Catalogue 310

History of Science

*Scientific books arranged in two parts*

Selections from the Personal Libraries:

**Roger Hahn**
Professor of History, University of California, Berkeley

**Norman Harold Horowitz**
Geneticist, California Institute of Technology

**David Charles Lindberg**
Hilldale Professor Emeritus of History of Science,
University of Wisconsin, Madison

**‘Bram’ Pais**
Professor of Physics, Rockefeller University

**Doris T. Zallen**
Professor of Science & Technology Studies, Virginia Tech

*Jeff Weber - Rare Books*

Montreux & Neuchâtel

Switzerland
FIRST EDITIONS. “The aim of the present paper is to extend Daniel Bernoulli’s method of approximating to the numerically greatest root of an algebraic equation. On the basis of the extension here given it now becomes possible to make Bernoulli’s method a means of evaluating not merely the greatest root, but all the roots of an equation, whether real, complex, or repeated, by an arithmetical process well adapted to mechanical computation, and without any preliminary determination of the nature or position of the roots. In particular, the evaluation of complex roots is extremely simple, whatever the number of pairs of such roots. There is also a way of deriving from a sequence of approximations to a root successive sequences of ever-increasing rapidity of convergence.” – Cambridge Univ. Press.

A. C. Aitken, of the Mathematical Institute, University of Edinburgh, made important contributions in the field of numerical analysis, powerful methods for the solution of general mathematical problems in numerical terms. These methods, in turn, provided the logical basis for modern computers. A practical method for finding a numerical value of \( f(x) \), for a given value of \( x \), when several values of \( x \) and \( f(x) \) are known, as Aitken’s process of iteration. These methods are well adapted to computing machinery. It consists of an iteration of the familiar process of linear interpolation. These and other methods, such as that in Aitken’s paper on Bernoulli’s method for solving algebraic equations, are offered here. Engineering
2. **BIOT, Jean-Baptiste** (1774-1862). *Traite de Physique Expérimentale et Mathématique*. Paris: Chez Deterville, 1816. 4 volumes. 8vo. lxvi, 538, [2]; [iv], 551, [1]; [iv], 516; [iv], 780, [2] pp. 4 errata sheets (final leaf of each vol.), 22 engraved (by Adam) folding plates (including II and “II bis” in vol. I), 5 folding tables (I: facing p. 158; II: 2 tables facing p. 262; IV facing pp. 542 + 730), 4 placement green ribbons; mild staining (most prominent at preliminaries and rear leaves, burn hole at IV pp.737/8 – touching one letter on recto). Contemporary quarter gilt-stamped calf, marbled boards, vellum tips, edges speckled; joints cracked, spine ends worn, vol. IV with small part of head chipped and laid on. Generally very good. Bookplate of Sydney Ross. RARE. [S13842] $ 325

First edition of “Biot’s *TRAITE DE PHYSIQUE* (1816) constitutes a comprehensive account of contemporary physics, including not only recent original research by himself (e.g. on polarization) but also the recent and often unpublished work of his associates, particularly Laplace, Gay-Lussac, and Dulong.” – Crosland in *DSB*. 

Jean-Baptiste Biot was a French physicist, astronomer, and mathematician. He was able to prove the extraterrestrial origins of meteorites which had been doubted up to this period. With Gay-Lussac, he participated in the first scientific balloon flight in 1804, and, with the present work, studied optics and the polarization of light. “His work in chromatic polarization and rotary polarization greatly advanced the field of optics, although it was later shown that his findings could also be obtained using the wave theory of light.” – see: Eugene Frankel, “Corpuscular Optics and the Wave Theory of Light: The Science and Politics of Revolution in Physics.” Social Studies of Science, vol. 6, no 2. May 1976.

