S. Ac.** ..... Mémoires de la Société Académique de Maine et Loire. Angers.
- 1857— B.M.; Camb.U.; N.H.M.; R.S.i.
- Met. S. QJ.** ..... Quarterly Journal of the Royal Meteorological Society. London.
- 1873— Camb.U.; Dub.R.I.A.i.; Dub.T.C.i.; Edinb.R.S.; Linn.
S.i.; Oxon.R.; P.O.; R.A.S.; R.S.
- Met. Z.** ..... Meteorologische Zeitschrift. Berlin.
- 1884— Camb.U.; Edinb.R.S.; P.O.; R.S.
- Metz Ac. Mm.** ..... Mémoires de l'Académie (Royale, Impériale) de Metz. Metz.
- Metz Mm. Ac.** ..... 1821— B.M.; Camb.U.; Dub.T.C.; N.H.M.; Oxon.B.; R.S.i.
- Mex. Arch. Com. Sc.** ..... Archives de la Commission Scientifique du Mexique, publiées sous
les auspices du Ministère de l'Instruction Publique. Paris.
- 1865—69. Oxon.B.; R.S.
- Méx. Reg. Trim.** ..... Registro trimestre, ó Coleccion de Memorias de Historia, Literatura,
Ciencias, etc., por una Sociedad de Literatos. México.
- 1832—33.
- Méx. S. "Alzate" Mm.** ..... Memorias de la Sociedad Científica "Antonio Alzate." México.
- 1887— B.M.i.; Camb.P.S.; Dub.R.I.A.; Edinb.R.S.; Linn.S.i.;
Math.S.i.; N.H.M.i.; R.A.S.; R.S.; U.C.L.i.
- Mg. Ntvd.** ..... Magazin for Naturvidenskaberne; Lundh, etc. Christiania.
- 1823—36. B.M.; N.H.M.i.; R.S.
- Mh. Mth. Ps.** ..... Monatshefte für Mathematik und Physik. Wien.
- 1890— B.M.; Camb.U.; Edinb.U.; Math.S.i.; N.H.M.
- Midl. Ntlist.** ..... The Midland Naturalist. London, Birmingham.
- 1878—93. Camb.U.; Geol.M.; Linn.S.; P.O.
- Mil. At. I. Lomb.** ..... Atti dell' I. R. Istituto Lombardo di Scienze, Lettere, ed Arti.
Milano.
- 1858—64. B.M.; Camb.U.; Edinb.R.S.; N.H.M.; Oxon.B.; R.S.

List of Serial Publications

- Mil. Effem.** ..... { Effemeridi Astronomiche di Milano. Con Appendice di Osservazioni e Memorie Astronomiche. Milano.
1806— Camb.U.; Oxon.B.; R.A.S.i.
- Mil. Effem. As.** ..... { Ephemerides Astronomicæ, ad Meridianum Mediolanensem supputatæ ab Angelo de Cesaris. Accedit Appendix cum Observationibus et Opusculis. Mediolani. (Milan.)
1774—1805. Oxon.B.
- Mil. G. I. Lomb.** ..... { Giornale dell' I. R. Istituto Lombardo di Scienze, Lettere, ed Arti, e Biblioteca Italiana; compilata da varj dotti nazionali e stranieri. Milano.
1841—56. B.M.; N.H.M.; Oxon.B.; R.S.
See **Mil. I. Lomb. G.**
- Mil. G. S. Inc.** ..... { Giornale della Società d' Incoraggiamento delle Scienze, etc. stabilita in Milano. Milano.
1808—65. B.M.; Camb.U.
- Mil. I. Lomb. G.** ..... See **Mil. G. I. Lomb.**
- Mil. I. Lomb. Mm.** ..... { Memorie dell' I. R. Istituto Lombardo di Scienze, etc. Milano.
1843— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.i.; Math.S.i.; N.H.M.; Oxon.B.; R.A.S.i.; R.S.; U.C.L.i.
- See **Mil. Mm. I. Lomb.**
- Mil. I. Lomb. Rd.** ..... { Reale Istituto Lombardo di Scienze e Lettere. Rendiconti. Milano.
1864— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Edinb.R.S.i.; Math.S.i.; N.H.M.; Oxon.B.i.; R.A.S.i.; R.S.; U.C.L.i.
- Mil. Mm. I. Lomb.** ..... See **Mil. I. Lomb. Mm.**
- Mil. Mm. I. Lomb. Ven.** ..... { Memorie dell' I. R. Istituto del regno Lombardo-Veneto. Milano.
1819—38. B.M.; Camb.U.; N.H.M.; Oxon.B.i.; R.S.
- Mitau Arb. Kurländ. Gs.** ..... { Arbeiten der Kurländischen Gesellschaft für Literatur und Kunst. Mitau.
1847—51. B.M.; Camb.U.
- Mitau Quatember.** ..... { Die Quatember; Zeitschrift für naturwissenschaftl., geschichtl., philolog. und gemischte Gegenstände; von Trautvetter. Mitau.
1829—30. B.M.
- Mitau Send. Kurländ. Gs.** ..... { Sendungen der Kurländischen Gesellschaft für Literatur und Kunst. Mitau.
1840—47. B.M.
- Mn. Mg.** ..... { The Mineralogical Magazine and Journal of the Mineralogical Society of Great Britain and Ireland. Truro, London.
1876— B.M.; Camb.U.; Chem.S.i.; Dub.N.L.I.; Geol.M.; N.H.M.; Oxon.B.(R.); P.O.; R.S.
- Mntp. Ac. Mm.** ..... { Académie des Sciences et Lettres de Montpellier. Mémoires de la Section des Sciences. Montpellier.
1847— B.M.; Camb.U.; Dub.R.D.S.; Dub.R.I.A.; Edinb.R.S.; Linn.S.i.; N.H.M.; Oxon.B.; R.A.S.; R.S.; U.C.L.i.
- See **Mntp. Ac. Sc. Mm., Mntp. Mm. Ac. and Mntp. Mm. Ac. Sect. Sc.**
- Mntp. Ac. PV.** ..... { Extraits des Procès-Verbaux des Séances de l'Académie des Sciences et Lettres, établie à Montpellier. Montpellier.
1847—54. N.H.M.i.
- Mntp. Ac. Sc. Mm.** ..... { See **Mntp. Ac. Mm.**
- Mntp. Mm. Ac.** ..... { See **Mntp. Ac. Mm.**
- Mntp. Mm. Ac. Sect. Sc.** ..... { See **Mntp. Ac. Mm.**
- Mntp. Mm. Ac. Sect. Md.** ..... { Mémoires de l'Académie des Sciences et Lettres: Section de la Médecine. Montpellier.
1849— B.M.; Camb.U.; Dub.R.D.S.; Dub.R.I.A.; Edinb.R.S.i.; Oxon.B.; R.S.
- Mntp. Rec. Bll.** ..... { Recueil des Bulletins publiés par la Société Libre des Sciences, etc., de Montpellier. Montpellier.
1803—14. B.M.; Camb.U.; Oxon.B.i.
- Mod. Ac. Sc. Mm.** ..... { Memorie della Regia Accademia di Scienze, Lettere ed Arti di Modena. Modena.
- Mod. Mm. Ac. Sc.** ..... { 1833— B.M.; Dub.R.I.A.i.; Dub.T.C.i.; Edinb.R.S.; Math.S.i.; N.H.M.; Oxon.B.i.; U.C.L.i.
- Mod. Mm. S. It.** ..... { Memorie di Matematica e di Fisica della Società Italiana delle Scienze. Modena.
- Mod. S. It. Mm.** ..... { 1782— B.M.i.; Camb.P.S.; Camb.U.i.; Dub.R.I.A.; Edinb.R.S.i.; Linn.S.i.; Oxon.B.i.; R.A.S.i.; R.S.; U.C.L.i.
- See **Rm. S. It. Mm., Verona Mm. S. It. and Verona S. It. Mm.**

List of Serial Publications

- Mod. S. Nt. At.** ..... *Atti della Società dei Naturalisti di Modena.* Modena.
1883— Camb.U.; Dub.R.I.A.i.; N.H.M.
- Moigno An. Cosmos**..... *Annuaire du Cosmos;* Moigno. Paris.
1859—70. B.M.
- Moigno Cosmos** ..... { *Cosmos. Révue Encyclopédique Hebdomadaire des Progrès des*
Sciences; Moigno. Paris.
- Mondes (1es)** ..... { 1852— B.M.; Camb.U.; Dub.T.C.; Edinb.R.S.i.; N.H.M.i.;
Oxon.B.; P.O.i.; R.A.S.i.; R.S.
- Mon. Sc.** ..... *Le Moniteur Scientifique du Chimiste et du Manufacturier;* Quesne-
ville. Paris.
- Mosc. Bil. S. Nt.**..... 1857— B.M.; Chem.S.i.; Dub.R.C.S.i.; Oxon.B.; P.O.; R.A.S.i.
Bulletin de la Société Impériale des Naturalistes. Moscou.
- Mosc. Obs. A.** ..... 1829— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.R.D.S.;
Dub.R.I.A.; Edinb.R.S.i.; Glasg.U.i.; Linn.S.; N.H.M.; Oxon.B.i.;
Oxon.R.; P.O.i.; R.A.S.i.; R.S.
- Mosc. S. Nt. Bil.**..... See **Mosc. S. Nt. Bil.**
- Mosc. S. Sc. Bil.**..... *Annales de l'Observatoire de Moscou;* Bredichin. Moscou.
1874— B.M.i.; Camb.U.; R.A.S.; R.S.
- Mosc. S. Nt. Bil.**..... See **Mosc. Bil. S. Nt.**
- Mosc. S. Sc. Bil.**..... *Bulletin of the Imperial Society of Lovers of Natural Science,*
Anthropology and Ethnography, in connection with the Imperial
University of Moscow. [In Russian.] Moscow.
- Mosc. Un. Mm.** ..... 1865— B.M.i.; Edinb.R.S.i.; N.H.M.i.
- Mosc. Un. Mm. (Ps.-Mth.)** Scientific Memoirs of the Imperial University of Moscow. [In
Russian.] Moscow.
— B.M.i.; Chem.S.i.; N.H.M.i.
- Mth. A.** ..... *Scientific Memoirs of the Imperial University of Moscow. Section*
Phys.-Math. Moscow.
1880—96. Chem.S.
- Mth. A.** ..... *Mathematische Annalen;* Clebsch. Leipzig.
- Mth. Gz.** ..... 1869— B.M.; Camb.P.S.; Camb.U.; Dub.N.L.I.i.; Dub.R.C.S.i.;
Dub.R.D.S.i.; Dub.T.C.i.; Edinb.U.; Glasg.U.; Math.S.; Oxon.R.;
R.S.; U.C.L.
- Mth. Misc.** ..... *The Mathematical Gazette.* London.
- Mth. Nt. B. Ung.** ..... 1894— B.M.; Camb.U.; Math.S.; U.C.L.i.
- Mth. Term. Éts.** ..... *The Mathematical Miscellany;* Gill. New York.
- Mth. Term. Éts.** ..... 1836—39. U.C.L.
- Mth. Ts.** ..... *Mathematische und naturwissenschaftliche Berichte aus Ungarn.*
Berlin.
- Mulhouse Bil.** ..... 1882— Camb.P.S.; Chem.S.; Edinb.R.S.; R.A.S.i.; R.S.
- Mulhouse Bil. S. In.** ..... { *Mathematikai és természettudományi Értesítő. Kiadja a Magyar*
Tudományos Akadémia. [Mathematical and Natural Science
- Mulhouse S. In. Bil.** ..... { *Report, published by the Hungarian Academy of Science.*] Budapest.
- Münch. Ab.** ..... 1883— B.M.i.; Edinb.R.S.; N.H.M.; R.S.
- Münch. Ak. Ab.** ..... *Mathematisk Tidsskrift.* Kjøbenhavn.
- Münch. Ak. Sb.** ..... 1859— B.M.; Camb.U.; Oxon.B.; R.S.i.
- Münch. D.** ..... *Bulletin de la Société Industrielle de Mulhouse.* Mulhouse.
- Münch. Sb.** ..... 1828— B.M.i.; Camb.U.i.; Chem.S.i.; Dub.R.C.S.i.; Dub.T.C.i.;
Glasg.P.S.i.; Glasg.U.i.; Oxon.B.i.; P.O.
- Münch. D.** ..... { *Abhandlungen der mathematisch-physikalischen Classe der Königl.*
Bayerischen Akademie der Wissenschaften. München.
- Münch. Sb.** ..... 1832— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.T.C.;
Edinb.R.S.; Edinb.U.; Glasg.U.; Linn.S.; Oxon.B.; Oxon.R.;
P.O.; R.A.S.i.; R.S.
- Münch. D.** ..... *Sitzungsberichte der Mathematisch-Physikalischen Classe der K. B.*
Akademie der Wissenschaften zu München. München.
- Münch. Sb.** ..... 1871— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.T.C.;
Edinb.R.S.; Glasg.U.i.; Linn.S.; Oxon.B.; Oxon.R.; P.O.;
R.A.S.; R.S.; U.C.L.i.
- Münch. D.** ..... *Denkschriften der Königl. Bayerischen Akademie der Wissenschaften*
zu München. München u. Salzburg.
- Münch. Sb.** ..... 1808—24. B.M.; Camb.P.S.; Camb.U.; N.H.M.; Oxon.R.; P.O.; R.S.
- Münch. Sb.** ..... *Sitzungsberichte der Königl. Bayerischen Akademie der Wissen-*
schaften zu München. München.
- Münch. Sb.** ..... 1860—70. B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.R.D.S.i.;
Dub.R.I.A.i.; Dub.T.C.i.; Edinb.R.S.; Linn.S.; N.H.M.;
Oxon.B.; P.O.i.; R.A.S.; R.S.

List of Serial Publications

- N. A. Mth.** ..... Nouvelles Annales de Mathématiques. Paris.
1842— B.M.; Camb.U.; Dub.T.C.; Edinb.U.; Glasg.U.; Math.S.i.; Oxon.B.(R.); R.S.; U.C.L.i.
- Nancy Mm. S. Sc.** ..... Mémoires de la Société [Royale] des Sciences, Lettres, et Arts de Nancy. Nancy.
1833— B.M.; Camb.U.i.; N.H.M.i.; Oxon.B.; R.S.i.
- Nancy S. Sc. Bil.** ..... Bulletin de la Société des Sciences de Nancy. Nancy, Paris.
1873— B.M.; N.H.M.; R.S.
- N. Antol. Sc.** ..... Nuova Antologia di Scienze, Lettere ed Arti. Firenze e Roma.
1866— B.M.; Dub.N.L.I.i.; N.H.M.
- Nap. Ac. At.** ..... Atti della Reale Accademia delle Scienze e Belle Lettere; Sezione della Società R. Barbonica. Napoli.
1819—51. B.M.; Camb.U.; Dub.R.D.S.; N.H.M.; Oxon.B.; R.A.S.i.; R.S.
Atti della R. Accademia delle Scienze Fisiche e Matematiche. Napoli.
1863—82; 1888— B.M.; Camb.U.; Dub.R.I.A.; Edinb.R.S.; Glasg.U.i.; Linn.S.i.; Math.S.i.; N.H.M.; Oxon.B.i.; Oxon.R.; R.A.S.i.; R.S.
See Nap. At. Ac. and Nap. At. Ac. Sc.
- Nap. Ac. Pont. At.** ..... Atti dell' Accademia Pontaniana di Napoli. Napoli.
1832— B.M.; Camb.U.; Dub.R.D.S.i.; N.H.M.; R.S.i.; U.C.L.i.
- Nap. Ac. Sc. Mm.** ..... Memorie della R. Accademia delle Scienze, etc. Napoli.
1852—57. B.M.; Camb.U.; Dub.R.D.S.; Edinb.R.S.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.; R.A.S.; R.S.
See Nap. Mm. Ac. Sc.
- Nap. At. Ac.** ..... } *See Nap. Ac. At.*
Nap. At. Ac. Sc. ..... }
- Nap. At. I. Inc.** ..... Atti del Real Istituto d' Incoraggiamento alle Scienze Naturali di Napoli. Napoli.
1811— B.M.; Camb.U.; Edinb.R.S.i.; N.H.M.; Oxon.B.; P.O.; R.S.i.
See Nap. I. Inc. At.
- Nap. At. S. Pont.** ..... Atti della Società Pontaniana di Napoli. Napoli.
1810—47. B.M.; Camb.U.; N.H.M.; R.S.
See Nap. S. Pont. At.
- Nap. I. Inc. At.** ..... *See Nap. At. I. Inc.*
- Nap. Mm. Ac. Sc.** ..... *See Nap. Ac. Sc. Mm.*
- Nap. Ms.** ..... Museo di Letteratura e Filosofia; Gatti. Napoli.
1842—62. B.M.; Oxon.B.
- Nap. Rd.** ..... Rendiconto dell' Accademia delle Scienze Fisiche e Matematiche. Napoli.
1862— Camb.U.; Dub.R.I.A.; Edinb.R.S.; Glasg.U.i.; Linn.S.i.; Math.S.; N.H.M.; Oxon.R.i.; P.O.; R.A.S.; R.S.; U.C.L.i.
- Nap. S. Pont. At.** ..... *See Nap. At. S. Pont.*
- N. Arch. Wisk.** ..... Nieuw Archief voor Wiskunde. Amsterdam.
1875— Camb.P.S.i.; Edinb.R.S.i.; Math.S.
- N. A. Sc. Nt.** ..... Nuovi Annali delle Scienze naturali; Alessandrini, Bertoloni, Gherardi, e Ranzani. Bologna.
1838—54. Camb.U.; N.H.M.; Oxon.B.i.; R.S.
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- N. Cim.** ..... Il Nuovo Cimento, Giornale di Fisica, Chimica e Storia Naturale. Pisa.
1855— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Edinb.R.S.i.; N.H.M.; Oxon.R.i.; P.O.i.; R.S.
- Nebr. Un. Stud.** ..... University Studies. Published by the University of Nebraska. Lincoln, Nebraska.
1888— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Edinb.R.S.; Oxon.B.; R.S.
- N. Eng. I. Mn. E. T.** ..... Transactions of the North of England Institute of Mining Engineers. Newcastle-upon-Tyne.
1852— B.M.; Camb.U.; Edinb.R.S.i.; Oxon.B.i.; P.O.i.; R.S.
- Neuch. Bil.** ..... { Bulletin de la Société des Sciences Naturelles de Neuchâtel.
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1844— B.M.i.; Camb.U.; Dub.R.I.A.; Edinb.R.S.i.; N.H.M.; Oxon.B.i.; R.A.S.i.; R.S.i.
- NH. Rv.** ..... The Natural History Review and Quarterly Journal of Science. London and Dublin.

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The Natural History Review; a Quarterly Journal of Biological Science. London.
- 1861—65. B.M.; Camb.P.S.; Camb.U.; Dub.R.D.S.; Dub.T.C.; Edinb.R.S.; Glasg.P.S.; Glasg.U.; Linn.S.; N.H.M.; Oxon.B.i.; Oxon.R.; P.O.; R.S.
- Nicholson J.** ..... Journal of Natural Philosophy, Chemistry, and the Arts; Nicholson. London.
- 1797—1813. B.M.; Camb.U.; Chem.S.i.; Dub.R.I.A.i.; Dub.T.C.i.; Edinb.R.S.; Edinb.U.; Glasg.P.S.i.; Glasg.U.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.i.; R.S.; U.C.L.
- Niort Mm. de l'Athénée** ..... Mémoires de l'Athénée de Niort, Société Libre des Sciences et des Arts du département des Deux-Sèvres. Niort.
- 1808 (?). B.M.; Oxon.B.; R.S.i.
- N. Jb. Min.** ..... Neues Jahrbuch für Mineralogie, Geologie und Palaontologie. Stuttgart.
- 1833— B.M.; Camb.U.; Chem.S.i.; Dub.N.L.I.i.; Dub.R.D.S.i.; Geol.M.; N.H.M.; Oxon.R.; R.S.
- N. Mg. Ntvd.** ..... Nyt Magazin for Naturvidenskaberne. Christiania.
- 1838— Camb.U.i.; Edinb.R.S.i.; Linn.S.i.; N.H.M.; R.S.
- Norske Vd. Skr.** ..... Det Kongelige Norske Videnskabselskabs Skrifter i det 19de Aarhundrede. Kjøbenhavn og Trondhjem.
- 1817— B.M.; Camb.U.i.; Dub.T.C.i.; Edinb.R.S.i.; N.H.M.; R.S.
See **Thrond. Skr.**
- N. Rs. S. Nt. Mm. (Mth.)** ..... Memoirs of the Mathematical Section of the New Russian Society of Naturalists. [In Russian.] Odessa.
- 1878— B.M.i.; Dub.R.I.A.i.; Math.S.i.; R.S.i.
- N. S. W. Ph. S. T.** ..... Transactions of the Philosophical Society of New South Wales. Sydney.
1866. Camb.P.S.; Camb.U.; Chem.S.; Edinb.R.S.i.; Glasg.U.; Linn.S.; Oxon.B.; R.A.S.; R.S.
- N. S. W. R. S. J.** ..... Journal and Proceedings of the Royal Society of New South Wales. Sydney.
- 1876— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.T.C.; Edinb.R.S.i.; Geol.M.i.; Glasg.P.S.i.; Glasg.U.i.; Linn.S.i.; N.H.M.; Oxon.B.; Oxon.R.i.; P.O.i.; R.A.S.; R.S.
- N. S. W. R. S. T.** ..... Transactions of the Royal Society of New South Wales. Sydney.
- 1867—75. B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.R.D.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.i.; Glasg.U.i.; N.H.M.; R.A.S.; R.S.
- Nt.** ..... Nature: a weekly illustrated Journal of Science. London.
- 1870— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.N.L.I.; Dub.R.C.S.; Dub.R.D.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Geol.M.; Glasg.P.S.; Glasg.U.i.; Linn.S.; Oxon.B.; Oxon.R.; P.O.; R.A.S.; R.S.; U.C.L.
- N. Ts. Mth.** ..... Nyt Tidsskrift for Mathematik. Kjøbenhavn.
- 1890— B.M.; Math.S.i.
- Nürnb. Nt. Gs. Ab.** ..... Abhandlungen der Naturhistorischen Gesellschaft zu Nürnberg. Nürnberg.
- 1852— B.M.i.; Camb.U.; Dub.R.I.A.; N.H.M.; R.S.i.
- Nv. Archt. T.** ..... Transactions of the Institution of Naval Architects. London.
- 1860— B.M.; Camb.U.; Dub.R.I.A.; Edinb.U.; P.O.; R.S.; U.C.L.i.
- N.-Vorp. Mt.** ..... Mittheilungen aus dem Naturwissenschaftlichen Vereine von Neu-Vorpommern und Rügen. Berlin.
- 1869— B.M.; Camb.U.; Dub.R.D.S.; Dub.R.I.A.; N.H.M.
- N. Y. Am. Mth. S. Bl.** ..... Bulletin of the American Mathematical Society. New York.
- 1895— B.M.; Camb.P.S.; Camb.U.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.P.S.; Glasg.U.; Math.S.; Oxon.B.; Oxon.R.; R.S.i.
- N. Y. Am. Mth. S. T.** ..... Transactions of the American Mathematical Society. Lancaster, Pa. and New York.
- 1900— Camb.P.S.; Camb.U.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.U.; Math.S.; Oxon.B.; Oxon.R.; R.S.
- N. Y. Mth. S. Bl.** ..... Bulletin of the New York Mathematical Society. New York.
- 1892—94. B.M.; Camb.P.S.; Camb.U.; Edinb.R.S.; Glasg.P.S.; Math.S.; Oxon.B.; Oxon.R.; R.A.S.

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1868— B.M.; Camb.P.S.i.; Camb.U.; Dub.R.D.S.; Dub.R.I.A.; Edinb.R.S.; Edinb.U.; Geol.M.i.; Glasg.P.S.i.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.S.; U.C.L.i.
- Obs.** ..... The Observatory. A monthly Review of Astronomy. London.
1878— Camb.P.S.; Camb.U.; Dub.T.C.i.; Edinb.R.S.; Oxon.R.; P.O.; R.A.S.
- Oestr. Z. Brgw.** ..... Oesterreichische Zeitschrift für Berg- und Hüttenwesen; von Otto Freiherrn von Hingenau. Wien.
1853— B.M.; P.O.
- Oken Isis** ..... Isis, oder Encyclopädische Zeitung; Oken. Jena.
1817—48. B.M.i.; Camb.U.; Edinb.U.; Linn.S.i.; N.H.M.; Oxon.B.(R.); R.S.
- Opusc. Mt. Fis.** ..... Opuscoli matematici e fisici di diversi Autori. Milano.
1832—34. R.S.
- Orv.-Termt. Éts. (Termt. Szak)** ..... Orvos-Természettudományi Értesítő a Kolozsvári Orvos-Természettudományi Társulat és az Erdélyi Múzeum-Egylet Természettudományi Szakosztályának..... [Medical and Natural History Proceedings of the Sections of the Klausenburg Medical and Natural History Society and of the Natural History Section of the Museum Association of Transylvania.] Kolozsvár [Klausenburg].
1879— N.H.M.; R.S.i.
- Padova Ac. At. e Mm.** ... Atti e Memorie della R. Accademia di Scienze, Lettere ed Arti in Padova. Nuova serie. Padova.
1885— Edinb.R.S.; N.H.M.
- Padova Mm. Ac.** ..... Memorie dell' Accademia di Scienze, Lettere, ed Arti di Padova. Padova.
1809. B.M.; Camb.U.; N.H.M.; Oxon.B.; R.S.
- Padova N. Sag.** ..... Nuovi Saggi dell' Accademia di Scienze, Lettere, ed Arti di Padova. Padova.
1817—83. B.M.i.; Camb.U.i.; Dub.R.I.A.i.; Dub.T.C.i.; Edinb.R.S.; N.H.M.; Oxon.B.i.; R.S.i.
- Padova Rv. Period.** ..... Revista Periodica dei Lavori della I. R. Accademia di Scienze, Lettere, ed Arti di Padova. Padova.
1851— B.M.; Edinb.R.S.i.; N.H.M.; R.S.i.
- Palermo Ac. At.** ..... (Atti dell' Accademia di Scienze, Lettere ed Arti di Palermo. Palermo.
1845— B.M.; Camb.U.i.; Dub.R.I.A.; Dub.T.C.; N.H.M.; Oxon.B.i.; R.A.S.i.; R.S.
- Palermo At.** ..... Rendiconti del Circolo Matematico di Palermo. Palermo.
1887— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Dub.T.C.; Math.S.; I.S.
- Palermo G. Sc. Nt.** ..... Giornale di Scienze naturali ed economiche, pubblicato per cura del Consiglio di Perfezionamento annesso al R. Istituto Tecnico di Palermo. Palermo.
1865— B.M.; Camb.U.; Dub.R.D.S.i.; R.S.
- Palomba Rac.** ..... Raccolta di Lettere, etc. intorno alla Fisica ed alle Mathematiche; Palomba. Roma.
1845—48. B.M.i.
- Par. A. Cons.** ..... Annales du Conservatoire des Arts et Métiers. Paris.
1861— B.M.; Camb.U.; Glasg.P.S.i.; Oxon.B.; P.O.; R.S.
See Par. A. Cons. Arts et Mét.
- Par. Ac. Sc. Mm.** ..... Mémoires de l'Académie des Sciences de l'Institut de France. Paris.
1816— B.M.; Camb.U.; Dub.N.L.I.i.; Dub.R.D.S.i.; Dub.T.C.i.; Edinb.R.S.i.; Edinb.U.; N.H.M.; Oxon.B.; Oxon.R.; P.O.i.; R.A.S.i.; R.S.; U.C.L.
- Par. A. Éc. Norm.** ..... *See Par. Mm. Ac. Sc.*
Annales scientifiques de l'École Normale Supérieure. Paris.
1864— B.M.; Camb.P.S.i.; Camb.U.; Dub.N.L.I.i.; Dub.R.C.S.i.; Dub.R.D.S.i.; Edinb.R.S.i.; Edinb.U.i.; Glasg.U.i.; Oxon.B.; R.S.
- Par. An. Mét.** ..... *See Par. Éc. Norm. A.*
Annuaire de la Société Météorologique de France. Paris.
1849— B.M.; Camb.U.i.; Dub.T.C.i.; Edinb.R.S.i.; R.S.i.
- Par. An. S. Mét.** ..... Annales de l'Observatoire de Paris; mémoires publiées par U. J. Le Verrier. Paris.

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See Par. Obs. A. and Par. Obs. A. (Mm.)
- Par. A. Pon. Chauss.**..... Annales des Ponts et Chaussées. Mémoires et documents relatifs à l'Art des Constructions et au Service de l'Ingénieur. Paris.
 1831— B.M.; Camb.U.; Edinb.U.i.; Glasg.P.S.i.; Glasg.U.i.; P.O.; R.S.i.
- See A. Pon. Chauss.*
- Par. Bil. S. Encour.** ..... Bulletin de la Société d'Encouragement pour l'Industrie Nationale. Paris.
 1802— Camb.U.; Dub.R.C.S.i.; Dub.T.C.i.; Edinb.R.S.i.; Glasg.P.S.i.; Oxon.B.; P.O.; R.S.
- Par. Bil. S. Gg.** ..... Bulletin de la Société de Géographie. Paris.
 1822— B.M.; Camb.U.; Dub.R.I.A.; Edinb.R.S.i.; N.H.M.; Oxon.B.; R.S.; U.C.L.i.
- See Par. Gg. S. Bil. and Par. S. Gg. Bil.*
- Par. Bil. S. Phlm.** ..... Bulletin des Sciences de la Société Philomathique de Paris. Paris.
 1791—1805; 1814—24; 1864— B.M.i.; Camb.U.; Dub.T.C.i.; Edinb.R.S.i.; Glasg.U.i.; Math.S.i.; N.H.M.; Oxon.R.i.; P.O.i.; R.A.S.i.; R.S.; U.C.L.
- See Par. S. Phlm. Bil.*
- Par. Éc. Norm. A.** ..... *See Par. A. Éc. Norm.*
- Par. Éc. Pol. Cor.** ..... Correspondance sur l'École Polytechnique, à l'usage des Élèves de cette École; Hachette. Paris.
 1808—16. B.M.i.; Oxon.B.; R.S.; U.C.L.
- Par. Éc. Pol. J.** ..... Journal de l'École Polytechnique. Paris.
 1795— B.M.; Camb.P.S.; Camb.U.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.P.S.i.; Glasg.U.; Linn.S.i.; Math.S.i.; Oxon.B.(R.); P.O.; R.A.S.i.; R.S.; U.C.L.i.
- See Par. J. Éc. Pol.*
- Par. Gg. S. Bil.** ..... *See Par. Bil. S. Gg.*
- Par. Ing. Civ. Mm.**..... Mémoires et Comptes Rendus des Travaux de la Société des Ingénieurs Civils. Paris.
 1848— B.M.; Glasg.U.i.; P.O.
- See Par. Mm. Ing. Civ.*
- Par. J. Éc. Pol.** ..... *See Par. Éc. Pol. J.*
- Par. Mm. Ac. Sc.** ..... *See Par. Ac. Sc. Mm.*
- Par. Mm. de l'I.** ..... Mémoires de la Classe des Sciences mathématiques et physiques de l'Institut. Paris.
 1798—1815. B.M.; Edinb.R.S.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.i.; U.C.L.
- See Par. Ing. Civ. Mm.*
- Par. Mm. Ing. Civ.**..... Mémoires présentés à l'Institut des Sciences, Lettres et Arts par divers Savans, et lus dans ses Assemblées: Sciences Mathématiques et Physiques. Paris.
 1806—11. B.M.; Camb.U.; Dub.R.D.S.; Dub.T.C.; Edinb.R.S.; N.H.M.; Oxon.R.; P.O.; R.A.S.; R.S.; U.C.L.
- Par. Mm. Sav. Étr.** ..... Mémoires présentés par divers Savans à l'Académie des Sciences de l'Institut de France. Paris.
 1827— B.M.; Camb.U.; Dub.T.C.; Edinb.R.S.i.; Linn.S.i.; N.H.M.; Oxon.B.; Oxon.R.; P.O.i.; R.A.S.i.; R.S.
- Par. Mm. S. Sav.** ..... Mémoires des Sociétés Savantes et Littéraires de la République Française. Recueillis et rédigés par les Citoyens Prony, etc. Paris.
 1801—02. B.M.; Oxon.B.; R.S.
- Par. Obs. A.** ..... } *See Par. A. Obs.*
- Par. Obs. A. (Mm.)** ..... }
- Par. Poids et Mes. PV.**... Comité International des Poids et Mesures. Procès-Verbaux des Séances. Paris.
 1875— Camb.P.S.; Camb.U.i.; Dub.R.D.S.; Oxon.R.; P.O.; R.A.S.; R.S.
- Par. S. Amat. Tr.** ..... Notices des Travaux de la Société des Amateurs des Sciences physiques et naturelles de Paris. Paris.
 1807—08.
- See Par. Tr. S. Amat.*
- Par. S. Ap. Bil.** ..... Bulletin de la Société d'Anthropologie de Paris. Paris.
 1860— B.M.; Camb.U.; Dub.R.I.A.; Edinb.R.S.i.; N.H.M.i.; Oxon.R.; R.S.

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- Par. Sé. Éc. Norm.** ..... Séances des Écoles Normales. Paris.
1800—01. R.S.; U.C.L.
- Par. S. Gg. Bll.** ..... See **Par. Bll. S. Gg. and Par. Gg. S. Bll.**
- Par. S. Mth. Bll.** ..... Bulletin de la Société Mathématique de France. Paris.
1873— B.M.; Camb.P.S.; Camb.U.; Edinb.R.S.; Math.S.;
Oxon.R.; R.A.S.; R.S.
- Par. S. Phlm. Bll.** ..... See **Par. Bll. S. Phlm.**
- Par. S. Phlm. Mm. Cent.** ..... Mémoires publiés par la Société Philomathique à l'occasion du
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1888. B.M.; Edinb.R.S.; N.H.M.; R.A.S.; R.S.
- Par. S. Phlm. N. Bll.** ..... Nouveau Bulletin des Sciences de la Société Philomathique de Paris.
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1807—1813; 1825—26; 1832—33. B.M.i.; Camb.U.; Dub.T.C.;
N.H.M.; P.O.i.; R.S.; U.C.L.
- Par. S. Phlm. PV.** ..... Extraits des Procès-Verbaux des Séances de la Société Philomathique.
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1836—63. N.H.M.; R.S.
- Par. T. Nauk Śc. Pam.** ... Pamiętnik Towarzystwa Nauk Ścisłych w Paryżu. Paris.
1871—82. B.M.; N.H.M.
- Par. Tr. S. Amat.** ..... See **Par. S. Amat. Tr.**
- Perpignan Bll. S. Ag.** ..... [Bulletin de la] Société Agricole, Scientifique, et Littéraire des
Fyr. Orient. ..... Pyrénées-Orientales. Perpignan.
1834— N.H.M.; R.S.i.
- Peterm. Mt.** ..... Mittheilungen aus Justus Perthes' Geographischer Anstalt über
wichtige neue Erforschungen auf dem Gesamtgebiete der
Geographie; Petermann. Gotha.
1855— B.M.; Camb.U.; Dub.R.C.S.; Geol.M.i.; Glasg.P.S.i.;
Glasg.U.; N.H.M.i.; Oxon.B.; Oxon.R.; R.S.; U.C.L.i.
- Phil. Trans.** ..... Philosophical Transactions of the Royal Society of London.
London.
1665— B.M.; Camb.P.S.i.; Camb.U.; Chem.S.i.; Dub.R.C.S.;
Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Geol.M.; Glasg.
P.S.; Glasg.U.i.; Linn.S.i.; Math.S.i.; N.H.M.; Oxon.B.;
Oxon.R.; P.O.; R.A.S.i.; R.S.; U.C.L.i.
- Ph. Mg.** ..... The London, Edinburgh, and Dublin Philosophical Magazine and
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1827— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.R.D.S.; Dub.
R.I.A.; Edinb.R.S.; Edinb.U.; Geol.M.i.; Glasg.P.S.i.; Glasg.U.;
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R.S.; U.C.L.
- Phm. J.** ..... The Pharmaceutical Journal and Transactions. London.
1841— B.M.; Camb.U.; Chem.S.; Dub.N.L.I.i.; Dub.T.C.i.;
Glasg.P.S.; Glasg.U.i.; N.H.M.; Oxon.B.; Oxon.B.(R.); R.S.i.;
U.C.L.
- Ph. Stud.** ..... Philosophische Studien herausgegeben von Wilhelm Wundt.
Leipzig.
1883— Camb.U.; Dub.T.C.; Edinb.U.; Oxon.B.; R.S.; U.C.L.
- Pisa A. Scuola Norm.** ... Annali della R. Scuola Normale Superiore di Pisa. Scienze Fisiche
e Matematiche. Pisa.
1871. Oxon.B.; Oxon.R.; R.S.
- Pisa A. Un. Tosc.** ..... { Annali delle Università Toscane. (Parte 2da.) Scienze Cosmo-
Pisa A. Un. Tosc. Sc. ..... logiche. Pisa.
Cosm. ..... { 1846— Camb.U.i.; N.H.M.; R.S.i.
- Pisa N. G.** ..... Nuovo Giornale de' Letterati. Pisa.
1822—39. B.M.; Camb.U.; Oxon.B.
- Pisa S. Tosc. At. (PV.)** ... Atti della Società Toscana di Scienze Naturali residente in Pisa.
Processi Verbal. Pisa.
1875— B.M.; Camb.P.S.i.; Dub.T.C.; N.H.M.; R.S.
- Pistoja At. Ac.** ..... Atti della R. Accademia Pistoiese di Scienze, Lettere, ed Arti:
Memorie di Matematica e Fisica, per l' anno 1816. Pistoja.
1816. B.M.; Camb.U.; N.H.M.; Oxon.B.; R.S.
- Pogg. A.** ..... Annalen der Physik und Chemie; Poggendorff. Leipzig.
1824— B.M.; Camb.P.S.i.; Camb.U.; Chem.S.; Dub.R.I.A.;
Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.P.S.i.; Glasg.U.i.;
N.H.M.; Oxon.B.(R.); P.O.; R.S.; U.C.L.i.
- See **A. Ps. C.**
- Poligrafo** ..... Il Poligrafo: Giornale di Scienze, Lettere, ed Arti. Verona.
1830—45. B.M.; Oxon.B.

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- Pol. Mt.** ..... Polytechnische Mittheilungen, unter Mitwirkung von Professoren
höherer technischer Lehranstalten. Tübingen.
1844—46. B.M.; R.S.
- Pop. As.** ..... Popular Astronomy. Northfield, Minnesota.
1894— B.M.; Glasg.U.; R.A.S.
- Prace Mt.-Fiz.** ..... Prace Matematyczno-Fizyczne. Warsaw.
1888— Camb.P.S.; Camb.U.; Chem.S.i.; Dub.R.I.A.i.; Math.S.i;
R.S.i.
- Prag Ab.** ..... Abhandlungen der k. Böhmisches Gesellschaft der Wissenschaften.
Prag.
1804—92. B.M.i.; Camb.P.S.; Camb.U.i.; Dub.R.I.A.i.; Edinb.
R.S.i.; Linn.S.i.; N.H.M.; Oxon.B.; R.S.i.
See Böhms. Gs. Ab.
- Prag České Ak. Fr. Jos. Pam.** ..... Památník na oslavu padesátiletého panovníckého jubilea jeho
veličenstva císaře a krále Františka Josefa I. Vydala Česká
Akademie Císaře Františka Josefa pro Vědy, Slovesnost a Umění.
[Memoirs in honour of the jubilee of his Imperial and Royal
Majesty Franz Joseph I. Edited by the Imperial Bohemian
Franz-Joseph Academy of Sciences, Literature and Art.] Praze.
(Prag.)
1898. Camb.P.S.; N.H.M.
- Prag České Ak. Fr. Jos. RZ.** ..... Rozprawy České Akademie Císaře Františka Josefa Pro Vědy,
Slovesnost a Umění. [Memoirs of the Imperial Bohemian Franz-
Joseph Academy of Sciences, Literature and Art.] Prag.
1891— B.M.; Edinb.R.S.; N.H.M.i.
- Prag Fr. Jos. Ac. Sc. Bll.** ..... Académie des Sciences de l'Empereur François Joseph I (Česká
(Mth. Nt.) ..... Akademie Císaře Františka Josefa I). Bulletin International.
Résumé des Travaux présentés. Sciences Mathématiques et
Naturelles. Prag.
1897— Edinb.R.S.; N.H.M.i.
- Prag Jb. Böhm. Ms.** ..... Jahrbücher des Böhmisches Museums für Natur- und Länderkunde,
etc. Prag.
1830—31. B.M.; N.H.M.
- Prag Sb.** ..... Sitzungsberichte der k. Böhmisches Gesellschaft der Wissenschaften
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1859— Camb.P.S.; Camb.U.i.; Dub.R.D.S.; Dub.R.I.A.; Edinb.
R.S.i.; Linn.S.i.; N.H.M.; R.S.; U.C.L.i.
- Presse Sc.** ..... Presse Scientifique des Deux Mondes. Paris.
1860—66. B.M.; R.S.i.
- Ps. Rv.** ..... The Physical Review. New York, London, Berlin.
1894— B.M.; Camb.P.S.; Camb.U.; Dub.R.C.S.; Edinb.R.S.;
Edinb.U.i.; Oxon.R.; P.O.; R.S.
- Ps. Z.** ..... Physikalische Zeitschrift. Leipzig.
1899— Camb.P.S.; Edinb.U.; Oxon.R.; R.S.
- Queb. T.** ..... { Transactions of the Literary and Historical Society of Quebec.
Quebec.
- Queb. T. Lt. S.** ..... { 1829— B.M.i.; Dub.R.I.A.; Edinb.R.S.i.; Glasg.P.S.i.; Linn.S.i.;
N.H.M.; R.S.i.
- Quetelet Cor. Mth.** ..... Correspondance Mathématique et Physique; publiée par MM.
Garnier et Quetelet. Gand et Bruxelles.
1825—39. B.M.; Camb.U.; R.A.S.i.; R.S.; U.C.L.
- QJ. Mth.** ..... The Quarterly Journal of Pure and Applied Mathematics. London.
1855— B.M.; Camb.P.S.; Camb.U.; Dub.N.L.I.; Dub.T.C.;
Edinb.R.S.i.; Edinb.U.; Glasg.P.S.i.; Glasg.U.; Math.S.i.;
Oxon.B.; Oxon.R.; P.O.; B.A.S.i.; R.S.; U.C.L.
- QJ. Sc.** ..... The Journal of Science and the Arts; edited at the Royal Institution
of Great Britain. London. Continued as: Quarterly Journal of
Science, Literature and Arts. London.
1816—30. B.M.; Camb.U.; Chem.S.; Dub.T.C.; Edinb.R.S.;
Glasg.U.; Oxon.B.; Oxon.R.; R.S.; U.C.L.
- Railroad & Eng. J.** ..... The Railroad and Engineering Journal. New York.
1887—92. B.M.; P.O.
- Ranuzzi An. Gg.** ..... Annuario geografico Italiano; Ranuzzi. Bologna.
1844—45. B.M.; Camb.U.

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- R. E. Fp.** ..... Papers on subjects connected with the duties of the Corps of Royal Engineers. London. 1844— Camb.U.; Geol.M.i.; Glasg.U.i.; P.O.i.
- Rheinl. Westphal. Sb.** ... Sitzungsbericht des Naturhistorischen Vereins der Preussischen Rheinlande und Westphalens. Bonn. 1844— Dub.R.D.S.i.; Dub.R.I.A.i.; Edinb.R.S.; Linn.S.i.; N.H.M.; Oxon.R.; R.S.i.
- Riga Cor.-Bl.** ..... Correspondenzblatt des Naturforscher-Vereins zu Riga. Riga. 1846— B.M.; Dub.R.I.A.i.; N.H.M.; R.S.i.
- R. I. J.** ..... Journal of the Royal Institution of Great Britain. London. 1802—03; 1830—31. Camb.U.i.; Chem.S.i.; Dub.R.D.S.; Edinb.R.S.i.; Glasg.P.S.i.; Linn.S.i.; N.H.M.i.; Oxon.R.; P.O.i.; R.A.S.i.; R.S.; U.C.L.i.
- Rio Arch. Palest.** ..... Archivos da Palestra Scientifica do Rio de Janeiro. Rio de Janeiro. 1858. N.H.M.; R.S.
- R. I. P.** ..... Notice of the Proceedings at the meetings of the members of the Royal Institution, with Abstracts of the Discourses delivered at the Evening Meetings. London. 1851— B.M.; Camb.U.; Chem.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Geol.M.; Glasg.P.S.; Glasg.U.; Linn.S.; N.H.M.; Oxon.R.; P.O.; R.A.S.; R.S.; U.C.L.
- Rm. At.** ..... { Atti dell' Accademia Pontificia dei Nuovi Lincei. Roma.
Rm. At. N. Linc. ..... { 1847— B.M.; Dub.R.I.A.; Edinb.R.S.; N.H.M.; Oxon.B.i.; R.A.S.i.; R.S.
 See **Rm. N. Linc. At.**
- Rm. At. R. Ac.** ..... Atti della Reale Accademia dei Lincei. Roma. 1870—83. B.M.; Camb.P.S.; Camb.U.i.; Chem.S.i.; Dub.R.D.S.; Dub.R.I.A.; Linn.S.; Math.S.; N.H.M.; Oxon.B.; Oxon.R.i.; R.A.S.i.; R.S.; U.C.L.i.
- Rm. Cor. Sc.** ..... See **Rm. R. Ac. Linc. At.**
 Corrispondenza Scientifica in Roma per le avanzamento delle Scienze, etc. Roma. 1848—
 See **Rm. S. Cor.**
- Rm. Mm. Osserv.** ..... Memorie dell' Osservatorio dell' Università Gregoriana del Collegio Romano, diretto dal PP. della Compagnia di Gesu. Roma. 1850—63. B.M.; R.A.S.; R.S.
- Rm. N. Linc. At.** ..... See **Rm. At. and Rm. At. N. Linc.**
- Rm. N. Linc. Mm.** ..... Memorie della Pontificia Accademia dei Nuovi Lincei. Roma. 1887— Dub.R.D.S.; Dub.R.I.A.; Edinb.R.S.; N.H.M.; R.S.
- Rm. R. Ac. Linc. At.** ..... See **Rm. At. R. Ac.**
- Rm. R. Ac. Linc. Mm.** ... Atti della R. Accademia dei Lincei. Memorie della Classe di Scienze fisiche, matematiche e naturali. Roma. 1877— B.M.i.; Camb.P.S.; Camb.U.; Chem.S.; Dub.R.I.A.i.; Edinb.R.S.; Glasg.P.S.i.; Glasg.U.i.; Linn.S.; Math.S.; N.H.M.; Oxon.B.; Oxon.R.; P.O.i.; R.A.S.; R.S.; U.C.L.
- Rm. R. Ac. Linc. Rd.** ..... Atti della R. Accademia dei Lincei. Rendiconti. Roma. 1885— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.T.C.; Edinb.R.S.; Glasg.U.i.; Linn.S.; Math.S.; N.H.M.; Oxon.B.; Oxon.R.; R.A.S.; R.S.; U.C.L.
- Rm. R. Ac. Linc. T.** ..... Atti della R. Accademia dei Lincei. Transunti. Roma. 1877—84. B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.R.I.A.; Edinb.R.S.; Glasg.P.S.i.; Linn.S.; Math.S.; N.H.M.; Oxon.B.; Oxon.R.; R.A.S.; R.S.; U.C.L.
- Rm. S. Cor.** ..... See **Rm. Cor. Sc.**
- Rm. S. It. Mm.** ..... Memorie di Matematica e di Fisica, della Società Italiana delle Scienze. Napoli e Roma. 1782— B.M.i.; Camb.P.S.; Camb.U.i.; Dub.R.I.A.; Edinb.R.S.i.; Linn.S.i.; Oxon.B.i.; R.A.S.i.; R.S.; U.C.L.i.
- Rochester (N. Y.) Ac. Sc. P.** ..... See **Mod. Mm. S. It., Verona Mm. S. It. and Verona S. It. Mm.**
 Proceedings of the Rochester Academy of Sciences. Rochester, N.Y. 1890— B.M.; Camb.P.S.; Edinb.R.S.i.; Linn.S.; N.H.M.; R.S.; U.C.L.i.
- Rot. N. Vh.** ..... Nieuwe Verhandelingen van het Bataafsch Genootschap der Proefondervindelijke Wijsbegeerte te Rotterdam. Rotterdam.

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Rouen Bil. S. Em. ..... Bulletins [des travaux] de la Société Libre d'Émulation de Rouen. Rouen.
 1837— B.M.; Oxon.B.
Rouen Ac. Tr. ..... } Précis analytique des Travaux de l'Académie des Sciences, Belles-
Rouen Tr. Ac. ..... } Lettres, et Arts de Rouen. Rouen.
 1804— B.M.; Camb.U.; Dub.R.I.A.; Dub.T.C.; N.H.M.i.; Oxon.B.; R.S.i.
Rpm. Mth. ..... Repertorium der literarischen Arbeiten aus dem Gebiete der reinen und angewandten Mathematik. Leipzig.
 1877—79. Camb.U.; R.S.
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 1849. B.M.; Camb.U.; R.S.
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 1832— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.N.L.I.i.; Dub.R.C.S.; Dub.R.D.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Geol.M.; Glasg.P.S.; Glasg.U.i.; Linn.S.i.; Math.S.i.; N.H.M.; Oxon.B.i.; Oxon.R.; P.O.; R.A.S.; R.S.; U.C.L.
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 1869— Camb.P.S.i.; Chem.S.; Edinb.R.S.i.; N.H.M.
R. S. Yearbook ..... Yearbook of the Royal Society of London. (Biography. 1900.)
Rv. Artl. ..... Revue d'Artillerie. Paris, Nancy.
 1872— B.M.; P.O.
Rv. Brazil ..... Revista Brasileira, Jornal de Ciencias, Lettras, e Artes; Oliveira. Rio de Janeiro.
 1857—61. B.M.; N.H.M.; R.S.i.
Rv. Cours. Sc. ..... Revue des Cours Scientifiques de la France et de l'Étranger; Eug. Yung et Em. Clave. Paris.
 1863—70. B.M.; Edinb.R.S.i.; Edinb.U.; N.H.M.; Oxon.R.; P.O.; R.S.
Rv. Ligure ..... Rivista Ligure, giornale di Lettere, Scienze, etc. Genova.
 1843. B.M.; N.H.M.; Oxon.B.
Rv. Mar. ..... } Revue maritime et coloniale. Paris.
Rv. Mar. et Col. ..... } 1861— B.M.; Oxon.B.; Oxon.R.; P.O.
Rv. Mt. ..... Rivista di Matematica. Torino.
 1891—95. Camb.U.; Oxon.B.; R.S.
Rv. Mth. ..... Revue de Mathématiques. (Rivista di Matematica.) Turin.
 1896— Camb.U.; Oxon.B.; Oxon.R.; R.S.
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 1871— B.M.; Camb.U.; Edinb.R.S.; Edinb.U.; N.H.M.; Oxon.R.; P.O.; R.A.S.i.; R.S.
Rv. Sc.-Ind. ..... Rivista Scientifico-Industriale delle principali scoperte ed invenzioni fatte nelle scienze e nelle industrie. Firenze.
 1869— P.O.
Rv. Un. Mines ..... Revue Universelle des Mines, de la Métallurgie, etc. Liège & Paris.
 1857— B.M.; Camb.U.; Dub.R.I.A.i.; Glasg.P.S.i.; Glasg.U.i.; N.H.M.; P.O.
See Cuyper Rv. Un.
S. Afr. Ph. S. T. ..... The Transactions of the South African Philosophical Society. Cape Town.
 1878— B.M.; Camb.P.S.; Camb.U.i.; Chem.S.; Edinb.R.S.; Edinb.U.; Glasg.P.S.; Linn.S.i.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.; R.S.
S. Afr. QJ. ..... The South African Quarterly Journal; edited at the African Institution. Cape Town.
 1830—35. B.M.i.; Edinb.R.S.i.; N.H.M.
Santiago de Chile Un. A. ..... Anales de la Universidad de Chile. Santiago de Chile.
 1843— B.M.i.; Dub.T.C.; N.H.M.i.; Oxon.B.i.
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Sarthe S. Bil. ..... Bulletin de la Société d'Agriculture, etc., de la Sarthe. Le Mans.
 1833— R.S.i.

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- S. Aust. R. S. T.** ..... Transactions and Proceedings and Report of the Royal Society of South Australia. Adelaide.
1877— Camb.P.S.i.; Camb.U.i.; Chem.S.i.; Dub.R.I.A.i.; Edinb. R.S.; Linn.S.i.; N.H.M.; P.O.; R.A.S.; R.S.i.
- Sav. Ac. Mm.** .....) Mémoires de la Société Académique de Savoie. Chambéry.
Sav. Mm. Ac. .....) 1825— Camb.U.; Dub.R.I.A.; Dub.T.C.; N.H.M.; Oxon.B.; R.S.i.
See **Chambéry Mm. Ac. Sav.**
- Sc. Abs.** ..... Science Abstracts. Physics and Electrical Engineering. London.
1898— Camb.P.S.; Camb.U.; Chem.S.; Edinb.R.S.i.; Edinb.U.; Glasg.P.S.; Oxon.B.; P.O.; R.A.S.i.; R.S.; U.C.L.
- Sch. Gs. N. D.** ..... Neue Denkschriften der allgemeinen Schweizerischen Gesellschaft für die gesammten Naturwissenschaften. Neuchâtel, Zürich, etc.
1837— B.M.; Camb.P.S.; Camb.U.; Dub.R.D.S.i.; Dub.R.I.A.i.; Edinb.R.S.; Linn.S.i.; N.H.M.; Oxon.B.; R.S.
See **Zür. N. D. Sch. Gs.**
- Sch. Gs. Vh.** ..... Verhandlungen der Schweizerischen Gesellschaft für die gesammten Naturwissenschaften. Aarau, etc.
1823— B.M.i.; Edinb.R.S.i.; Linn.S.i.; N.H.M.; R.S.
See **Sch. Nf. Gs. Vh.**
- Schlömilch Z.** ..... Zeitschrift für Mathematik und Physik; Schlömilch. Leipzig.
1856— B.M.; Camb.U.; Dub.N.L.I.i.; Dub.R.D.S.i.; Dub.R.I.A.i.; Dub.T.C.i.; Edinb.U.; Glasg.U.i.; Math.S.i.; Oxon.B.(R.); R.S.; U.C.L.i.
See **Z. Mth. Ps.**
- Sch. Nf. Gs. Vh.** ..... See **Sch. Gs. Vh.**
- Schumacher As. Ab.** ..... Astronomische Abhandlungen; Schumacher. Altona.
1823—25. B.M.; Camb.U.; Dub.R.D.S.; Edinb.R.S.; R.A.S.; R.S.
- Schweigger J.** ..... Journal für Chemie und Physik; Schweigger. Nürnberg.
1811—29. Edinb.R.S.; N.H.M.; Oxon.R.; P.O. Continued as: Neues Jahrbuch der Chemie und Physik; Schweigger-Seidel. Berlin.
1831—33. B.M.; Chem.S.; Edinb.R.S.; N.H.M.; Oxon.R.; P.O.; R.S.
- Science** ..... Science. Cambridge, Mass., and New York.
1883— B.M.; Dub.N.L.I.i.; Dub.R.C.S.i.; Edinb.R.S.; Edinb. U.i.; Glasg.P.S.i.; N.H.M.; Oxon.R.i.; P.O.; R.A.S.i.
- Sc. S. Arts T.** ..... Transactions of the Royal Scottish Society of Arts. Edinburgh.
1841— B.M.i.; Camb.U.; Dub.R.D.S.; Edinb.R.S.; Edinb.U.; Glasg.P.S.; Glasg.U.; P.O.; R.S.
See **Edinb. Sc. S. Arts T. and Edinb. T. Sc. S. Arts.**
- Sid. Mess.** ..... The Sidereal Messenger. Northfield, Minn.
1883—91. B.M.; R.A.S.
- Siena At. Ac.** ..... Atti dell' Accademia delle Scienze di Siena detta de' Fisiso-critici. Siena.
1761— B.M.; Camb.U.i.; Dub.R.I.A.i.; Dub.T.C.i.; N.H.M.i.; Oxon.B.; R.S.i.
- Silliman J.** ..... The American Journal of Science and Arts; Silliman. New Haven.
1818— B.M.; Camb.P.S.i.; Camb.U.; Chem.S.i.; Dub.N.L.I.i.; Dub.R.C.S.i.; Dub.T.C.i.; Edinb.R.S.; Edinb.U.; Geol.M.; Glasg.P.S.; Glasg.U.i.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.i.; R.S.
See **Am. J. Sc.**
- Skandia** ..... Skandia. Tidskrift för Vetenskap och Konst; utgifven af Svenska Litteratur-Föreningen. Upsala.
1833—37. B.M.
Förhandlingar vid det af Skandinaviska Naturforskare och Läkare hållna Möte..... Göteborg, etc.
1839— Oxon.B.i.; R.S.i.
Förhandlingerne ved de Skandinaviske Naturfyskeres...Møde.... Göteborg, etc.
- Sk. Nf. F.** .....)
Sk. Nt. Möd. F. .....)
Sk. Nt. Möt. F. .....) 1839— B.M.; N.H.M.; R.S.i.
- Smiths. Ct.** ..... Smithsonian Contributions to Knowledge. Washington.
1848— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.T.C.; Edinb. R.S.; Edinb.U.; Geol.M.i.; Glasg.P.S.; Glasg.U.i.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.i.; P.O.i.; R.A.S.; R.S.; U.C.L.i.
- Smiths. Misc. Col.** ..... Smithsonian Miscellaneous Collections. Washington.
1862— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.T.C.; Edinb. R.S.; Edinb.U.; Geol.M.; Glasg.P.S.; Glasg.U.; Linn.S.; N.H.M.; Oxon.B.; Oxon.R.i.; P.O.i.; R.A.S.; R.S.; U.C.L.i.

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1846— B.M.i.; Camb.P.S.; Camb.U.; Dub.T.C.; Edinb.R.S.i.; Geol.M.; Glasg.P.S.i.; Glasg.U.; Linn.S.i.; Math.S.i.; N.H.M.i.; Oxon.B.; Oxon.R.i.; P.O.i.; R.A.S.i.; R.S.i.; U.C.L.i.
- Spet. It. Mm.** ..... Memorie della Società degli Spettroscopisti Italiani, raccolte e pubblicate per cura del Prof. P. Tacchini. Palermo.
1872— B.M.i.; Camb.U.; Edinb.R.S.i.; P.O.; R.A.S.; R.S.
- Steierm. Mt.** ..... Mittheilungen des Naturwissenschaftlichen Vereins für Steiermark. Graz.
1863— B.M.; Camb.U.i.; Dub.R.I.A.; Edinb.R.S.i.; Linn.S.i.; N.H.M.; R.S.; U.C.L.i.
- St. Gal. B.** ..... Bericht über die Thätigkeit der St. Gallischen Naturwissenschaftlichen Gesellschaft. St. Gallen.
1860— N.H.M.; R.S.i.
- St. Louis Ac. T.** ..... The Transactions of the Academy of Science of St. Louis. St. Louis.
1856— B.M.; Dub.R.I.A.; Edinb.R.S.; Glasg.P.S.; Linn.S.i.; N.H.M.; Oxon.B.; P.O.i.; R.S.
- Stockh. Ac. Hndl.** ..... (Kongliga Svenska Vetenskaps-Akademiens Handlingar. Stockholm.
1739— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.R.I.A.; Edinb.R.S.i.; Glasg.P.S.i.; Linn.S.i.; N.H.M.; R.A.S.; R.S.
- Stockh. Ak. Hndl.** ..... Bihang till Kongl. Svenska Vetenskaps-Akademiens Handlingar. Stockholm.
1872— B.M.; Camb.P.S.; Camb.U.; Chem.S.; Dub.R.I.A.; Edinb.R.S.; Glasg.P.S.; Linn.S.i.; N.H.M.; R.A.S.; R.S.
- Stockh. Ak. Hndl. Bh.** ... Öfversigt af Kongl. Vetenskaps-Akademiens Förhandlingar. Stockholm.
1844— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.R.I.A.; Edinb.R.S.i.; Glasg.P.S.i.; Glasg.U.i.; Linn.S.i.; N.H.M.; Oxon.R.; R.A.S.; R.S.; U.C.L.i.
- Stockh. Öfv.** ..... Lefnadsteckningar öfver Kongl. Svenska Vetenskaps Akademien... ledamöter. Stockholm.
1869—73. Chem.S.i.; Dub.R.I.A.; Edinb.R.S.; Glasg.P.S.; Linn.S.i.; R.A.S.; R.S.
- St. Pét. Ac. Mm.** ..... Mémoires de l'Académie Impériale des Sciences de St. Pétersbourg. St. Pétersbourg.
1803— B.M.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.R.D.S.; Dub.R.I.A.; Dub.T.C.; Edinb.R.S.; Edinb.U.; Glasg.U.i.; N.H.M.; Oxon.B.; Oxon.R.; P.O.i.; R.S.; U.C.L.i.
- St. Pét. Ac. Sc. Bll.** ..... See **St. Pét. Ac. Sc. Mm.**, **St. Pét. Mm.** and **St. Pét. Mm. Ac. Sc.**
Bulletin Scientifique publié par l'Académie Impériale des Sciences de St. Pétersbourg. St. Pétersbourg.
1836—42.
Bulletin de la Classe Physico-mathématique de l'Académie Impériale des Sciences de St. Pétersbourg. St. Pétersbourg and Leipzig.
1843—59.
Bulletin de l'Académie des Sciences de St. Pétersbourg. St. Pétersbourg.
1860— B.M.i.; Camb.P.S.; Camb.U.; Chem.S.i.; Dub.R.I.A.; Edinb.R.S.; Glasg.P.S.i.; Glasg.U.; Linn.S.i.; N.H.M.; Oxon.B.; Oxon.R.i.; P.O.i.; R.A.S.i.; R.S.
- St. Pét. Ac. Sc. Mm.** ..... See **St. Pét. Bll. Ac. Sc.** and **St. Pét. Bull. Sc.**
- St. Pét. Ac. Sc. Mm. (Rs.)** ..... See **St. Pét. Ac. Mm.**
Memoirs of the Imperial Academy of Science. [In Russian.]
St. Petersburg. Not the same as **St. Pét. Ac. Mm.**
1862—95. B.M.; Dub.R.I.A.
- St. Pet. Ac. Sc. N. Acta...** ..... Nova Acta Academiæ Scientiarum Imperialis Petropolitanae. Petropoli.
1783—1802. B.M.; Camb.U.; Edinb.R.S.; Linn.S.i.; N.H.M.; Oxon.B.; Oxon.R.; P.O.; R.A.S.i.; R.S.; U.C.L.
- St. Pét. Ac. Sc. Rec.** ..... Recueil des Actes des Séances Publiques de l'Académie Impériale des Sciences de St. Pétersbourg. St. Pétersbourg.
1827—48. B.M.; Camb.U.; Chem.S.i.; Dub.R.I.A.i.; Edinb.R.S.; N.H.M.; Oxon.B.; Oxon.R.i.; R.A.S.; R.S.
- St. Pét. Bll. Ac. Sc.** ..... }
St. Pét. Bll. Sc. ..... } See **St. Pét. Ac. Sc. Bll.**
- St. Pét. Mm.** ..... }
St. Pét. Mm. Ac. Sc. ..... } See **St. Pét. Ac. Mm.**
- St. Pét. Mm. Sav. Étr.** ... Mémoires présentés à l'Académie Impériale des Sciences de St. Pétersbourg par divers Savans. St. Pétersbourg.

List of Serial Publications

- 1831—59. B.M.; Camb.U.; Edinb.R.S.; Glasg.U.; Linn.S.; N.H.M.; R.A.S.; R.S.; U.C.L.i.
Strasb. Mm. S. Sc...... Mémoires de la Société des Sciences Naturelles de Strasbourg. Strasbourg.
 1830—70. B.M.; Dub.R.I.A.i.; Dub.T.C.i.; N.H.M.
Strasb. S. Sc. N. Mm. ... Nouveaux Mémoires de la Société des Sciences, Agriculture, et Arts du Département du Bas-Rhin. Strasbourg.
 1832—42; 1859—68. Camb.U.i.; N.H.M.; Oxon.B.; R.S.i.
Svea ..... Svea. Tijdskrift för Vetenskap och Konst. Upsala.
 1818—31.
Sym. Met. Mg. ..... Symons's Monthly Meteorological Magazine. London.
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- Odd numbers 1-191 divided into square numbers. Pollock, (Sir) F. [1853] Phil Trans. (1854) 311-.
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- — — *Thorn*, A. S. [1900] Nt. 63 (1900-01) 7.
- — — *Basset*, A. B. [1900] Nt. 63 (1900-01) 82.
- Chinese arithmetical notation. *Edkins*, —. Nt. 37 (1888) 65.
- "Conjugate angles," new geometrical term. *Worthington*, A. M. Nt. 47 (1892-93) 8.
- Cuneiform numerical signs, transmission. *Bobylin*, V. Bb. Mth. (1893) 18-.
- Curves without double points. *Richmond*, H. [1900] Nt. 63 (1900-01) 58.
- Decimal division of circle (i.e. of right angle). *Hatzfeld*, A. Rv. Sc. 48 (1891) 655-.
- Determinant notation. *Nanson*, E. J. Ph. Mg. 44 (1897) 396-.
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- , — — — *Collins*, J. V. Science 20 (1892) 359.

- Notation, arithmetical. *McColl*, H. Educ. Times 33 (* 1880) 111.
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- Spoken numeration, from international point of view. *Berdellé*, C. Ens. Mth. 1 (1899) 269-.
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- — — — — *Keck*, —. Hann. Arch. - Vr. Z. 30 (1884) 285-.
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- , instrument for graphic integration. *Abdank-Abakanowicz, B.* C. R. 92 (1881) 402-, 515-.
- , mechanical, Amsler-Laffon's. *Merrifield, C. W. Nv. Archt. T.* 21 (1880) 252-.
- , —, for areas, etc. *Deprez, M. C. R.* 73 (1871) 785-; *Les Mondes* 27 (1872) 10-.
- , —, — ($Xdx + Ydy$). *Cayley, A. B. A.* Rp. (1877) (Sect.) 18-.
- , —, — work done by a force. *Fuchs, K.* Mth. Termt. Éts. 13 (1895) 239-; *Mth. Nt. B. Ung.* 13 (1897) 144-.
- , new form. *Marinovitch, B.* Lum. Élect. 17 (1885) 529-.
- , —, model. *Napoli, D. & Abdank-Abakanowicz, —.* C. R. 101 (1885) 592-.
- , *Żmurko's. Skibinski, P. K.* Kosmos (Lw.) 9 (1884) 185-; *Wien Ak. D.* 53 (1887) (Ab. 2) 35-.
- Integrators. *Hummel, —.* Dingler 275 (1890) 17-.
- , mechanical. *Abdank-Abakanowicz, B.* Lum. Élect. 18 (1885) 49-, 110-, 161-, 249-, 306-, 393-, 535-, 589-; 24 (1887) 3-, 54-, 161-.
- , two mechanical. *Fraser, A. Y.* Edinb. Mth. S. P. 4 (1886) 29-.
- Integrometer, new. *Abdank-Abakanowicz, B.* C. R. 95 (1882) 1047-.
- Involution and evolution of numbers, instrument for. *Roget, P. M.* [1814] *Phil. Trans.* (1815) 8-.
- Least squares, instrument for. *Bouniakowsky, V.* Pogg. A. 107 (1859) 463-.
- Linear differential equation of 2nd order, general mechanism for integrating. *Tait, P. G.* [1876] *Edinb. R. S. P.* 9 (1878) 118-.
- Link-work apparatus for describing curves. *Janse, L. N.* Arch. Wisk. 9 (*1882) 61-.
- Linkages for tracing conic sections. *Strong, W. M. A.* Mth. 8 (1893-94) 181-.
- x^m . *Freeland, F. T.* [1879] *Am. J. Mth.* 3 (1880) 316-.
- Logical machine, Jevons'. *Sonnenschein, E. A.* (xi) [1883] *Birm. Ph. S. P.* 4 (1885) 72-.
- Logical machine, new. *Marquand, A.* Am. Ac. P. 21 (1886) 303-.
- Mathematical instruments, models etc., exhibition in Munich. *Dyck, W. D.* Mth. Vr. Jbr. 3 (1894) 39-.
- Mechanisms, new: projector, ellipsograph, . . . *Delanvay, N.* Bll. Sc. Mth. 19 (1895) 240-.
- Mensurator and cœlometer. *Adams, M. L.* Mth. S. P. 5 (1874) 141-.
- Military surveying circle. *Delanges, P.* Bologna Mm. I. It. 1 (pte. 2) (1806) 63-.
- Mirror for drawing in perspective. *Schönmann, P.* Z. Nw. 10 (1874) 102-.
- Multiplication by a mechanical device. *Berdellé, C.* As. Fr. C. R. (1887) (Pt. 2) 210-.
- Nautical instruments, and calculating apparatus. *Gelcich, E.* Czgt. Opt. 5 (1884) 242-, 253-, 268-, 277-; 6 (1885) 9; 7 (1886) 265-.
- Nicolas's gyrograph for tracing arcs of large circles. *Gobin, A.* Lyon A. S. Ag. 8 (1864) 520-.
- Nürnberg, German Museum, mathematical collection. *Günther, S.* Lpldina. 14 (1878) 93-, 108-.
- , —, — instruments. *Günther, S. D.* Nf. Vh. (1893) (Th. 2, Hälfte 1) 32.
- Observations, mechanical calculation of results. *Favaro, A.* Ven. I. At. 2 (1876) 559-.
- Pantograph; proof of chief theorem, etc. *Haussner, A.* Arch. Mth. Ps. 65 (1884) 334-.
- , scenographic, for projecting geometric figures. *Magistrini, G. B.* Bologna Opusc. Sc. 1 (1817) 289-.
- Pantographs. *Ott, A.* Czgt. Opt. 17 (1896) 161-.
- , proof of properties ($1^r + 2^r + 3^r + \dots + x^r$). *Ligowski, W.* [1879] *Arch. Mth. Ps.* 65 (1880) 329-.
- Parabola, apparatus for drawing. *Thallmayer, V.* Dingler 227 (1878) 430-.
- Parabolograph. *Delone, N. B.* Rs. Ps.-C. S. J. 29 (Ps.) (1897) 76.
- Parallel lines, instrument for drawing. *Nicholson, W.* Nicholson J. 2 (1799) 429-.
- , —, —. *Suverkrop, J. P.* [1883] *Sc. S. Arts T.* 11 (1887) 73-.
- rule, new. *B., R.* Nicholson J. 9 (1804) 212-.
- , —. *Boswell, J. W.* Nicholson J. 13 (1806) 196-.
- "Perspecteur-calquer," instrument for drawing in perspective. *Breton, —.* Isère S. Bll. 27 (1892) 659-.
- Perspective drawer. *Brauer, E.* Z. Mth. Ps. 43 (1898) 163-.
- drawing instrument. *Brunel-Barennes, — de.* Dingler 34 (1829) 325-.
- , Verly's instrument, report. *Rodolphe, —.* Metz Mm. Ac. 20 (1833-39) 258-.
- , scale for dividing vanishing lines. *Cumberland, G.* Nicholson J. 16 (1807) 1-.
- Plagiograph aliter skew pantograph. *Sylvester, J. J.* Nt. 12 (1875) 168.
- , history. *Sylvester, J. J.* Nt. 12 (1875) 214-.
- Plane surface, formation, law of progress of accuracy. *Airy, (Sir) G. B.* Ph. Mg. 42 (1871) 107-.

- Planigraph, projecting tortuous curve on plane. *Delone, N. B.* [1895] Vars. S. Nt. Tr. (1895-96) (*C. R., Ps. C.*) No. 2, 3 pp.
- Planimeter. *Amsler, J.* Zür. Vjschr. 1 (1856) 41-101-.
- , *Amsler's.* *Decher, G.* Dingler 140 (1856) 27-; 141 (1856) 29-.
- , —. *Weisbach, J.* Civing. 4 (1858) 1-.
- , —. *Wittstein, T.* Hann. Z. Archt. Vr. 7 (1861) 289-.
- , —. *Petsch, —.* A. Pon. Chauss. 16 (1868) 124-.
- , —. *Combes, C. P. M.* A. Mines 19 (1871) 278-.
- , —. *Bramwell, F. J.* B. A. Rp. 42 (1872) 401-.
- , —. *Purvis, F. P.* Ph. Mg. 48 (1874) 11-.
- , —. *Rateau, A.* As. Fr. C. R. (1896) (*Pt.* 2) 130-.
- , —, proof of principle. *Steggall, —.* Edinb. Mth. S. P. 7 (1889) 25-.
- , —, theory. *Zhbirowskii, A. K.* (xii) [1865] Kazan Un. Mm. (1864, *Ps.-Mth.* No. 1), 219-.
- , —, —. *Aldis, W. S.* N. Eng. I. Mn. E. T. 28 (1879) 211-.
- , —, —. *Thiré, A. A.* Mines 11 (1887) 121-.
- , Bouniakowsky's and modification. *Decher, G.* Dingler 140 (1856) 27-.
- , construction. *Schultén, N. G. af.* (viii) Helsingf. Öfv. 5 (1863) 245-.
- , Coradi's. ? *Coradi, —.* V. Nost. Eng. Mg. 32 (1885) 465-.
- , hatchet. *Hill, F. W.* [1894] L. Ps. S. P. 13 (1895) 229-; Ph. Mg. 38 (1894) 265-.
- , history. *Favaro, A.* Förster Al. Bauztg. 38 (1873) 68-93-.
- , —. *Wolf, R.* Zür. Vjschr. 37 (1892) 111-; 38 (1893) 3-.
- of Hohmann and Coradi. *Fischer, G.* Cztg. Opt. 5 (1884) 74-.
- , Lippincott. *Greenhill, A. G.* [1899] Sc. Abs. 3 (1900) 234.
- , Maass-, description. *Günther, F.* Cztg. Opt. 7 (1886) 247-.
- , new. *Eckert, —, & Hamann, —.* Cztg. Opt. 18 (1897) 125.
- , description. *Maevskij, J. A.* [1889] Vars. S. Nt. Tr. (1889-90) (*C. R., Ps. C.*) No. 2, 7-.
- , form. *Maxwell, J. C.* Edinb. T. Sc. S. Arts 4 (1856) 420-.
- , — (Beverley). *Balfour, J. M.* [1865] Edinb. Sc. S. Arts T. 7 (1868) 198-.
- , — (1852). *Baranoffsky, E.* Helsingf. Acta 4 (1856) 3-.
- , — (1855). *Bouniakowsky, V.* [1855] St Pét. Ac. Sc. Bil. 14 (1856) 152-.
- polar. *Amsler, J.* Dingler 140 (1856) 321-; 141 (1856) 326-.
- , —, *Amsler's.* *Decher, G.* Dingler 141 (1856) 330-.
- , —, —. *Schinz, E.* Bern Mt. (1857) 152-.
- , —, —. *Nehls, C.* Civing. 20 (1874) 71-.
- , —, results. *Hartogh Heys van Zou-teen, H.* Arch. Néerl. 5 (1870) 440-.
- Planimeter, polar, determination of constant. *Schell, A.* Wien SB. 56 (1867) (*Ab.* 2) 325-.
- , —, general theory. *Schell, A.* Wien SB. 58 (1868) (*Ab.* 2) 189-; Carl Rpm. 11 (1875) 406-.
- , —, note. *Resal, H.* C. R. 77 (1873) 509-.
- , Richard. ? *Anon.* Sc. Abs. 1 (1898) 635.
- , rolling, theory. *Fenner, P.* Cztg. Opt. 7 (1886) 133-.
- , solutions of electric problems. *Atkinson, L. B.* Elect. 22 (1889) 702-; 23 (1889) 29-.
- , Trunk's. *Hübner, A.* Arch. Mth. Ps. 44 (1865) 337-.
- , Wetli's. *Stampfer, S.* Wien SB. (1850) (*Ab.* 1) 134-.
- Planimeters. *Moberg, A.* (viii) [1859] Helsingf. Öfv. 5 (1863) 53-.
- , Beck, A. Riga Cor.-Bl. 40 (1898) 99-.
- , free. *Bouniakowsky, V.* St Pét. Ac. Sc. Bil. 2 (1860) 567-.
- and similar instruments. *Kohlmorgen, O.* Westf. Vr. Jbr. (1890) 126-.
- of Wetli, Decher, and Amsler. *Miller, W. H.* Ph. Mg. 16 (1858) 230-.
- Problems of 3rd degree, instrument for solution. *Simon, C.* Les Mondes 4 (1864) 547-.
- Proportion-table, equivalent to sliding-rule 13' 4" long. *Everett, J. D.* Ph. Mg. 32 (1866) 350-.
- Protractor, semicircular, improved form. *Stewart, J. N. Z. I. T.* 3 (1870) 316-.
- for trisecting angles. *Alexander, J. H.* Silliman J. 7 (1849) 243-.
- Quadrature, instrument for. *Boileau, P. C. R.* 15 (1842) 594-.
- Refraction through prism; apparatus to illustrate deviation of ray. *Marcucci, S.* Rv. Sc.-Ind. 27 (1895) 101-.
- Scale, accuracy of, and limit of perception. *Neovius, E.* Helsingf. Öfv. 23 (1881) 71-.
- "Scoliograph, unicursal," for drawing algebraic curves. *Boguslawsky, A.* [1881] Mosc. S. Nt. Bil. 57 (1882) (*Pt.* 2) 72-.
- Screw, use in mathematical instruments. *Carl, P.* Carl Rpm. 2 (1867) 37-.
- Sectograph (for dividing lines and angles, &c.). *Jones, T.* Tilloch Ph. Mg. 42 (1813) 401-.
- Sine and cosine quadrant. *Schreiber, C.* Cztg. Opt. 7 (1886) 38-.
- Spherical integrator, modification of a form of. *Smith, F. J.* Ph. Mg. 22 (1886) 147-.
- triangles, instrument for determining, by mechanical action. *Penrose, F. C.* As. S. M. Not. 36 (1876) 281-.
- Spherometer. *Mayer, A. M.* Am. J. Sc. 32 (1886) 61-.
- , new. *Krüss, H.* Cztg. Opt. 12 (1891) 63-.
- Spirals, Johnson's volutor for drawing. *Booth, J.* B. A. Rp. (1860) (*Pt.* 2) 60-.
- Square with parallel lines. *Chausse-not, (l'Ainé).* Par. Bil. S. Encour. 43 (1844) 4-.
- Stanhope logical and arithmetical machine. *Harley, (Rev.) R.* N. S. W. R. S. J. 24 (1890) 121-.

Stereoscopic drawing apparatus. *Jensen, J.* [1870] Arch. f. Ap. 4 (1871) 233-.

Straight line apparatus, Hart's. *Darboux, G.* Bil. Sc. Mth. As. 3 (1879) 144-.

Stupakoff's comparator. *Basford, G. M.* Am. Eng. & Railroad J. 73 (1899) 59, 169.

Tachymeter, Cairo's. *Puissant, L. C. R.* 3 (1836) 140, 200, 245-, 384.

Tractoringraph (instrument for describing curves of "tractory" nature). *Kleritj, L.* Dingler 305 (1897) 234-, 260-.

— of Kleritj, and rod-planimeter. *Korselt, A. Z. Mth. Ps.* 43 (1896) 312-.

Trigonometer, instrument for solving spherical triangles. *Braun, K. (XII)* Mth. Term. Éts. 1 (1883) 313-; Mth. Nt. B. Ung. 1 (1882-83) 283-.

—, Savy's. *Le Grand, G.* Aube Mm. S. Ag. 5 (1854) 235-.

Trisection of angle, instrument for. *Burt, T. S.* Beng. As. S. J. 1 (1832) 499-.

—, —, —. *Tate, T.* Ph. Mg. 19 (1860) 261-.

—, —, —. *Cassani, P.* Ven. Aten. At. 1 (1878) 163-.

—, —, —. *Longchamps, G. de.* As. Fr. C. R. (1893) (Pt. 2) 190-.

—, —, mechanical. *Russell, A. H.* Nt. 43 (1891) 547-.

— angles, test. *Rönisch, A.* Czgt. Opt. 16 (1895) 253-.

Vernier for line or curve with unequal divisions. *Artur, J. F.* Par. Bil. S. Encour. 50 (1851) 676-.

—, new form. *Ludlow, H. H. V.* Nost. Eng. Mg. 27 (1882) 196.

— or Nonius, priority. *Breusing, A.* [1879] As. Nr. 96 (1880) 129-.

Verniers. *Matzka, W.* Grunert Arch. 34 (1860) 334-.

CALCULATING MACHINES.

Addition machine. *Goss, J.* Tilloch Ph. Mg. 41 (1813) 166-.

Arithmetical machine, Čebyšev's. *Bool, V. G. von.* Mosc. S. Sc. Bil. 91 (No. 1) (1894) 12-.

— with continuous motion. *Tchebitchef, P. L.* Rv. Sc. 4 (1882) 402-.

—, supplementary explanation. *Čebyšev, P. L.* Mosc. S. Sc. Bil. 91 (No. 1) (1894) 22.

— machines, history. *Mehmke, R.* Prace Mt.-Fiz. 6 (1895) 177-.

Arithmometer, Thomas's. *Ettingshausen, A. von.* Wien SB. 24 (1857) 16-.

—, —. *Reuleaux, F.* Civing. 8 (1862) 182-.

—, —. *Hirn, G. A.* Les Mondes 3 (1863) 433-.

—, —. *Junge, A. Z.* Mth. Ps. 9 (1864) 198-.

—, —. *Zillmer, —.* I. Act. J. 15 (*1870) 25-.

—, —. *Cavallero, A.* Cuyper Rv. Un. 8 (1880) 309-.

Arithmometer, Thomas's, actuarial use. *Gray, P. I.* Act. J. 17 (*1873) 249-; 18 (*1875) 20-, 123-.

—, —, adaptation of assurance formulæ to. *Hannington, J.* Assur. Mg. 12 (*1866) 184.

—, —, use. *Hannington, (Maj.-Gen.).* I. Act. J. 16 (*1872) 244-.

—, use. *Hirn, G. A.* A. Gén. Civ. 2 (1863) (pte. 2) 113-, 153-.

—, —. *Hancock, W. J.* I. Act. J. 16 (*1872) 265-.

—, — in constructing tables. *Carment, D.* I. Act. J. 22 (*1881) 368-; 23 (*1882) 232.

Calculating apparatus, arithmetical puzzles. *Lucas, E.* Rv. Sc. 45 (1890) 1-.

— based on Napier's rods. *Bridge, J.* Ph. Mg. 9 (1880) 191-.

— circle. *Weiss, P.* C. R. 131 (1900) 1289-.

— instruments and machines. (2) Logarithmic scales. (3) Graphic processes. *Ocagne, M. d'. A. Cons. Arts et Mét.* 5 (1893) 231-, 323-; 6 (1894) 42-.

— machine. *Babbage, C.* Edinb. Ph. J. 8 (1823) 122-.

—, —. *Olivier, T.* Par. Bil. S. Encour. 45 (1846) 153-.

—, —. *Nystrom, J. W.* Franklin I. J. 21 (1851) 262-.

—, —. *Selling, E.* D. Nf. Tbl. (1887) 234-; Würzb. Ps. Md. Sb. (1888) 148-; Czgt. Opt. 9 (1888) 3-.

—, —. *Levänen, S.* Helsingf. Öfv. 38 (1896) 26-.

—, —. *Siedentopf, H.* N.-Vorp. Mt. 30 (1899) xvii-.

— or arithmometer. *Hoyan, —.* (vi Adds.) Par. Bil. S. Encour. 21 (1822) 355-.

—, —, —. *Thomas, —.* Moigno Cosmos 4 (1854) 72-, 186-.

—, —. *Babbage's.* Baily, F. Tilloch Ph. Mg. 63 (1824) 355-.

—, —. *Ménabréa, L. F.* Taylor Sc. Mm. 3 (1843) 666-.

—, —. *Brit. Ass. Comm.* B. A. Rp. (1878) 92-.

—, —. *Menabrea, (le gén.).* L. F. C. R. 99 (1884) 179-.

—, —, mechanical arrangements. *Babbage, (Maj.-Gen.) H. P.* B. A. Rp. (1888) 616-.

— for definite integrals. *Moseley, H.* B. A. Rp. (1841) (Pt. 2) 35-.

—, duplex. *Küttner, W.* Dingler 300 (1896) 199-.

—, &c. *Ramsing, H. M.* Mth. Ts. 2 (1860) 65-.

—, —. *Fowler's.* De Morgan, A. R. S. P. 4 (1840) 243-.

—, —. *Henri Genaille's.* Genaille, H. As. Fr. C. R. (1894) (Pt. 2) 272-.

—, new. *Lalanne, L.* C. R. 9 (1839) 319-.

—, —. *Fowler, —.* B. A. Rp. (1841) (Pt. 2) 39-.

—, —. *Grant, G. B.* Am. J. Sc. 8 (1874) 277-.

0080 Calculating Machines

- Calculating machine, new. *Bollée, L. C.* R. 109 (1889) 737-.
- , —. *Strehl, K.* Cztg. Opt. 11 (1890) 242-.
- , —, old. *Cadell, W. A.* Thomson A. Ph. 3 (1814) 251-.
- for products, quotients, logs., and powers of numbers. *Moseley, H.* Ph. Mg. 30 (1847) 171-.
- , prospectus, &c. *Slonimsky, C. Z.* Crelle J. 28 (1844) 184-.
- for real roots of numerical equations. *Moth, F. X.* Wien D. 1 (1850) 105-.
- , report. *Wiberg, —.* C. R. 56 (1863) 330-.
- , Scheutz's. *Meidinger, H.* Dingler 156 (1860) 241-, 321-.
- , Selling's. *Poppe, A.* Dingler 271 (1889) 193-.
- machines. *Hélie, —.* Eure Rec. Tr. 2 (1842) 170-.
- , *Olivier, T.* Par. Bil. S. Encour. 42 (1848) 411-.
- , *Jomard, E. F.* Par. Bil. S. Encour. 42 (1843) 548-.
- , *Lauterburg, —.* Bern Mt. (1863) 20-.
- , *Warren, T. P. B.* Ph. Mg. 43 (1872) 396-.
- , *Edmondson, J.* [1885] L. Ps. S. P. 7 (1886) 81-; Ph. Mg. 20 (1885) 15-.
- , *Davis, H. S.* Pop. As. 4 (1897) 20-.
- , *Torres, L. C. R.* 130 (1900) 472-.
- , arithmograph. *Gathey, —.* Par. Bil. S. Encour. 15 (1816) 50-.
- , continuous. *Hele-Shaw, H. S.* Phil. Trans. 176 (1886) 367-.
- , history. *Mehmke, R. D.* Mth. Vr. Jbr. 3 (1894) 59-.
- and instruments. *Ocagne, M. d'. Brux.* S. Sc. A. 17 (1893) (Pt. 1) 84-.
- invented by Russians. *Bool, V. von.* Mosc. S. Sc. Bil. 92 (No. 1) (1896) 33-.
- , theory. *Stamm, E.* Mil. I. Lomb. Rd. 2 (1865) 360-.
- Calculation and calculating machines. *Lucas, É.* As. Fr. C. R. (1884) (Pt. 1) 111-.
- , mechanical aids. *Sang, E.* I. Act. J. 16 (*1872) 253-.
- Calculations, instruments to aid. *Thomson, G.* [1896] Sc. S. Arts T. 14 (1898) 172-.
- Chinese-Japanese calculating machine, and Chinese Swan-Pan (calculating table). *Westphal, A.* (xii) D. Gs. Ostas. Mt. 1 (1873-76) (Heft 8) 27-, (Heft 9) 43-.
- Efficiency, apparatus for calculating. *Boys, C. V.* (ix) [1882] L. Ps. S. P. 5 (1884) 28-; Ph. Mg. 13 (1882) 193-.
- Logarithmic calculating rules, Lambert's. *Schweigger, J. S. C.* Schweigger J. 14 (1815) 115-.
- Slide-rule. *Burg, A.* Wien Jb. Pol. I. 16 (1830) 101-.
- , *Burdon, —.* C. R. 58 (1864) 573-.
- , *Mackesy, W. H.* Medley I. Eng. 4 (1867) 349-.
- , *Schwind, F. von* [1873] Innsb. Nt. Md. B. 4 (1874) liv-.

Models 0080

- Slide-rule. *Boys, C. V.* Nt. 32 (1885) 627-.
- , employment. *Herrmann, E.* Oestr. Z. Brgw. 15 (1867) 193-.
- , —. *Charnoz, J.* Rv. Mar. et Col. 57 (1878) 493-.
- , English. *Sedlacek, E.* Hammer-schmidt Al. Oestr. Z. (1846) 439-, 451-, 465-, 478-; (1847) 182-, 221-, 318-, 342-, 365-, 390-, 401-.
- , Fuller's. *Fenton, J. J.* Vict. R. S. T. 22 (1886) 57-.
- for gauging casks. *Young, (Dr) T.* QJ. Sc. 16 (1823) 357-.
- , gunner's. *Smith, John T.* Madras Eng. Rp. 2 (1846) 14-.
- , model. *Béghin, A.* As. Fr. C. R. (1900) (Pt. 1) 127-.
- , new. *Gallie, G.* C. R. 128 (1899) 163-.
- , —. *Puller, —.* Hann. Archt.-Vr. Z. 46 (1900) 203-.
- , —, calculating. *Fuller, G.* (xii) [1879] Belfast NH. S. P. (1878-80) 36-.
- , —, form of. *Béghin, A.* As. Fr. C. R. (1899) (Pt. 2) 142-.
- , proposed addition. *Schweth, W. D.* Nf. Vh. (1900) (Th. 2, Hälfte 1) 66-.
- , proposed forms. *Darwin, G. H. L.* Mth. S. P. 6 (1875) 113-.
- , radial cursor. *Lanchester, F. W.* [1895] L. Ps. S. P. 14 (1896) 8-; Ph. Mg. 41 (1896) 52-.
- , solution of equations in three variables. *San Roberto, P. di.* [1867] Tor. Mm. Ac. 25 (1871) 53-.
- , treatment of equation in two variables. *San Roberto, P. di.* Tor. At. Ac. Sc. 2 (1866-67) 454-.
- , use. *Boys, C. V.* V. Nost. Eng. Mg. 33 (1885) 512-.
- rules, Everett's proportion-table. *Everett, J. D.* Ph. Mg. 32 (1866) 350-.
- , Fuller's calculating helix, and historical notes on calculating instruments with logarithmic divisions. *Favaro, A.* Ven. I. At. 5 (1879) 495-.
- , logarithmic. *Sedlacek, E.* Hammer-schmidt Al. Oestr. Z. (1847) 493-, 507-, 521-, 531-.
- , modified. *Mannheim, A.* N. A. Mth. 12 (1853) 327-.

MODELS.

- Cubic surface with 27 real lines. *Wiener, —.* D. Nf. Tbl. (*1868) 56-.
- , —, —. *Blythe, W. H.* Camb. Ph. S. P. 8 (1895) 241-.
- , —, —. *Taylor, H. M.* Camb. Ph. S. T. 18 (1900) 375-.
- , —, —, Wiener's model. *Cayley, A.* [1871] Camb. Ph. S. T. 12 (1879) 366-.
- surfaces, construction of models. *Blythe, W. H.* QJ. Mth. 29 (1898) 206-.
- , model by Rodenburg. *Korteweg, D. J.* N. Arch. Wisk. 20 (1893) 63-; Fschr. Mth. (1893-94) 83.
- Cylindroid. *Ball, R. S.* Ph. Mg. 42 (1871) 181-; Am. As. P. (1884) 52-.

- Descriptive geometry, models. *Didier*, —, & *Evrard*, —. Par. S. Phlm. Bll. (1833) 177-.
- Ellipsoid, model of the centro-surface. *Kummer*, *E. E.* Berl. Mb. (1862) 426-.
- Goniometrical instruction. *Hoza*, *F.* Arch. Mth. Ps. 61 (1877) 108-.
- Kinematic models, epicycloids, linkwork. *Schilling*, *F. D.* Nf. Vh. (1898) (Th. 2, Hälfte 1) 6-.
- Mathematical models, use. *Emch*, *A.* Kan. Ac. Sc. T. 14 (1896) 90-.
- Minimal surface, model in plaster. *Schwarz*, *H. A.* Berl. Mb. (1872) 122-.
- Paraboloids, hyperbolic, model. *Olivier*, *T.* Par. S. Phlm. N. Bll. (1832) 184-.
- Pencils, thin, models. *Kummer*, *E. E.* Berl. Mb. (1860) 469-.
- Ronayne's cubes. *Hennessy*, *H.* Ph. Mg. 39 (1895) 183-.
- Ruled surface, 3rd order. *La Gournerie*, *J. de*. Par. A. Cons. 6 (1866) 205-.
- Sections of quadric surfaces. *Wiener*, —. Karlsruhe Nt. Vr. Vh. 10 (1888) (Sb.) 50-.
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- — — general projective group. *Taber, H.* N. Y. Am. Mth. S. Bl. 2 (1896) 221-; 346.
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- , Fermat's theorem. *Pollock, (Sir) F.* Phil. Trans. (1861) 409-; R. S. P. 13 (1864) 542-.
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- , —, extension. *Pollock, (Sir) F.* [1850] R. S. P. 5 (1851) 922-.
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- — reciprocals. *Bouvier, L. C.* Gergonne A. Mth. 15 (1824-25) 39-.
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- Sums of 4 algebraic series. *Glaisher, J. W. L.* [1877] Mess. Mth. 7 (1878) 119-.
- powers of reciprocals of integers. *Schlämilch, O. X.* Leip. Mth. Ps. B. 29 (1877) 106-.
- — products of an arithmetical progression, taken 2, 3, 4 ... together, calculation. *Lampe, E.* Fsch. Mth. (1893-94) 409.
- — — natural numbers. *Mollame, V.* N. A. Mth. 5 (1886) 364-.
- — — numbers, theorem. *Lerch, —.* G. Teix. J. Sc. 8 (1887) 161-.
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$$\sum_{r=1}^{r=n} r^k.$$

- Collins, E.* St Pét. Ac. Sc. Mm. 8 (1817-18) 242-.
- Schlämilch, O.* Grunert Arch. 10 (1847) 342-.
- Thacker, A.* Camb. and Dubl. Mth. J. 5 (1850) 243-.
- Mourgues, —.* N. A. Mth. 10 (1851) 78-.
- Catalan, E. C.* N. A. Mth. 15 (1856) 230-.
- Siacci, F.* (viii) A. Mt. 4 (1861) 46-.
- Lucas, É.* N. A. Mth. 9 (1870) 49-.
- Amigues, É.* N. A. Mth. 10 (1871) 79-.
- Dostor, G.* Arch. Mth. Ps. 54 (1872) 70-; 57 (1875) 222-.
- Lampe, E.* [1877] Crelle J. Mth. 84 (1878) 270-.
- Lucas, É.* N. A. Mth. 16 (1877) 18-.
- Pelndř, M.* Časopis 6 (*1877) 279-; Fsch. Mth. (*1877) 110-.
- Dostor, G.* Arch. Mth. Ps. 63 (1879) 435-; 64 (1879) 310-.
- Marchand, D.* N. A. Mth. 20 (1881) 140-.
- Schier, O.* Wien Ak. Sb. 85 (1882) (Ab. 2) 503-.
- Boije af Gennäs, C. O.* Stockh. Ak. Hndl. Bh. 10 (1885) No. 4, 6 pp.
- Slavik, J.* Časopis 16 (1887) 121-; Fsch. Mth. (1887) 240.
- Locchi, E.* Mh. Mth. Ps. 4 (1893) 85-.
- Nielsen, N. N.* Ts. Mth. 4 (B) (1893) 1-; Fsch. Mth. (1893-94) 410-.
- Barbette, E.* Mathesis 14 (1894) 105-.
- Jung, V.* Časopis 28 (1899) 124-; Fsch. Mth. (1899) 247.

$$\sum_{r=1}^{r=n} r^3.$$

- Genocchi, A.* A. Mt. 7 (1865) 151-.
- Cantor, M.* Z. Mth. Ps. 11 (1866) 248-; 12 (1867) 170-.

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- Unferdinger, F. Arch. Mth. Ps. 48 (1868) 361-.
- Amigues, É. N. A. Mth. 10 (1871) 117-.
- Glaisher, J. W. L. Mess. Mth. 4 (1875) 168-.
- Rocquigny, F. [G.] de. Les Mondes 51 (1880) 153-.
- geometrical summation. Glaisher, J. W. L. (vi) [1873] Mess. Mth. 3 (1874) 5.
- problem of Boncompagni, solution. Matthies-
sen, L. Z. Mth. Ps. 13 (1868) 348-.

$$\sum_{r=1}^{r=n} (2r-1)^k.$$

- Bretschneider, C. A. Grunert Arch. 1 (1841) 415-.
- Borchardt, C. W. Berl. Mb. (1857) 301-.
- Brioschi, F. [1857] Tortolini A. 1 (1858) 43-.
- Dostor, G. Arch. Mth. Ps. 64 (1879) 353-.

$$\sum_{r=1}^{r=n} (2r-1)^k \quad (k=3).$$

- Dostor, G. Arch. Mth. Ps. 64 (1879) 356-.

$$\sum_{r=0}^{r=n-1} (a+rd)^m.$$

- Puiseux, V. Liouv. J. Mth. 11 (1846) 477-.
- Gilbert, P. N. A. Mth. 8 (1869) 434-.
- formulae. Lionnet, E. N. A. Mth. 1 (1842) 175-.
- , Rispal, A. N. A. Mth. 6 (1847) 273-.

$$\sum_{n=1}^{\infty} (a+n-1)^a h^{n-1}, \quad \sum_{n=1}^{\infty} [a+n-1]^a h^{n-1}.$$

- Pepin (le père). N. A. Mth. 15 (1856) 27-.
- $\sum_{i=0}^{i=n-1} (x+ih)\mu, \quad \sum_{i=0}^{i=n-1} (-1)_i (x+ih)^\mu.$ Björling,
E. G. Stockh. Ak. Hndl. 2 (1857-58) 18 pp.
- $\sum_{r=1}^{\infty} \left(\frac{1}{r}\right)^n$, Jacobian formula involving. Stern,
M. A. Crelle J. Mth. 84 (1878) 216-.
- $\sum_{r=2n+1}^{\infty} r^2$ or r^3 . Dostor, G. Arch. Mth. Ps. 64
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$$\sum_{r=1}^{r=n} (r)^\alpha. \text{ Dostor, G. N. A. Mth. 18 (1879) 459-, 513-}.$$

$$\sum_1^n (2r^{2m}) \text{ and } \sum_1^n (2r-1^{2m}). \text{ Glaisher, J. W. L. Mess. Mth. 20 (1891) 172-}.$$

$$\sum_1^n (r^{2m}). \text{ Glaisher, J. W. L. Mess. Mth. 20 (1891) 120-; 28 (1899) 29-}.$$

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tell, J. McK. Science 2 (1895) 761-.
- Approximate formulae relating to large num-
bers. La Place, P. S. (Marquis) de. Par.
Mm. de l'I. (1809) 353-, 559-.

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- Approximations, numerical. Guyou, —. N.
A. Mth. 8 (1889) 165-.
- Arithmetical events, study. Cesàro, E. Brux.
Mm. Cour. 4^o. 47 (1886) No. 9, 14 pp.
- Association ratios (of phenomena in observa-
tions). Doolittle, M. H. Smiths. Misc.
Col. 33 (1888) Art. 4, 83-, 94-. (Wash. Ph.
S. Bll. 10 (1888).)
- Averages, theory. Local probability. Doo-
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596-.
- Bernoulli's inverse theorem. Meyer, A. Brux.
Ac. Bll. 23 (1856) 148-.
- theorem. Mansion, —. Brux. S. Sc. A.
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$$(x-a)(x-b)f_1(x) = -F(x) + f(x)$$

$$\frac{F(a)x-b}{f(a)a-b} + \frac{F(b)x-a}{f(b)b-a}.$$

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—, —, formula of Laplace's.

$$\frac{Y}{(y-p_1)^{\mu_1+1} \dots (y-p_r)^{\mu_r+1}}$$

$$= \sum_{m=1}^{m=r} \frac{\partial^{\mu_m} \left(\frac{\lambda_m(p_m)}{y-p_m} \right)}{1.2.3 \dots \mu_m \cdot \partial^{\mu_m} p_m^{\mu_m}}.$$

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- p prime of form $4k \pm 1$. *Rogers*, L. J. L. Mth. S. P. 30 (1899) 23—.
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- —. Series $\sum_{n=1}^{\infty} e^{\frac{a^2 2\pi n^2}{N}}$. *Mertens*, F. Berl. Ak. Sb. (1896) 217—.
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- , —, *Störmer, C.* N. Ts. Mth. 7 (B) (1896) 49-; Fsch. Mth. (1896) 166.
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- , —, by elliptic functions. *Kronecker, L.* Berl. Mb. (1863) 44-.
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- , — (Dirichlet). *Tano, F.* Crelle J. Mth. 105 (1889) 160-.
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- Pell's equation $y^2 - 3x^2 = 1$. *Boutin, A.* Mathesis 18 (1898) 159-.
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- , —, $A + x^2$. *Ivanov, I.* St. Pét. Ac. Sc. Bl. 3 (1895) 361-; Fsch. Mth. (1895) 201.
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- , —, Gauss, demonstration. *Perott, J. de.* [1889] J. H. Un. Cir. [9 (1889-90)] 30.

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- — $r \left(\frac{p-1}{\lambda} \right)^{\text{th}}$ powers ($\lambda=2, 3, 4$) not divisible by p . *Gegenbauer*, L. *Wien Ak. Sb.* 95 (1887) (Ab. 2) 838-.
- Sums of cubes, numbers as. *Zornow*, —. *Crelle J.* 14 (1835) 276-.
- — — —. *Jacobi*, C. G. J. *Crelle J.* 42 (1851) 41-.
- — powers, representation of integers as. *Mathews*, G. B. *Mess. Mth.* 25 (1896) 69-.
- Ternary cubic form. *Sylvester*, J. J. *Tortolini A.* 7 (1856) 398-; *Am. J. Mth.* 2 (1879) 280-, 357-; 3 (1880) 58-, 179-.
- — — —. *Savin*, A. M. [1884] *A. Mth.* 1 (1884-85) 58-.
- — — —, resolution in integers. *Desboves*, A. N. A. Mth. 5 (1886) 545-.
- Values of x, y, v, z for which $uvz^2(ax^2 + by^2)^2 + \Delta x^2y^2(av^2 + bz^2)^2$ is a square. *Euler*, L. *St Pét. Ac. Sc. Mm.* 9 (1824) 14-.

2870 Forms of higher degree which can be considered as products of linear factors; algebraic numbers; ideals. (See also 0820.)

- Abelian number-fields (Zahlkörper). *Weber, H.* Acta Mth. 8 (1886) 193-; 9 (1887) 105-.
- , Kronecker's theorem. *Hilbert, D.* Gött. Nr. (1896) 29-.
- Algebraic composite fields. *Hensel, K.* Crelle J. Mth. 120 (1899) 99-.
- congruences and universal arithmetic. *Kronecker, L.* Crelle J. Mth. 100 (1887) 490-.
- fields, groups of numbers in. *Weber, H.* Mth. A. 48 (1897) 433-; 49 (1897) 83-; 50 (1898) 1-.
- number-field, unimodular substitutions in. *Hurwitz, A.* Gött. Nr. (1895) 332-.
- fields, historical and bibliographical account. *Hilbert, D.* D. Mth. Vr. Jbr. 4 (1897) 175-.
- , units in. *Minkowski, H.* Gött. Nr. (1900) 90-.
- numbers. *Dedekind, R.* Bll. Sc. Mth. As. 11 (1876) 278-; 1 (1877) 17-, 69-, 144-, 207-.
- , *Hurwitz, A.* Gött. Nr. (1895) 324-.
- , analogue of Riemann-Roch theorem in theory of. *Landsberg, G.* Mth. A. 50 (1898) 577-.
- , arithmetical theory. *Hurwitz, A.* Gött. Nr. (1895) 230-.
- , class of lowest order containing given classes. *Kneser, A.* Mth. A. 30 (1887) 179-.
- , criterion. *Minkowski, H.* Gött. Nr. (1899) 64-.
- depending on cube root of given number. *Markoff, A.* St Pét. Ac. Sc. Mm. 38 (1892) No. 9, 37 pp.
- derived from irreducible cubic equation. *Mathews, G. B.* L. Mth. S. P. 24 (1894) 327-.
- and function theory. *Grönwall, H.* Stockh. Öfv. (1897) 199-.
- , fundamental equation of a class-domain (Gattungsbereich). *Mertens, F.* Wien Ak. Sb. 103 (1894) (Ab. 2a) 5-.
- of given class-domain. *Hensel, K.* Crelle J. Mth. 101 (1887) 99-.
- , greatest common divisor. *Sochocki, J.* Prace Mt.-Fiz. 4 (1893) 95-; Fsehr. Mth. (1893-94) 297-.
- , logarithms. *Störmer, C.* C. R. 130 (1900) 1603-.
- , real, property of whole system. *Cantor, G.* [non M.] [1873] (vii) Crelle J. Mth. 77 (1874) 258-.
- Analytical loci. *Cauchy, A. L.* C. R. 24 (1847) 885-.
- Arithmetical demonstration of algebraic theorems. *Kneser, A.* Crelle J. Mth. 102 (1888) 20-.

- Aurifeuillians. *Cunningham, (Lt.-Col.) A. L.* Mth. S. P. 29 (1898) 381-.
- Binary cubic forms, calculation and classification for negative determinants. *Arndt, F.* [1851] Grunert Arch. 31 (1858) 335-.
- forms, which cannot represent powers of primes. *Gegenbauer, L.* Wien Ak. Sb. 97 (1889) (Ab. 2a) 368-.
- Biquadratic forms, class, prime divisors. *Lejeune-Dirichlet, G.* Crelle J. 3 (1828) 35-.
- Class-number divisible by prime λ . *Kummer, E. E.* Berl. Ak. Mb. (1874) 239-.
- for numbers formed from 11th and 13th roots of unity. *Wolfskehl, P.* Crelle J. Mth. 99 (1886) 173-.
- Classes of resolvable forms. *Schering, E.* [1868] Gött. Ab. 14 (1869) 16 pp.
- numbers and Hilbert's theorem. *Capelli, A.* Nap. Rd. 35 (1896) 198-.
- Complex factorisation of numbers. *Cauchy, A. L.* C. R. 24 (1847) 1022-; 25 (1847) 46-.
- factors of prime numbers. *Zignago, I.* Rv. Mt. 4 (1894) 151-.
- number systems, irreducible. *Formenti, C.* Mil. I. Lomb. Rd. 17 (1884) 6-.
- numbers. *Schering, K.* Crelle J. Mth. 102 (1888) 56-.
- , advantages of geometric representation. *Vivanti, G.* Rv. Mt. 2 (1892) 167-.
- , class. *Markoff, A.* C. R. 112 (1891) 780-, 1049-, 1123-, 1288.
- connected with equation $\theta^3 - 2 = 0$. *Mathews, G. B.* L. Mth. S. P. 24 (1893) 319-.
- , extension. *Vahlen, T.* Königsb. Schr. 38 (1897) [72]-.
- of form $a+bi$. *Gegenbauer, L.* Wien Ak. Sb. 91 (1885) (Ab. 2) 1047-.
- formed from fourth roots of unity. *Gegenbauer, L.* Wien Ak. D. 50 (1885) (Ab. 1) 153-.
- , —, —, —, —, probabilities in connexion with. *Gegenbauer, L.* Wien Ak. Sb. 98 (1890) (Ab. 2a) 635-.
- , —, —, —, —, quadratic reciprocity law for. *Busche, E.* Hamb. Mth. Gs. Mt. 2 (1890) (Festschr., Tl. 2) 80-.
- , ideal prime factors. *Kummer, E. E.* Berl. Ab. (1856) (Mth.) 1-.
- , norms. *Schering, K.* Acta Mth. 11 (1887-88) 265-.
- , systems of, and bilinear groups. *Cartan, E.* Toul. Fac. Sc. A. 12 (1898) B, 99 pp.
- , —, —, —, transformation groups. *Study, E.* Mh. Mth. Ps. 1 (1890) 283-.
- , theory. *Ivanov, I.* St Pét. Ac. Sc. Mm. (Rs.) 72 (1893) (Suppl.) No. 9, 14 pp.; Fsehr. Mth. (1893-94) 302.
- primes. *Gegenbauer, L.* Wien Ak. Sb. 98 (1890) (Ab. 2a) 1036-.
- formed from fifth roots of unity. *Tanner, H. W. L.* L. Mth. S. P. 24 (1893) 223-.
- Cubic number-fields, number of ideal classes in. *Dedekind, R.* Crelle J. Mth. 121 (1900) 40-.
- , —, table of class numbers. *Reid, L. W.* N. Y. Am. Mth. S. Bll. 6 (1900) 268, 277-.

- Decomposition of numbers $f^{12} - 9g^{12}$ into two cubes. *Henry, C. N. A. Mth.* 20 (1881) 418-.
- Dirichlet's biquadratic number-field. *Hilbert, D. Mth. A.* 45 (1894) 809-.
- Divisors of certain polynomials and existence of certain primes. *Genocchi, A. C. R.* 98 (1884) 411-.
- complex numbers, theorems. *Gegenbauer, L. Mh. Mth. Ps.* 1 (1890) 39-.
- , elementary, of compounded matrices. *Hensel, K. Crelle J. Mth.* 114 (1895) 109-.
- , —, theory and applications. *Sauvage, L. Par. Éc. Norm. A.* 8 (1891) 285-; 10 (1893) 9-.
- , —, of two systems. *Hensel, K. Crelle J. Mth.* 117 (1897) 346-.
- , fundamental, of algebraic systems. *Hensel, K. Crelle J. Mth.* 117 (1897) 333-.
- , —, — system with reference to two different rational fields. *Hensel, K. Crelle J. Mth.* 118 (1897) 173-.
- Dual group generated by three moduli. *Dedekind, R. Mth. A.* 53 (1900) 371-.
- Equation $F(x, y, z) = \phi(\alpha)\phi(\beta)\dots = 1$. *Lejeune-Dirichlet, G. C. R.* 10 (1840) 285-.
- $F(x, y, z) = \phi(\alpha)\phi(\beta)\dots = 1$ (Lejeune-Dirichlet). *Libri, G. C. R.* 10 (1840) 311-.
- Equivalences, theory. *Grunert, J. A. Arch. Mth. Ps.* 44 (1865) 443-; 45 (1866) 454-.
- Factorisation of function with respect to prime modulus p . *Pellet, A. E. C. R.* 86 (1878) 1071-.
- , complex, of primes, theorem. *Cellérier, C. Gen. S. Ps. Mm.* 32 (1894-97) No. 7, 61 pp.
- $x^n - a$ in arbitrary field. *Wendt, E. Mth. A.* 53 (1900) 450-.
- Functions of several variables, irreducibility. *Bendixson, I. Stockh. Öfv.* (1892) 189-.
- — —, matrices. *Kronecker, L. Berl. Mb.* (1869) 159-, 688-.
- , two biquadratic, of 4 variables, whose product is a similar function. *Tortolini, B. Tortolini A.* 2 (1859) 9-.
- Fundamental equation of a class for a real prime as modulus. *Hensel, K. Crelle J. Mth.* 113 (1894) 61-.
- system and discriminant of classes of algebraic numbers. *Landsberg, G. Crelle J. Mth.* 117 (1897) 140-.
- Galoisian number-fields. *Hilbert, D. Gött. Nr.* (1894) 224-.
- Galois's imaginaries, operation symbols involving. *Le Vasseur, —. Toul. Ac. Sc. Mm.* 9 (1897) 247-.
- Greatest common divisor. *Gegenbauer, L. Wien Ak. Sb.* 101 (1892) (*Ab. 2a*) 1143-.
- — —, theorem. *Mertens, F. Wien Ak. Sb.* 101 (1892) (*Ab. 2a*) 1560-.
- Groups of functions, representation by a basis. *Ritter, E. Gött. Nr.* (1895) 158-.
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- division of algebraic quantities by real primes. *Hathaway, A. S. J. H. Un. Cir.* [4] (1885) 79.
- Ideals. *Hathaway, A. S. Am. J. Mth.* 9 (1887) 162-.
- in algebraic number-field, existence of primitive numbers. *Wiman, A. Stockh. Öfv.* (1899) 879-.
- , Dedekind's. *Baur, L. Mth. A.* 32 (1888) 151-.
- , Dedekind-Weber, in a hyper-elliptic field. *Baur, L. Mth. A.* 41 (1893) 491-.
- and higher congruences, connection of theories. *Dedekind, R. Gött. Ab.* 23 (1878) 5-.
- , theory. *Dedekind, R. Gött. Nr.* (1894) 272-; (1895) 106-.
- , —. *Hurwitz, A. Gött. Nr.* (1894) 291-.
- , —. *Furtwängler, P. Gött. Nr.* (1895) 381-.
- Integral functions. *Heine, H. E. [1852] Crelle J.* 48 (1854) 237-, 243-.
- with binomial divisors. *Hill, C. J. D. Crelle J.* 70 (1869) 103-.
- of integers, irreducible factors. *Runge, C. Crelle J. Mth.* 99 (1886) 89-.
- — —, —. *Mandl, M. Crelle J. Mth.* 113 (1894) 252-.
- — —, modular factors. *Cauchy, A. L. C. R.* 24 (1847) 1116-.
- polynomials with prime divisors of assigned form. *Lefébure, A. C. R.* 98 (1884) 293-, 413-, 567-, 613-; *Par. Éc. Norm. A.* 1 (1884) 389-; 2 (1885) 113-.
- — — several variables, resolution into factors. *Hancock, H. Par. Éc. Norm. A.* 17 (1900) 89-.
- — — — — linear elements. *Méray, C. Par. Éc. Norm. A.* 2 (1885) 289-.
- Modular systems, decomposition. *Moore, E. H. N. Y. Am. Mth. S. Bll.* 3 (1897) 372-.
- — and general complex numbers, theory. *Kronecker, L. Berl. Ak. Sb.* (1868) 429-, 447-, 557-, 595-, 983-.
- —, Kronecker's, canonical forms for. *Hancock, H. Crelle J. Mth.* 119 (1898) 148-.
- — —, reduction. *Hancock, H. QJ. Mth.* 27 (1895) 147-; *Crelle J. Mth.* 122 (1900) 265-.
- — —, relations between. *Pund, O. Hamb. Mth. Gs. Mt.* 3 (1900) 325-.
- — of second rank, elementary properties of pure. *Hensel, K. Crelle J. Mth.* 119 (1898) 175-.
- — — — —, and rings of numbers. *Landsberg, G. Gött. Nr.* (1897) 277-.
- Moduli, extension of symbol (a, b) in theory. *Dedekind, R. Gött. Nr.* (1895) 183-.
- , theory. *Steinitz, E. Mth. A.* 52 (1899) 1-.
- Numbers, as sum of 2 cubes. *Lenhart, W. [1836] Mth. Misc.* 1 (1838) 114-.
- Pairs of forms $xy(x^4 - y^4)$ whose product or quotient is square. *Euler, L. St Pét. Ac. Sc. Mm.* 11 (1830) 31-.
- Period equation of numbers formed with λ th roots of unity. *Stouff, X. C. R.* 125 (1897) 859-.
- Polynomial of several variables, test for factorisability. *Laurent, H. N. A. Mth.* 12 (1893) 315-.

- Primary prime functions. *Hancock, H.* [1900] *N. Y. Am. Mth. S. Bll.* 7 (1901) 202, 206-.
- Prime factor of class-number H , divisibility by λ . *Kronecker, L.* *Liouv. J. Mth.* 1 (1856) 396-.
- factors of certain forms, Lejeune-Dirichlet's theorems. *Kronecker, L.* *Berl. Ak. Sb.* (1888) 417-.
- ideals in relation to substitution groups. *Frobenius, G.* *Berl. Ak. Sb.* (1896) 689-.
- , separation of number-field into. *Hilbert, D.* *Mth. A.* 44 (1894) 1-.
- integral complex numbers formed from fourth roots of unity. *Gegenbauer, L.* *Wien Ak. Sb.* 101 (1892) (*Ab. 2a*) 984-.
- Primes and prime ideals in domain of fifth roots of unity. *Gmeiner, J. A.* *Mh. Mth.* Ps. 11 (1900) 1-.
- Primitive factors of $4(1-x^n)/(1-x)$, reduction of product to form $Y^2 \pm nZ^2$, Cauchy's theorem. *Genocchi, A.* *C. R.* 67 (1868) 1035-.
- Quadratic complex numbers, certain systems. *Western, A. E.* [1898] *Camb. Ph. S. T.* 17 (1899) 109-.
- Representation of numbers of a class-domain. *Hensel, K.* *Crelle J. Mth.* 103 (1888) 230-.
- by forms. *Poincaré, H.* *C. R.* 92 (1881) 777-; *Par. S. Mth. Bll.* 13 (1885) 162-.
- — — — —. *Gegenbauer, L.* *Wien Ak. Sb.* 95 (1887) (*Ab. 2*) 618-.
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- Absolutely smallest residues of real magnitudes. *Kronecker, L.* *Berl. Ak. Sb.* (1885) 383-, 1045-.
- Arithmetical series, Dirichlet's theorem. *Sylvester, J. J.* *As. Fr. C. R.* (1888) (*Pt. 2*) 118-.

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- Liouville, J.* *Liouv. J. Mth.* 2 (1857) 413-.
- Trudi, N.* [1866] *Nap. At. Ac.* 3 (1866-68) No. 6, 49 pp.
- Rubini, R.* *G. Mt.* 5 (1867) 184-.
- and algebraic radicals. *Valat, —.* *Bordeaux Act. Ac. Sc.* (1843) 321-.
- alternating sums formed with primitive roots. *Cauchy, A. L.* *C. R.* 10 (1840) 560-.
- application of Sturm's theorem. *Gascheau, G.* *Liouv. J. Mth.* 7 (1842) 126-.
- to summation of series. *Berger, A.* *Ups. S. Sc. N. Acta* 13 (1887) No. 7, 36 pp.
- depression of degree. *Lobachevsky, N.* (*vi Adds.*) *Kazan Mm. Un.* (1834) 1-.
- existence and characteristics of roots. *Méray, C.* *Par. Éc. Norm. A.* 2 (1885) 337-.
- functions of roots. *Schönemann, T.* *Crelle J.* 17 (1837) 372-.
- irreducibility. *Mertens, F.* *Wien Ak. Sb.* 99 (1891) (*Ab. 2a*) 907-.

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- , extraction. *Berkhout, J. J. T. van* (*vi Adds.*) *Arch. Wisk. Gn.* 1 (1859) 54-.
- solution. *Garnier, J. G.* *Brux. Ac. Bll.* 6 (1839) 474-.
- , cases. *Lenthéric, —.* *Gergonne A. Mth.* 21 (1830-31) 101-.
- , trigonometric. *Tetmajer, J.* (*xii*) *Krk. Ak. (Mt.-Prz.) Pam.* 5 (1880) 117-.
- sums of powers of a primitive root. *Cauchy, A. L.* *C. R.* 10 (1840) 594-.
- transformations. *Gram, J. P.* *Ts. Mth.* 5 (1887) 44-; *Fschr. Mth.* (1887) 72-.
- $x^{287}=1$, solution. *Richelot, F. J.* *Crelle J.* 9 (1832) 1-, 146-, 209-, 337-.
- $x^{287}-1=0$, solution. *Fischer, P. A.* *Crelle J.* 11 (1834) 201-.
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- $x^n-1=0$, trigonometric series derived from. *Cauchy, A. L.* *C. R.* 10 (1840) 719-.
- $x^p-1=0$, p prime, solution. *Realis, S. N.* *A. Mth.* 2 (1843) 5-, 147-.
- $x^p=1$, auxiliary equation of m th order ($p=m\pi+1$). *Lebesgue, V. A.* *C. R.* 18 (1844) 696-.
- $x^p-1=0$, modular indices of polynomials connected with. *Cauchy, A. L.* *C. R.* 25 (1847) 93-.
- $x^p-1=0$, p prime, solution. *Plana, G.* [1850] *Tor. Mm. Ac.* 11 (1851) 413-.
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- $w^n=1$, periods formed by roots when n is not prime. *Fuchs, L.* [1862] *Crelle J.* 61 (1863) 374-.
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- $x^p-1=0$, quinquisection. *Cayley, A. L.* *Mth. S. P.* 12 (1880-81) 15-; 16 (1884-85) 61-.
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- $x^p-1=0$, p prime, solution. *Butters, J. W.* *Edinb. Mth. S. P.* 7 (1889) 10-.
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— functions. *Lucas, É.* C. R. 90 (1880) 855-.

—, *Tanner, H. W. L.* L. Mth. S. P. 20 (1889) 63-, 258-.

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—, divisors. *Sylvester, J. J.* C. R. 90 (1880) 287-, 345-.

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—, derived from linear equations (for primes of form $2^n + 1$). *Hermes, J.* [1878] Crelle J. Mth. 87 (1879) 84-.

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—, algebraic. *Berger, A.* Stockh. Öfv. (1891) 683-; Fsch. Mth. (1891) 190-.

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—, proofs of theorems related to. *Lanavicensis (Sylvester, J. J.).* Ph. Mg. 18 (1859) 281-.

—, by purely geometrical means; possible cases. *Hessel, J. F. C.* Grunert Arch. 37 (1861) 269-.

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Divisibility of prime factor of class-number H by λ . *Kronecker, L.* Liouv. J. Mth. 1 (1856) 396-.

Division of angle into $2^n + 1$ equal parts. *Kempe, A.* N. Arch. Wisk. 1 (1895) 163-; Fsch. Mth. (1893-94) 1152-.

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—, form $Ax^2 + By^2 + Cz^2$, proof of theorem of Lagrange, and divisors of functions which multisection the roots of unity. *Sylvester, J. J.* Am. J. Mth. 3 (1880) 390-.

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—, n th roots of unity. *Bang, A. S.* N. Ts. Mth. 6 (B) (1895) 6-; Fsch. Mth. (1895) 121.

—, $t^2 - pu^2 = 1$, p prime, solution by circular functions. *Lejeune-Dirichlet, G.* Crelle J. 17 (1837) 286-.

—, $x^{p-1} + x^{p-2} + \dots + 1 = 0$ is irreducible when p is prime. *Kronecker, L.* Crelle J. 29 (1845) 280; Liouv. J. Mth. 1 (1856) 399-.

—, $X = 1 + x + \dots + x^{p-1} = 0$, p prime, irreducibility. *Prouhet, E.* N. A. Mth. 9 (1850) 348-.

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Gauss, formula

$$\left[\Sigma \omega^a - \Sigma \omega^b = \pm \sqrt{(-1)^{\frac{n-1}{2}} n} \right]$$

$$\text{where } \omega = \cos \frac{2\pi}{n} + \sqrt{-1} \sin \frac{2\pi}{n}.$$

Kronecker, L. Liouv. J. Mth. 1 (1856) 392-.

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— — — — — with extreme values in every interval. König, J. Mh. Mth. Ps. 1 (1890) 7–.

— — — — — of one real variable. Scheeffer, L. Acta Mth. 5 (1884) 183–, 279–.

— — — — — Broden, T. Crelle J. Mth. 118 (1897) 1–.

— — — — — Kowalewski, G. Leip. Mth. Ps. B. 52 (1900) 214–.

— — — — — two real variables. Townsend, E. J. [1900] N. Y. Am. Mth. S. Bll. 7 (1901) 244, 251–.

— — — — — n variables. Riquier, —. Par. Ec. Norm. A. 7 (1890) 265–.

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- Discontinuity, curious examples. *Plateau, J. A. F.* *Brux. Ac. Bll.* 43 (1877) 84-, 255-.
- of functions, theorem. *Casorati, F.* *Mil. I. Lomb. Rd.* 1 (1868) 123-.
- Discontinuous function. *Lerch, M. G. Mt.* 26 (1888) 375-.
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- , *Boole, G.* [1846] *Ir. Ac. T.* 21 (1848) 124-.
- , *Cauchy, A. L.* *C. R.* 28 (1849) 277-.
- , *Darboux, G.* [1874] *Par. Éc. Norm. A.* 4 (1875) 57-; 8 (1879) 195-.
- , application to analytic formulæ. *Libri, G. C. R.* 15 (1842) 401-.
- connected with continuous. *Baire, R. C. R.* 126 (1898) 1621-.
- developable by continuous. *Baire, R. C. R.* 126 (1898) 884-.
- , real, of real variable, analytical representation. *Severini, C.* *Tor. Ac. Sc. At.* 33 (1897) 762- or 1002-; 34 (1898) 199-, 374- or 325-, 518-.
- , representation. *Rawson, R.* [1846] *Manch. Ph. S. Mm.* 8 (1848) 235-.
- , sum, theorem of Abel's. *Catalan, E. C. Liège S. Sc. Mm.* 15 (1888) No. 1, 153-.
- , theorem, proof. *Baire, R. Par. S. Mth. Bll.* 28 (1900) 173-.
- , theory. *Piola, G.* [1830] *Mod. Mm. S. It.* 20 (1828) 573-.
- , —, *Haan, D. Bierens de.* *Amst. Vh.* 7 (1859) 52 pp.
- , —, *Baire, R. C. R.* 129 (1899) 1010-.
- and indeterminate functions. *Wead, C. K.* [1900] *Wash. Ph. S. Bll.* 14 (1906) 65-.
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- Double functions, changes. *Decher, G.* *Grunert Arch.* 21 (1853) 423-; 27 (1856) 471-.
- Elimination, a functional. *Russell, W. H. L. Mess. Mth.* 1 (1872) 102.
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- Evaluation of functions in indeterminate form. *Unferdinger, F.* *Grunert Arch.* 26 (1856) 224-.
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- Fluctuating functions. *Hamilton, (Sir) W. R.* [1840] *Ir. Ac. T.* 19 (1843) 264-.
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- Function satisfying no algebraic functional equation. *Hölder, O.* *Gött. Nr.* (1887) 662-.
- Functional analysis with application to parallelogram of forces. *Anon.* (vi 553) *Gergonne A. Mth.* 14 (1823-24) 350-.
- indices. *Liventsov, A. I.* (xii) *Rec. Mth. (Moscou)* 8 (1876) (Pt. 1) 277-.
- Functional powers. *Collins, E.* [1835] *St Pét. Ac. Sc. Mm.* 3 (1838) 313-.
- problems. *Abel, N. H.* *Mg. Ntvd.* 1 (1823) 216-; *Crelle J.* 2 (1827) 386-.
- , *Decsy, S.* (xii) *Mag. Tud. Ak. Ets.* 7 (No. 6) (1873) 80-.
- symbols. *Cayley, A.* *QJ. Mth.* 4 (1861) 225-.
- Functions analogous to sine and cosine. *Olivier, L.* *Crelle J.* 2 (1827) 243-.
- , application to pure geometry. *Holst, E.* [1879] *Par. S. Mth. Bll.* 8 (1880) 52-.
- , approximate representation, application of method of least squares. *Schlömilch, O.* *Schlömilch Z.* 3 (1858) 124-.
- dependent on lines. *Volterra, V.* *Rm. R. Ac. Linc. Rd.* 3 (1887) (Sem. 2) 225-, 274-.
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- , differentiable, with infinitely close (*dicht*) maxima and minima. *Broden, T.* *Stockh. Öfv.* (1900) 423-, 743-.
- expressible rationally in terms of one another. *Woepcke, C.* *Liouv. J. Mth.* 4 (1859) 339-.
- , having differential coefficient at every point, and oscillating infinitely often in every interval. *Pereno, I.* *G. Mt.* 35 (1897) 132-.
- no derivative throughout one interval. *Dini, U.* *A. Mt.* 8 (1877) 121-.
- not expressible by Taylor's theorem. *Pringsheim, A.* *Mth. A.* 44 (1894) 41-.
- oscillating infinitely often, and discontinuous functions. *Hankel, H.* *Mth. A.* 20 (1882) 63-.
- of real arguments, classification by changes in least intervals. *Du Bois-Reymond, P.* [1874] *Crelle J. Mth.* 79 (1875) 21-.
- one real variable. *Burnside, W.* *Mess. Mth.* 23 (1894) 39-.
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- — — —, *Straneo, P.* *Rm. R. Ac. Linc. Rd.* 8 (1899) (Sem. 1) 438-, 618.
- — — —, analytic representation. *Weierstrass, K.* *Berl. Ak. Sb.* (1885) 633-, 789-.
- — — —, —, *Mittag-Leffler, G.* *Palermo Cir. Mt. Rd.* 14 (1900) 217-.
- — — — with derivatives of every order. *Maurer, L.* *Mth. A.* 41 (1893) 377-.
- — — — and their differential coefficients. *Harnack, A.* *Mth. A.* 23 (1884) 244-; 24 (1884) 217-.
- — — —, discontinuities. *Bettazzi, R.* *Palermo Cir. Mt. Rd.* 6 (1892) 173-.
- — — —, geometric mean value. *Lemoyne, G.* *G. Mt.* 16 (1878) 209-.
- — — —, special class. *Study, E.* *Mth. A.* 46 (1896) 298-.
- — — —, theory. *Echols, W. H. A.* *Mth.* 8 (1893-94) 65-.
- two real variables. *Borel, É.* *Par. Ec. Norm. A.* 13 (1896) 79-.

- Functions of two real variables. *Biermann, O.* Mth. A. 48 (1897) 393-.
- — — — —, and the idea of arbitrary function. *Borel, É.* C. R. 121 (1895) 811-.
- — — — —, within a finite range. *Ascoli, G.* Mil. I. Lomb. Rd. 22 (1889) 317-, 438-, 686-, 804-.
- several real variables, differentiation and integration. *Bettazzi, R.* G. Mt. 22 (1884) 133-, 200.
- with recurring derivatives. *Sang, E.* [1866] Edinb. R. S. T. 24 (1867) 523-.
- , representation by a curve (strip). *Klein, F.* (viii) Erlang. Sb. Ps. Md. S. 6 (1874) 52-.
- Harmonic functions of two real variables and functions of a complex argument, oscillations in values. *Schottky, E.* Crelle J. Mth. 117 (1897) 225-.
- Homogeneous functions, extension of Euler's theorem. *Philip, W. E.* Edinb. Mth. S. P. 18 (1900) 101-.
- Implicit functions of a real variable. *Ingrami, G.* Bologna Rd. (1888-89) 108-.
- — — — —, transformation into explicit. *Cauchy, A. L.* C. R. 38 (1854) 944-.
- — — — —, monodromic and monogenous. *Cauchy, A. L.* C. R. 40 (1855) 878-.
- Integral polynomials of one variable. *Hermite, C.* N. Ts. Mth. 5 (B) (1894) 1-.
- Invariability of form. *Maizière, — de.* Gergonne A. Mth. 1 (1810-11) 368-.
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- Isobaric calculus. *Cesàro, E. N. A.* Mth. 3 (1884) 561-; 4 (1885) 59-, 578.
- Lagrange's "Théorie des Fonctions Analytiques," note. *Poisson, S. D.* Liouv. J. Mth. 2 (1837) 140-, 189-.
- — — — —, Poisson's. *Poinsot, L.* C. R. 4 (1837) 559-.
- Limits of functions. *Matzka, W.* Prag Sb. (1878) 262-.
- , superior, of functions, calculation. *Cauchy, A. L.* C. R. 15 (1842) 138-.
- Mean value, theorem. *Stringham, I.* As. S. Pac. Pb. 2 (1890) 100-; 3 (1891) 112.
- Ordered functions. *Somigliana, C.* Rm. R. Ac. Linc. Rd. 8 (1899) (Sem. 2) 125-.
- Principle, fundamental, elementary proof. *Manson, P. B. A.* Rp. (1876) (Sect.) 26-.
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- , general. *Ruffini, P.* [1806] Mod. S. It. Mm. 13 (1807) 292-.
- Rational functions, approximate square roots. *Bugaev, N. V.* [1881] (xii) Rec. Mth. (Moscow) 10 (1882-83) (Pt. 1) 524-.
- — — — —, elements of a theory. *Kraus, L.* Časopis 14 (1885) 49-; Fsch. Mth. (1885) 369-.
- Real non-analytic functions, development. *Painlevé, P.* C. R. 126 (1898) 459-.
- Reciprocal functions. *Cauchy, A. L.* Par. S. Phlm. Bll. (1818) 178-.
- Reciprocal relation of functions. *Raabe, J. L.* [1852] Zür. Mt. 3 (1853-55) 198-.
- Simple functions, gradation. *Oettinger, L.* Crelle J. 11 (1834) 75-, 173-; 12 (1834) 295-; 13 (1835) 292-.
- Singularities, new general condensation principle. *Cantor, G.* Mth. A. 19 (1882) 588-.
- Summatorial functions, properties. *Hill, C. J. D.* Sk. Nf. F. 8 (1860) 518-.
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- , *Stäckel, P.* Crelle J. Mth. 112 (1893) 311-.
- , inversion. *Kneser, A.* Mth. A. 45 (1894) 446-.
- Theorem. *Grolous, J.* Par. S. Phlm. Bll. 12 (1875) 95-.
- , *Tonelli, A.* A. Mt. 9 (1878-79) 173-.
- , *Poincaré, H.* Par. S. Mth. Bll. 11 (1883) 112-.
- , applications. *Krey, H.* Z. Mth. Ps. 26 (1881) 357-.
- on determination of u, v to satisfy $uf(x) + vF(x) = R$. *Cauchy, A. L.* Baumgartner Z. 1 (1826) 88-.
- Theorems. *Prym, F. E.* Crelle J. 71 (1870) 223-.
- , *Thomae, C. J.* Gött. Nr. (1878) 466-.
- , two, of Tchebitcheff's, generalisation. *Minine, A.* Les Mondes 55 (1881) 185-.
- Transformation of functions. *Deflers, —.* Par. S. Phlm. Bll. (1819) 161-.
- — —, *Nicholson, P.* Tilloch Ph. Mg. 62 (1823) 168-, 244-, 348-, 433-.
- — —, *Buquoy, G. von.* Oken Isis (1827) 130-.
- — —, *Collins, E.* St Pét. Ac. Sc. Mm. 1 (1831) 583-.
- — —, *Novi, G.* Tortolini A. 1 (1850) 517-.
- — —, *Schlämilch, O.* Liouv. J. Mth. 8 (1863) 99-.
- — —, general. *Boole, G.* Camb. and Dubl. Mth. J. 3 (1848) 112-.
- — — — — into isotropic means. *Cauchy, A. L.* C. R. 34 (1852) 159-; 43 (1856) 261-.
- — — — — by substitution. *Collins, E.* [1826] St Pét. Ac. Sc. Mm. 1 (1831) 181-.
- and simplification, methods by interpolation. *Richelmy, P.* [1855] Tor. Mm. Ac. 17 (1858) 245-.
- Weierstrass's function, $f(x) = \sum_{n=0}^{\infty} b^n \cos(a^n \pi x)$. *Wiener, L. C.* Crelle J. Mth. 90 (1881) 221-.
- $z = f(x, y)$, graphic representation. *Lalanne, L.* Par. S. Phlm. PV. (1843) 71-.
- $f(x)f(x+1) \dots f(x+h)$, value. *Gasparis, A. de.* Nap. Rd. 1 (1852) 199-.
- $F(x, y)$, when a function of $\phi(x, y)$, conditions. *Dienger, J.* Grunert Arch. 21 (1853) 219-.
- $f(x)$, Wronski's expansion. *Echols, W. H.* N. Y. Mth. S. Bll. 2 (1893) 178-.

3220 Infinite series; infinite products and other infinite processes. (See also 5610, 5620.)

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- Fontana, G. Verona S. It. Mm. 2 (1784) 386-.
- Paoli, P. Verona S. It. Mm. 4 (1788) 429-.
- Parseval, M. A. [1799] Par. Mm. Sav. Étr. 1 (1806) 638-.
- Bianchi, G. [1844] Mod. Mm. S. It. 23 (1846) 239-.
- Malmsten, C. J. Crelle J. 38 (1849) 1-.
- Dienger, J. Crelle J. 38 (1849) 266-, 331-.
- Tremoil, —. N. A. Mth. 9 (1850) 66.
- Björling, E. G. Stockh. Öfv. 10 (1853) 147-.
- Schlämilch, O. Schlämilch Z. 1 (1856) 180-; 5 (1860) 132-.
- Kinkelin, H. Bern Mt. (1858) 88-.
- Greer, H. R. QJ. Mth. 3 (1860) 262-, 370-.
- Isely, M. Neuch. Bil. 6 (1861-63) 356-.
- Cockle, Jas. [1863] (ii) Mess. Mth. 2 (1864) 196-.
- Lindman, C. F. Arch. Mth. Ps. 50 (1869) 219-.
- Enneper, A. Z. Mth. Ps. 15 (1870) 47-.
- Schlämilch, O. X. Leip. Mth. Ps. B. 29 (1877) 101-.
- Barbour, L. G. Des Moines Anal. 8 (1881) 191-.
- West, É. Liouv. J. Mth. 7 (1881) 111-.
- Catalan, E. C. Liège S. Sc. Mm. 12 (1885) No. 2, 148-, 152-, 206-, 282-, 294-.
- Cesáro, E. G. Teix. J. Sc. 7 (1886) 171-; 8 (1887) 15-.
- Biehler, C. N. A. Mth. 6 (1887) 243-.
- Gutzmer, A. G. Teix. J. Sc. 8 (1887) 81-.
- Studnička, F. J. Časopis 16 (1887) 81-; Fsch. Mth. (1887) 227.
- Weyr, E. G. Teix. J. Sc. 8 (1887) 97-.
- Catalan, E. Brux. Ac. Bil. 18 (1889) 41-.
- Tauber, A. Mh. Mth. Ps. 8 (1897) 273-.
- Absolutely summable series, series (M) and analytical continuation. Borel, É. C. R. 131 (1900) 830-.
- Algebraic series. Sidler, G. Zür. Vjschr. 1 (1856) 180-; Bern Mt. (1899) 13-.
- , new. Wallace, J. Silliman J. 7 (1824) 278-; 9 (1825) 98-.
- , — (Wallace). B. (vi Add.) Silliman J. 8 (1824) 131-; 9 (1825) 293-.
- Analytic series. Svanberg, J. Stockh. Ak. Hndl. 22 (1801) 30-.
- , —, genetic explanation. Barfuss, F. W. Grunert Arch. 8 (1846) 387-.
- Applications to arithmetic. Sardi, C. G. Mt. 7 (1869) 257-.
- Approximation to geometric means by series of arithmetical and harmonic means. Mathieu, J. J. A. N. A. Mth. 18 (1879) 529-.
- series. Meyer, A. N. Ts. Mth. 5 (B) (1894) 81-; 6 (B) (1895) 41-, 73-; Fsch. Mth. (1893-94) 241.
- Approximations and series. Houzeau, J. C. Brux. Ac. Bil. 41 (1876) 961-.

- Asymptotic values of certain series. Le Roy, É. Bil. Sc. Mth. 24 (1900) 245-.
- , —, infinite approximations, and order of infinity in solution of equations. Du Bois-Reymond, P. Mth. A. 8 (1875) 363-, 574-.
- Bernoulli's functions. Baraniecki, M. A. Krk. Ak. (Mt.-Prz.) Rz. 13 (1886) 183-; Fsch. Mth. (1885) 416.
- Binet's series, and products of a large number of factors. Gilbert, P. Brux. S. Sc. A. 10 (1886) (Pt. 2) 191-.

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- Ampère, A. M. Gergonne A. Mth. 15 (1824-25) 369-.
- Burg, A. Crelle J. 1 (1826) 367-; Wien Jb. Pol. I. 16 (1830) 171-.
- De Morgan, A. Camb. Mth. J. 3 (1843) 61-.
- Barfuss, F. W. Grunert Arch. 5 (1844) 155-; 7 (1846) 3-; 8 (1846) 387-.
- (Barfuss.) Schlämilch, O. Grunert Arch. 5 (1844) 437-; 10 (1847) 321-.
- Bianchi, G. [1844] Mod. Mm. S. It. 23 (1846) 239-.
- Terquem, O. N. A. Mth. 9 (1850) 459-.
- Heine, H. E. Crelle J. 55 (1858) 279-.
- Hinricks, G. Mth. Ts. 2 (1860) 38-.
- Janni, V. G. Mt. 12 (1874) 229-, 312.
- Lanza, G. Des Moines Anal. 1 (1874) 177-.
- Gohierre de Longchamps, —. N. A. Mth. 17 (1878) 101-.
- applications. Ferroni, P. [1801] Mod. S. It. Mm. 9 (1802) 291-.
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- , Knight, T. Phil. Trans. (1816) 331-; (1817) 245-.
- , Herapath, J. Thomson A. Ph. 13 (1819) 365-.
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- , Colburn, W. Bost. J. Ph. 2 (1825) 474-.
- , Strong, T. Silliman J. 12 (1827) 132-.
- , Crelle, A. L. Crelle J. 4 (1829) 305-; 5 (1830) 187-.
- , Cerquero, J. S. Quetelet Cor. Mth. 10 (1838) 202-.
- , Roche, —. N. A. Mth. 1 (1842) 42-, 118-.
- , Cox, H. Camb. and Dubl. Mth. J. 7 (1852) 98-.
- , Paque, A. Liège Mm. S. Sc. 10 (1855) 1-.
- , Macnie, J. Des Moines Anal. 7 (1880) 190-.
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- and generalisation. Eisenstein, G. Crelle J. 28 (1844) 44-; N. A. Mth. 8 (1849) 344-.
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—, approximate formulæ. *Åstrand, J. J.* *Grunert Arch.* 12 (1849) 420-.

—, properties derivable from. *Young, J. R.* *Ph. Mg.* 33 (1848) 268-.

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— or negative index, demonstration. *Anon.* (vi 1170) *Thomson A. Ph.* 7 (1816) 346-.

— — —, —. *Rodrigues, O.* *Liouv. J.* *Mth.* 3 (1838) 550-.

— — —, Euler's demonstration. *Muirhead, R. F.* *Edinb. Mth. S. P.* 17 (1899) 38-.

— — —, extension. *Davidov, A. Y.* (xm) *Rec. Mth.* (Moscou) 3 (1868) (Pt. 2) 1-.

— — —, historical note. *Terquem, O.* *N. A. Mth.* 6 (1847) 85-.

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— — —, two groups. *Weiss, E.* *Wien Ak. Sb.* 91 (1885) (Ab. 2) 587-.

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—, especially factorial coefficients, determination. *Schlömilch, O.* *Grunert Arch.* 18 (1852) 306-.

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— — —, multiplication. *Pringsheim, A.* *Mth. A.* 21 (1883) 327-.

— — —, —. *Voss, A.* *Mth. A.* 24 (1884) 42-.

— — — and products. *Pringsheim, A.* *Mth. A.* 22 (1883) 455-.

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Cauchy, A. L. *C. R.* 19 (1844) 141-, 157.

Malmsten, C. J. *Ups. N. Acta S. Sc.* 12 (1844) 255-.

Schultén, N. G. af (fil.) [1844] *Helsingf. Acta* 2 (1847) 733-.

Cauchy, A. L. *C. R.* 20 (1845) 126-.

Lebesgue, V. A. *N. A. Mth.* 4 (1845) 66-.

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Terquem, O. *N. A. Mth.* 5 (1846) 101-.

Timmermans, J. A. *Brux. Ac. Bll.* 13 (1846) 140-.

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Schlömilch, O. *Grunert Arch.* 14 (1850) 105-.

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Gilbert, P. *Brux. S. Sc. A.* 15 (1891) (Pt. 1) 69-.

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$$P = \frac{\sin x}{1 + 2y \cos x + y^2},$$

$$Q = \frac{y + \cos x}{1 + 2y \cos x + y^2}.$$

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$$(x^2 + ax + b)^{-(\mu+1)}.$$

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$$+ \beta_2 \phi'' x \cdot \frac{h^3}{1 \cdot 2 \cdot 3 \cdot 4} - \dots$$

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$$\int_0^\infty \left\{ \frac{a^n}{[n]} - \frac{a^{n-1}}{[n-1]} \frac{1}{\phi} + \frac{a^{n-2}}{[n-2]} \frac{1}{\phi^2} - \&c. \mp \frac{a^2}{[2]} \phi^{n-2} \right. \\ \left. \pm \frac{a}{\phi^{n-1}} \mp \frac{1}{\phi^n} \pm \frac{1}{\phi^n} e^{-a\phi} \right\} \times \frac{\sin \phi}{\phi} d\phi.$$

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$$\int_0^1 x^{p-1} (1-x)^{q-1} dx. \text{ Liouville, } J. \text{ Liouv. } J. \text{ Mth. } 2 \text{ (1857) 279.}$$

$$\int_0^\infty e^{-ax} e^{(x^2+bx)^{\frac{1}{2}}} dx. \text{ Popoff, } A. \text{ St Pét. Ac. Sc. Bll. } 15 \text{ (1857) 307-}.$$

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$$\int_0^\infty e^{uz} e^{-z} z^{-z} dz \text{ for calculation of series}$$

$$1 + \frac{u}{1} + \left(\frac{u}{2}\right)^2 + \left(\frac{u}{3}\right)^3 + \text{etc.}$$

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$$\int_0^\infty \frac{\sin^p x}{x^q} dx. \text{ Schlömilch, } O. \text{ Schlömilch } Z. 5 \text{ (1860) 286-}.$$

$$\int_0^1 \frac{(x^m-1) dx}{\log x}. \text{ Wolfers, } J. \text{ P. } \text{Grunert Arch. } 37 \text{ (1861) 245-}.$$

$$\int_0^\infty \frac{1-\cos^m x}{x^2} dx. \text{ Stefan, } J. \text{ Schlömilch } Z. 7 \text{ (1862) 356-}.$$

$$\int_0^\pi \cos^{a+b} \frac{1}{2} x \cos \frac{1}{2} x \cos \frac{1}{2} bx dx. \text{ Lindman, } C. F. \text{ [1864] } \text{Stockh. Öfv. } 21 \text{ (1865) 373-}.$$

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$$A = \int_0^\infty f\left(x + \frac{1}{x}\right) \arctan x \frac{dx}{x}. \text{ Liouville, } J. \text{ Liouv. } J. \text{ Mth. } 15 \text{ (1870) 7-}.$$

$$\int_0^\infty \frac{\cos bx}{a^2+x^2} dx. \text{ Glaisher, } J. \text{ W. } L. \text{ [1871] } \text{Mess. Mth. } 1 \text{ (1872) 35.}$$

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$$\int_0^\infty \frac{x^{a-1} dx}{1+x}. \text{ Walton, } W. \text{ [1871] } \text{QJ. Mth. } 12 \text{ (1873) 39-}.$$

$$\int_0^1 \frac{x^{m-1} - x^{-m}}{(1+x) \log x} dx. \text{ Walton, } W. \text{ [1872] } \text{QJ. Mth. } 12 \text{ (1873) 184-}.$$

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$$\int_0^\infty \sin x^2 dx \text{ and } \int_0^\infty \cos x^2 dx. \text{ Glaisher, } J. \text{ W. } L. \text{ [1872-75] } \text{QJ. Mth. } 13 \text{ (1875) 343-}.$$

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$$\int_{-\infty}^{+\infty} \int_{-\infty}^{+\infty} \phi(ax^m \pm by^n) x^{p-1} y^{q-1} dx dy.$$

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$$f(n) = B_1 \psi(n, 1) + B_2 \psi(n, 2) + \dots$$

where $f(n) = A_1 \phi(n, 1) + A_2 \phi(n, 2) + \dots$

and $\psi(n, k) = a_1 \phi(n, 1) + a_2 \phi(n, 2) + \dots$

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$$\text{— } \frac{a+bx+cx^2+\dots+px^n}{A+Bx+Cx^2+\dots+Px^n} \frac{dx}{\sqrt{(a+\beta x+\gamma x^2)}}.$$

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 Higher sines of 4th order

$$\left[\frac{z^\mu}{\mu!} \pm \frac{z^{\mu+n}}{\mu+n!} + \frac{z^{\mu+2n}}{\mu+2n!} \pm \dots (n=4) \right].$$

Kapteyn, J. C., & Kapteyn, W. *Amst. Ak. Vh. S4* (1886) 98 pp.
 — — — *n*th order. *Kapteyn, J. C., & Kapteyn, W.* *Wien Ak. Sb.* 93 (1886) (*Ab.* 2) 807-.
 Infinite group of rational integral functions

$$\left[R_n x = (-1)^n e^x \frac{d^n}{dx^n} (e^{-x} \cdot x^n) \right].$$

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 — transcendental functions, distribution of roots of class. *Bukriev, B. Ja.* [1893] *Rec. Mth.* (Moscou) 17 (1895) 217-; *Fsch. Mth.* (1893-94) 678.

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Recurring function $c_n = \sum_{\nu=0}^n (-1)^\nu \binom{n}{\nu} c_\nu$.

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$\sum \left(\frac{w^n}{\sin n\sigma\pi} + (-w)^n \frac{1}{\sigma} \cot \frac{m\pi}{\sigma} \right)$, new form of analytical expression. *Lerch, M.* *Prag České Ak. Fr. Jos. Rz.* (*Třída* 2) 9 (1900) *Art.* 6, 17 pp.; *Fsch. Mth.* (1900) 401-.

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$\frac{d^2 y}{dx^2} + F(x) \cdot y = 0$, and other equations. *Bras-sinne*, E. Toul. Mm. Ac. 2 (1846) 326-; 3 (1847) 204-; 1 (1863) 483-.

$$x^{n-1} (a_n + b_n x) y^{(n)} + x^{n-2} (a_{n-1} + b_{n-1} x) y^{(n-1)} + \dots + (a_1 + b_1 x) y' + b_0 y = 0.$$

Malmsten, C. J. *Crelle* J. 39 (1850) 99-.

$$y'' + \frac{y'}{x} + A x^m y = 0. \text{ } \textit{Malmsten}, C. J. \text{ } \textit{Crelle} J. 39 (1850) 108-.$$

$$\sum_{r=0}^{r=m} (a_r + b_r x^p) x^{(m-r)} y^{(m-r)} = \sum_{r=0}^{r=p} c_r x^{rp}. \text{ } \textit{Most}, R. Z. Mth. Ps. 15 (1870) 427-.$$

$$xy'' + ky' - y = 0. \text{ } \textit{Le Paige}, C. M. M. H. H. \text{ } \textit{Brux. Ac. Bll.} 41 (1876) 1011-.$$

$$x(1-x) \frac{d^2 y}{dx^2} + \left(\frac{2}{3} - \frac{7}{6}x\right) \frac{dy}{dx} + \frac{1}{48}y = 0, \text{ solution.}$$

Cockle, (Sir) *Jas. QJ. Mth.* 17 (1881) 293-.

$$x \frac{d^2 y}{dx^2} + \frac{dy}{dx} + y(x+A) = 0, \text{ from theory of reflexion of sound. } \textit{Sharpe}, H. J. \text{ } \textit{Mess. Mth.} 10 (1881) 174-.$$

$$x \frac{d^2 y}{dx^2} + \frac{dy}{dx} + y(x-A) = \frac{d}{dx} \cdot \frac{\cos(x+l)}{x+l}, \text{ from theory of sound. } \textit{Sharpe}, H. J. [1881] \text{ } \textit{Mess. Mth.} 11 (1882) 41-.$$

$$\frac{d^2 y}{dx^2} - (ae^x + 2) \frac{dy}{dx} + y = 0. \text{ } \textit{Florov}, P. S. \text{ } (\text{XII}) \text{ } \textit{Kharkov Mth. S. Com.} (1883) 127-; \text{ } \textit{Fschr. Mth.} (1884) 288.$$

$$(a + bx + cx^2) \frac{d^2 v}{dx^2} + (a + bx + cx^2) (a_1 + b_1 x) \frac{dv}{dx} + (a_0 + b_0 x + c_0 x^2) v = 0.$$

Heymann, W. *Z. Mth. Ps.* 28 (1883) 241-.

$$\frac{d^n u}{dx^n} = x^m u. \text{ } \textit{Florov}, P. S. \text{ } \textit{Kharkov Mth. S. Com.} (1885) 131-; \text{ } \textit{Fschr. Mth.} (1886) 302.$$

$$\frac{d^n \omega}{dx^n} = e^k \omega. \text{ } \textit{Florov}, P. S. \text{ } \textit{Kharkov Mth. S. Com.} (1887) 81-; \text{ } \textit{Fschr. Mth.} (1887) 337-.$$

4860 Integration of ordinary linear equations by definite integrals. (See also 4430.)

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$$x^n \frac{d^n y}{dx^n} + A_1 x^{n-1} \frac{d^{n-1} y}{dx^{n-1}} + A_2 x^{n-2} \frac{d^{n-2} y}{dx^{n-2}} + \dots + A_n y = f(x),$$

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—, method. *Petzval*, J. *Haidinger Ab.* 1 (1847) 177-.

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$$xy'' + (r+qx)y' + (p+nx+mx^2)y = 0. \text{ } \textit{Spitzer}, S. \text{ } \textit{Grunert Arch.} 23 (1854) 121-.$$

$$x^m \frac{d^n y}{dx^n} = \pm y. \text{ } \textit{Spitzer}, S. \text{ } \textit{C. R.} 48 (1859) 746-; \text{ } \textit{Crelle} J. 57 (1860) 82-.$$

$$x^m \frac{d^n y}{dx^n} = ay. \text{ } \textit{Spitzer}, S. \text{ } \textit{C. R.} 48 (1859) 995-.$$

$$y''' = xy'' - ny. \text{ } \textit{Spitzer}, S. \text{ } \textit{Schlömilch Z.} 7 (1862) 113-.$$

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$$y^{(n)} = Ax^2 y'' + Bxy' + Cy. \text{ } \textit{Spitzer}, S. [1870] \text{ } \textit{Mth. A.} 3 (1871) 453-.$$

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- physics, application of linear systems. *Larose, H. A. Tél.* 23 (1896-97) 259-.
- and pure analysis, relations. *Poincaré, H.* *Acta Mth.* 21 (1897) 331-.
- Mathematics, application to natural science. *Petzval, J.* *Wien Alm. (Anh.)* (1858) 187-.
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- , influence on physics. *Collins, E.* *St Pét. Ac. Sc. Rec.* (1837) 179-.
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- Periodic series. *Meyer, A.* [1850] *Crelle J.* 43 (1852) 60-.
- Physical data applicable to mathematics. *Rawson, R.* [1847] *Manch. Ph. S. Mm.* 8 (1848) 329-.
- Physics, principles of algebra of. *Macfarlane, A.* *Am. As. P.* (1891) 65-.
- Solution, general, of Maxwell's equations. *Birkeland, K.* *Arch. Sc. Ps. Nt.* 34 (1895) 5-.
- of problems of electricity by transformation of conjugate functions. *Maxwell, J. C.* [1871] (*viii*) *Camb. Ph. S. P.* 2 (1876) 242-.
- Theory of matrices, application to linear differential equations. *Brill, J.* *Camb. Ph. S. P.* 8 (1895) 201-.
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- Vector functions. *Burkhardt, H.* *Mth. A.* 43 (1893) 197-.
- and their applications to physics. *Élie, B.* *Bordeaux S. Sc. Mm.* 3 (1893) 1-.

5610 Harmonic analysis; Fourier's series. (See also 3220.)

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- (Conduction of heat.) *Fourier, J. B. J.* [1807-11] *Par. S. Phlm. N. Bl.* 1 (1807) 112-; *Par. Mm. Ac. Sc.* 4 (1824) 185-; 5 (1826) 153-.
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- Ascoli, G.* [1873-78] *A. Mt.* 6 (1875) 21-, 298-; *Rm. R. Ac. Linc. Mm.* 2 (1878) 584-.
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- Halphen, G. H. C. R.* 95 (1882) 1217-.
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- Gilbert, P. Brux. S. Sc. A. 8 (1884) (Pt. 2) 1-.
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- Calculation of Fourier and Bessel series. Dechevrens, M. Rm. N. Linc. Mm. 16 (1899) 149-; 17 (1900) 47-.
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- Expansion of discontinuous functions. Berger, A. Ups. S. Sc. N. Acta 15 (1895) No. 13, 33 pp.
- doubly periodic functions. Charlier, C. V. L. Stockh. Ak. Hndl. Bh. 12 (Afd. 1) (1887) No. 9, 24 pp.; Fsch. Mth. (1887) 448.
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$$0 = \sum_1^{2n-1} l_1 T_1^n \equiv H_n + \lambda H'_1.$$

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- Reciprocal surfaces. *Zeuthen, H. G. Mth. A.* 4 (1871) 633-.
- Riemann-Roch theorem extended to surfaces. *Noether, M. C. R.* 103 (1886) 734-.
- Ruled surfaces, double curve on. *Wiman, A. Acta Mth.* 19 (1895) 63-.
- — — of any genus. *Segre, C. Tor. Ac. Sc. At.* 22 (1886-87) 362-.
- — — with rational double curves. *Weyr, E. J.* [1881] *Wien Ak. Sb.* 84 (1882) (Ab. 2) 691-.
- — —, 4th degree, curves on. *Williams, F. B.* [1900] *Am. Ac. P.* 36 (1901) 17-.
- — —, 5th degree. *Schwarz, H. A.* [1866] *Crelle J.* 67 (1867) 23-.
- Singular lines of surfaces, generic points. *Levi, B. A. Mt.* 2 (1899) 127-.
- points. *Guccia, G. B. C. R.* 105 (1887) 741-.
- — —. *Del Pezzo, P. Palermo Cir. Mt. Rd.* 6 (1892) 139-.
- — —, decomposition. *Segre, C. Tor. Ac. Sc. At.* 32 (1896) 521- or 781-; 33 (1897) 19-; *A. Mt.* 25 (1897) 1-.
- — — (Segre). *Del Pezzo, P. Nap. Ac. Pont. At.* 27 (1897) No. 4, 13 pp., No. 10, 7 pp.
- — —, resolution. *Levi, B. Tor. Ac. Sc. At.* 33 (1897) 56- or 66-.
- Singularities, reduction by birational transformations of space. *Pannelli, M. A. Mt.* 25 (1897) 67-.
- Skew curve, 4th degree, automorphic transformation, and correlation with developable of osculating planes. *Del Re, A. Tor. Ac. Sc. At.* 22 (1886-87) 901-.
- — —, correlations changing into developable of bitangent planes. *Del Re, A. Nap. Rd.* 26 (1887) 167-.
- — —, developable quartics and sextics occurring in automorphic transformation of. *Del Re, A. Nap. Rd.* 27 (1888) 37-.
- curves on hyperboloid of one sheet. *Cremona, L. C. R.* 52 (1861) 1319-.
- — — — —. *Chasles, M. C. R.* 53 (1861) 1077-, 1203-.
- — — surface of 3rd degree. *Clebsch, R. F. A. C. R.* 62 (1866) 1114-.
- — — surfaces. *Jonquières, E. de.* [1862] (VIII) *A. Mt.* 5 (1863) 24-.
- — — of 3rd and 4th degrees. *Rohn, K. Leip. Mth. Ps. B.* 46 (1894) 84-; 49 (1897) 631-.
- surfaces of given degree, maximum genus. *Bobek, K. Wien Ak. Sb.* 96 (1888) (Ab. 2) 1024-.
- — —, 2nd degree, homographic systems of points on. *Townsend, R.* [1867] *QJ. Mth.* 9 (1868) 249-, 296-.
- Surface, 3rd degree, representation on plane. *Dumont, F. N. A. Mth.* 15 (1896) 318-.
- — —, 6th degree, genus -1. *Noether, M. Mth. A.* 21 (1883) 399-.
- — —, 8th degree, genus 0. Systems of straight lines passing through given straight line. *Aschieri, F. G. Mt.* 12 (1874) 129-.
- — —, ($n-4$)th degree, passing through double curve of surface, constancy of number of coefficients. *Clebsch, R. F. A. C. R.* 67 (1866) 1238-.

8040 Groups of Points

- Surface $z^2=f(xy)$, double planes with $p^{(1)}=1$.
Enriques, F. Rm. R. Ac. Linc. Rd. 7 (1898) (Sem. 1) 234-, 253-.
- Surfaces admitting doubly infinite system of plane reducible sections. *Castelnuovo, G.* Rm. R. Ac. Linc. Rd. 3 (1894) (Sem. 1) 22-.
- and algebraic groups, theory. *Picard, É.* C. R. 120 (1895) 658-.
- containing curves of certain genus. *Castelnuovo, G., & Enriques, F.* C. R. 131 (1900) 739-.
- with double circular generation, determination. *Cosserat, E.* C. R. 130 (1900) 311-.
- on which families of conics lie. *Weiler, A.* Zür. Vjschr. 29 (1884) 223-.
- , genus 0. *Tognoli, O.* G. Mt. 11 (1873) 180-.
- , —. *Castelnuovo, G.* Rm. S. It. Mm. 10 (1896) 103-.
- , —, special configurations on. *Brunel, G.* [1899] Bordeaux S. Sc. PV. (1899-1900) 2-.
- , $p=0$, representation on plane. *Armenante, A.* [1869] A. Mt. 4 (1870-71) 50-.
- , linear genus $p^{(1)}=2$. *Enriques, F.* Rm. R. Ac. Linc. Rd. 6 (1897) (Sem. 1) 139-.
- , $p^{(1)}=3$. *Enriques, F.* Rm. R. Ac. Linc. Rd. 6 (1897) (Sem. 1) 169-.
- with plane sections elliptic curves. *Castelnuovo, G.* Rm. R. Ac. Linc. Rd. 3 (1894) (Sem. 1) 59-.
- — hyperelliptic curves. *Castelnuovo, G.* Palermo Cir. Mt. Rd. 4 (1890) 73-.
- — rational. *Picard, É.* Par. S. Phlm. Bil. 2 (1878) 127-; *Crelle J. Mth.* 100 (1887) 71-.
- —. *Guccia, G. B.* Palermo Cir. Mt. Rd. 1 (1887) 165-.
- — points corresponding, fundamental points of 2. *Zeuthen, H. G.* C. R. 70 (1870) 742-.
- —, properties. *Zeuthen, H. G.* Mth. A. 4 (1871) 21-.
- — rational generators, class. *Humbert, G.* C. R. 116 (1893) 1350-.
- , representation on plane. *Clebsch, R. F. A.* Gött. Nr. (1870) 253-.
- , 2nd degree, curves on. *Halphen, G. H.* [1872] (x) Par. S. Mth. Bil. 1 (1873) 19-.
- —. *Schoute, P. H.* As. Fr. C. R. (1879) 180-.
- —, application of binary forms. *Laquerre, E.* [1872] (x) Par. S. Mth. Bil. 1 (1873) 31-.
- —, —, hyperboloidal coordinates. *Cayley, A.* Ph. Mg. 22 (1861) 35-.
- , 3rd degree. *Clebsch, R. F. A.* [1865-69] *Crelle J.* 65 (1866) 359-; *Mth. A.* 1 (1869) 634-.
- —, curves on. *Sturm, R.* Mth. A. 21 (1883) 457-.
- , 3rd and 4th degrees, Steiner's surface. *Küpper, K.* Prag Ab. 2 (1888) No. 10, 11 pp.
- Tacnodal points. *Korteweg, D. J.* Wien Ak. Sb. 98 (1890) (Ab. 2a) 1154-.
- Transformation of figures in space, method. *Vaněček, J. S.* C. R. 94 (1882) 1463-, 1583-.

Transcendental Functions 8050

- Transformation of figures in space, method. *Vaněček, J. S., & Vaněček, M. N.* C. R. 95 (1882) 1049-, 1146-; 96 (1883) 1714-, 1773-.
- — rational surfaces. *Cayley, A.* [1870] *Mth. A.* 3 (1871) 469-.
- — surfaces, automorphic. *Picard, É.* C. R. 103 (1886) 517-.
- —, —, and a fundamental number in theory of surfaces. *Picard, É.* C. R. 103 (1886) 549-.
- —, and a class of differential equations. *Picard, É.* C. R. 103 (1886) 635-.
- Transformations, birational automorphic, surfaces with continuous group of. *Castelnuovo, G., & Enriques, F.* C. R. 121 (1895) 242-.
- —, —, —. *Painlevé, P.* C. R. 121 (1895) 318-.
- —, surfaces admitting double infinity. *Picard, É.* C. R. 103 (1886) 730-.
- , bi-uniform, of surfaces. *Painlevé, P.* C. R. 122 (1896) 874-.
- , rational, of space, determined by general surface of 3rd degree. *Loria, G.* Tor. Ac. Sc. At. 26 (1891) 275-.
- Uniform functions of 2 points, invariant by rational transformations. *Appell, P.* C. R. 96 (1883) 1643-.

8050 Application of transcendental functions to algebraic curves. (See also 4040, 4060, 7660.)

- Abelian functions and curves of any genus. *Buchheim, A.* L. Mth. S. P. 13 (1882) 180-.
- —, genus 3. *Amstein, H.* Laus. S. Vd. Bil. 24 (1889) 99-.
- — integrals and curves of 4th degree with 1 double point. *Roberts, W. R. W.* L. Mth. S. P. 25 (1894) 151-.
- —, genus $p=2$, periods. *Kępiński, S.* Prace Mt.-Fiz. 9 (1898) 139-; *Fschr. Mth.* (1898) 392.
- — and plane curves. *Lindemann, C. L. F.* [1877] *Œrelle J. Mth.* 84 (1878) 294-, 300-.
- —, 1st species, plane curves rectifiable by. *Brodén, T.* Stockh. Ak. Hndl. Bh. 15 (Åfd. 1) (1890) No. 5, 26 pp.
- — and uniform correspondences on elliptic curves. *Patrassi, P.* G. Mt. 34 (1896) 195-.
- Abel's theorem, applications. *Michel, C.* C. R. 130 (1900) 885-.
- —, — to conics. *Léauté, H.* C. R. 79 (1874) 93-, 602-; *Toul. Ac. Sc. Mm.* 8 (1876) 139-.
- —, extension to skew curve. *Poincaré, H.* C. R. 100 (1885) 40-.
- Conchalic curves, trajectories and cissoids of 4th degree. *Huber, G.* Mh. Mth. Ps. 6 (1895) 157-.
- Conics, porism of 2. *Gundelfinger, S.* *Crelle J. Mth.* 83 (1877) 171-.
- Curves whose corresponding Abelian functions are of class $p=2$. *Clebsch, R. F. A.* [1868] *Mth. A.* 1 (1869) 170-.

8060 Transcendental Functions

- Abelian functions and Weddle quartic surface. *Caspary, F.* Bl. Sc. Mth. 15 (1891) 308-.
- Abel's theorem and surface generated by translation of curves. *Lie, S.* C. R. 114 (1892) 277-.
- translation surfaces. *Lie, S.* Leip. Mth. Ps. B. 48 (1896) 141-.
- varieties. *Lie, S.* Leip. Mth. Ps. B. 49 (1897) 181-.
- Addition theorem of hyperelliptic integrals and functions of 1st order, significance for conical quadrics. *Staude, E. O.* Mth. A. 22 (1883) 1-, 145-.
- Analysis situs, and integrals of total differentials. *Picard, É.* C. R. 124 (1897) 532-.
- Cyclics and cyclides. *Darboux, G.* C. R. 68 (1869) 1311-; Bordeaux Mm. S. Sc. 8 (1870) 291-; 9 (1873) 1-.
- Elliptic functions, application to spherical polygons in one small circle and about another. *Richelot, F. J.* Crelle J. 5 (1829) 250-.
- integrals, minimal surfaces representable by. *Lilienthal, — von.* Crelle J. Mth. 99 (1886) 179-.
- ruled surfaces in n -dimensional space. *Segre, C.* Tor. Ac. Sc. At. 21 (1885) 868-.
- Groups and surfaces, theory. *Picard, É.* Palermo Cir. Mt. Rd. 9 (1895) 244-.
- Hessian of cubic surface. *Hutchinson, J. I.* N. Y. Am. Mth. S. Bl. 5 (1899) 282-; 6 (1900) 328-.
- Hyperabelian functions and surfaces representable by them. *Humbert, G.* C. R. 129 (1899) 667-.
- Hyperboloid of one sheet, and other ruled surfaces connected with it. *Schoenflies, A.* Z. Mth. Ps. 23 (1878) 269-; 24 (1879) 62-.
- Hyperelliptic canonical curves, surfaces with. *Enriques, F.* Rm. R. Ac. Linc. Rd. 5 (1896) (Sem. 1) 191-.
- functions, reduction of problem of 27 lines of cubic surface to transformation of. *Burkhardt, H.* Gött. Nr. (1892) 1-.
- representation of Kummer's surface by. *Reichardt, W.* Ac. Nt. C. N. Acta 50 (1887) 373-.
- — — quartic surfaces with double conic by. *Domsch, P. R.* Arch. Mth. Ps. 2 (1885) 193-, 225-.
- surfaces, general theory. *Humbert, G.* Liouv. J. Mth. 9 (1893) 29-, 361-.
- Periods of double integrals, and 2-dimensional cycles on algebraic surfaces. *Picard, É.* C. R. 126 (1898) 1457-.
- Theta functions of 2 variables and corresponding Kummer's surface. *Schleiermacher, L.* Mth. A. 50 (1898) 183-.
- and Weddle quartic surface. *Caspary, F.* C. R. 112 (1891) 1356-.
- Total differentials of 1st kind. *Noether, M.* Erlang. Ps. Md. S. Sb. 18 (1886) 11-.
- — — integrals, quartic surfaces admitting. *Berry, A.* Camb. Ph. S. T. 18 (1900) 333-.
- Transformations of surfaces, automorphic. *Poincaré, H.* C. R. 103 (1886) 732-.

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- Unicursal surfaces, general theory. *Humbert, M. G.* Mth. A. 45 (1894) 428-.
- Uniform functions of 2 parameters, surfaces with coordinates expressed by. *Picard, É.* Par. S. Mth. Bl. 28 (1900) 17-.

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- Schubert, H. C. H.* Mth. A. 10 (1876) 1-; 13 (1878) 429-; 15 (1879) 529-.
- Jonquières, E. de.* C. R. 106 (1888) 234-, 437.
- Kluyver, J. C. N.* Arch. Wisk. 18 (1891) 125-.
- Adjoint curves and special series. *Amodeo, F.* Nap. Rd. 35 (1896) 316-.
- minimal curves. *Amodeo, F.* Rm. R. Ac. Linc. Rd. 2 (1893) (Sem. 1) 460-, [601].
- Algebraic form, certain, and its geometrical representation. *Cotterill, T.* [1872] L. Mth. S. P. 4 (1871-73) 139-.
- Arbitrary points which can be double on curve or surface, maximum number. *Campbell, J. E.* Mess. Mth. 21 (1892) 158-.
- Bezout's theorem, geometrical extensions. *Schubert, H. C. H.* Gött. Nr. (1877) 401-.
- Bitangents of curve of nth degree. *Jacobi, C. G. J.* Crelle J. 40 (1850) 237-.
- — — — — (Jacobi). *Rubini, R.* Tortolini A. 2 (1851) 463-.
- — — — — (—). *Clebsch, R. F. A.* [1863] (vii) Crelle J. 63 (1864) 186-.
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- Branch points of any singularity of plane curve. *Bertini, E.* Mil. I. Lomb. Rd. 23 (1890) 307-.
- Branches of curves, real. *Hilbert, D.* Mth. A. 38 (1891) 115-.
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- Characteristics, Chasles's theorem. *Hurwitz, A., & Schubert, H.* Gött. Nr. (1876) 503-.
- of conics. *Halphen, G. H.* L. Mth. S. P. 9 (1877-78) 149-.
- — — — — *Study, E.* Mth. A. 27 (1886) 58-.
- — — — — (Study). *Zeuthen, H. G.* Mth. A. 37 (1890) 461-.
- — — and quadrics. *Halphen, G.* C. R. 76 (1873) 1074-.
- — — — — Cremona's formula. *Study, E.* Mth. A. 27 (1886) 102-.
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- Desargues and enumerative geometry. *Loria, G.* Bb. Mth. (1895) 51-.
- n -dimensional generalisations. *Schubert, H.* Mth. A. 26 (1886) 26-.
- geometry. *Schubert, H.* D. Nf. Vh. (1895) (Th. 2, Hälfte 1) 18-.
- , problem. *Pieri, M.* G. Mt. 30 (1892) 133-.
- linear spaces. *Schubert, H.* Acta Mth. 8 (1886) 97-.
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- , general enumerative functions for. *Schubert, H.* Mth. A. 45 (1894) 153-.
- p -dimensional space, 1st and 2nd degrees. *Schubert, H.* [1891] D. Mth. Vr. Jbr. 1 (1892) 48-.
- q -dimensional geometry, problem. *Tantruri, A.* Tor. Ac. Sc. At. 35 (1900) 269- or 427-.
- Double points, apparent, of skew curves. *Brunn, H.* [1893] D. Mth. Vr. Jbr. 3 (1894) 84-.
- of curve, maximum number. *Jonquière, E. de.* C. R. 105 (1887) 917-.
- surface, maximum number. *Jonquière, E. de.* C. R. 106 (1888) 19-.
- Envelopes of surfaces, degree. *Moutard, T.* N. A. Mth. 19 (1860) 58-.
- Excesses of systems of curves adjoint to algebraic curves, determination. *Amodeo, F.* Nap. Rd. 39 (1900) 224-.
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- Genus of certain set of curves. *Zeuthen, H. G.* Palermo Cir. Mt. Rd. 3 (1889) 171-.
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- Intersecting "branches" of curve. *Tantruri, A.* A. Mt. 4 (1900) 67-.
- Intersection of curves. *Cayley, A.* Camb. Mth. J. 3 (1843) 211-; Mth. A. 30 (1887) 85-.
- , theorem (Cayley). *Bacharach, I.* Mth. A. 26 (1886) 275-.
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- , inscriptions, etc., of curves. *Estienne, J. E.* N. A. Mth. 4 (1885) 87-, 131-, 297-.
- of 2 plane curves, multiplicity. *Brill, A.* Münch. Ak. Sb. 18 (1889) 81-.
- Maximum class of curves and ruled surfaces. *Küpper, C.* Mth. A. 31 (1888) 291-.
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- points of curves. *Coste, L. M. P.* Liouv. J. Mth. 7 (1842) 184-.
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- Multiple points of curves, maximum number. *Schoute, P. H.* Amst. Ak. Vs. M. 13 (1878) 96-.
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- and surfaces, difference in relation to number. *Jonquière, E. de.* C. R. 106 (1888) 156-.
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- , double, of skew curve, number. *Pieri, M.* Rm. R. Ac. Linc. Rd. 2 (1886) (Sem. 1) 327-.
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- Pencils of surfaces, oblique Jacobian, etc. *Rindi, S.* As. Fr. C. R. (1885) (Pt. 2) 123-.
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- groups, determination from their polars. *Waelsch, E.* [1883] Wien Ak. Sb. 88 (1884) (Ab. 2) 1039-.
- pairs in 2 planes or spaces, multiplicity. *Segre, C.* Palermo Cir. Mt. Rd. 5 (1891) 192-.
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- — skew curves. *Guccia, G. B. C. R.* 120 (1895) 816-.
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- — — — — 4 or fewer multiple points in common. *Saltel, L. Brux. Ac. Bil.* 40 (1875) 22-.
- — —, relation. *Klein, C. F. Erlang. Ps. Md. S. Sb.* 8 (1876) 95-; *Mth. A.* 10 (1876) 199-.
- — locus defined by k algebraic equations containing $k-1$ parameters. *Saltel, L. Brux. Ac. Bil.* 48 (1879) 632-.
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- — —, compound. *Guccia, G. B. Palermo Cir. Mt. Rd.* 3 (1889) 241-.
- — —, higher. *Cayley, A. Crelle J.* 64 (1865) 369-; *QJ. Mth.* 7 (1866) 212-.
- — —, —. *La Gournerie, J. de. Liouv. J. Mth.* 14 (1869) 425-; 15 (1870) 1-.
- — —, nature and effect. *Scott, (Miss) C. A. Am. J. Mth.* 15 (1893) 221-.
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- — —. *Fine, H. B. Am. J. Mth.* 8 (1886) 156-.
- — — and characteristics of polar developables. *Björling, C. F. E. Stockh. Öfv.* 38 (1881) No. 4, 3-.
- Skew curves, complete representation. *Vahlen, K. T. Crelle J. Mth.* 108 (1891) 346-.
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- — —. *Bischoff, J. N. Crelle J.* 59 (1861) 394-.
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- Theorems. *Chasles, M. C. R.* 81 (1875) 253-, 355-, 643-, 993-, 1221-; 82 (1876) 1399-; 83 (1876) 97-, 467-, 495-, 519-, 589-, 641-, 757-, 867-, 1123-, 1195-.
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- , quadratic plane. *Retali, V. Bologna Ac. Sc. Mm.* 10 (1889) 653-.
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8075 Special configurations of points, lines, planes or other elements. Space partitioning. (See also 3620, 6820, 7210, 7610, 7640.)

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- Bitangents of curve of 4th degree. *Geiser, C. F.* Mth. A. 1 (1869) 129-; *Crelle J.* 72 (1870) 370-.
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- 11₃. *Daubelsky von Sterneek, R.* Mh. Mth. Ps. 5 (1894) 325-; 6 (1895) 255.
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$$\int_0^\infty [f(\sin \alpha x, \cos \alpha x) - f(\sin \beta x, \cos \beta x)] \frac{dx}{x} \\ = \frac{1}{2} \log \left(\frac{\beta}{\alpha} \right) [f(\sin 0, \cos 0) - A_0].$$

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$$\int_0^\infty \frac{x^{m-1} - 1}{1 - x^2} dx = \frac{\pi}{2} \cot \frac{m\pi}{2} \text{ if } 2 > m > 0.$$

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$$\int_0^\pi (2 \cos x)^{a+b} \cos(a-b)x dx. \text{ Lipschitz, R. O. S.} \\ \text{Bll. Sc. Mth. As. 5 (1881) (Pt. 1) 387-}.$$

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