PROVENANCE: Dr. Sydney Ross (1915-2013), born in Scotland, took his degree in analytical chemistry from McGill University (1936). “In 1940, he earned a PhD in chemistry from the University of Illinois, studying x-ray diffraction under George Clark and completing a dissertation on foams and brewing that derived from Clark’s consulting work with the Schlitz Brewing Company . . . From a faculty appointment at Monmouth College, Illinois, Ross was called to postdoctoral study under James McBain at Stanford University, investigating the foaming of aircraft-lubricating oil and other military subjects. During this time he matured into a physical chemist with a special interest in colloidal phenomena, identifying himself henceforth as a colloid chemist. . . . In 1948, Ross landed an associate professorship at Rensselaer Polytechnic Institute, becoming a full professor in 1952, an active emeritus in 1980, and a retired emeritus in 1994. During that tenure he wrote 4 books, edited 3 more, published over 150 papers, and mentored more than 30 doctoral students.” Emeritus Professor of Colloid Chemistry at Rensselaer Polytechnic Institute. “During his early education at the High School of Glasgow, Ross developed an enthusiasm for the writings of Victorian sage John Ruskin, an avocation that led over the years to collections of many rare books, literary and scientific. In 1981, he donated his Ruskin letters collection to the Rush Rhees Library of the University of Rochester, and in 2001, he published The Catalogue of the Herschel Library, a listing of the books owned by astronomers William and John Herschel, the bulk of which he had purchased at auction. In 1977, Ross founded and endowed the James Clerk Maxwell Foundation to promote education in the physical sciences and to honor famed Edinburgh native James Clerk Maxwell.” – See: BEVAN, Ernest, Jr. & David RIEDE (compilers). The Sydney Ross Collection of John Ruskin; a Catalogue of an Exhibition Held in the Department of Rare Books, Manuscripts and Archives Rush Rhees Library University of Rochester. 15 February-15 May 1981. [Web sources].

□ DSB II, pp. 133-140 by M.P. Crosland.

$ 1,250

FOURTH EDITION. This work divides minerals into four orders and under these are classes based on physical and chemical properties.

“The first edition of his *Tableau Méthodique des Minéraux* appeared in 1784. While they display no great originality, Daubenton’s teaching and writings on mineralogy contributed significantly to the spreading of current knowledge of the subject. It was, moreover, under Daubenton’s patronage that Hauy began his career.” – DSB.

Duveen describes this as “a rare work, the pages of which, being printed on one side only, were presumably intended to be stuck on boards and made up into large tables.”

Louis Daubenton was professor of Natural History at the College de France and professor of mineralogy at the Museum of Natural History in Paris.
Deleuze (1753-1835), a prominent member of the “Mesmer movement,” discusses in this work “aspects such as the magnetic fluid, healing, problems and dangers of mesmerism, and personally observed phenomena” (Alvarado 116). “Deluze [sic] is a central figure in the history of animal magnetism. . . He was impressed with the demonstration (of somnambulism) and began to pursue his own study of animal magnetism. . . The Histoire is Deleuze’s first work on animal magnetism and is one of the most important ever written on the subject. . . The Histoire is about as balanced a treatment as one could find from a man who was engaged in a daily practice of that art” (Crabtree 267). / An excerpt (trans.): “The magnetiser can
communicate his fluid to many objects, and these objects become either the conductors of his action, or proper instruments of its transmission, and produce magnetic effects upon persons with whom he is in communication” (Deleuze 212 in Alvarado 121).


5. **DEMONFERRAND, Jean-Fermin.** *Manuel d’Electricité Dynamique, ou Traité sur l’action mutuelle des conducteurs électriques et des aimans, et sur une nouvelle théorie du magnétisme ; pour faire suite à tous les Traité de Physique élémentaire.* Paris: Bachelier, 1823. 8vo. 8.25 x 5.25 inches. [4], 210, [2] pp. It appears that this work was issued in two printings in 1823. There is no mention of two issues in any reference work, so we can only guess which issue is the first. Some institutional copies (such as the Wheeler copy) are numbered to page 210 (like ours) and in those copies the address of the
This work was translated into English by James Cumming in 1872 as *A Manual of Electro Dynamics, or, Treatise on the Mutual Action of Electric Conductors and Magnets*. Scarce first edition of the first textbook on electrodynamics to incorporate the newly made discoveries of Ampere and Oersted (Bakken 174; Poggendorff, 548). Demonferrand’s *Manuel d’Electricité Dynamique* illuminates the “fundamental phenomena and laws of electro-dynamics” and represents a first, important, and comprehensive treatment (written in scientific and mathematical language) of Ampere’s theory of electromagnetism (Wheeler 797).

“Demonferrand’s account is more informative in some other respects than either of the previous written versions. . . The notion of an equilibrium is reported here for the first time, yet it agrees with a much later account given by Ampere himself in 1833. Furthermore, Demonferrand indicated. . . that the object of [one of his] experiment[s] was to throw light on the question of whether electric currents already exist in iron when it is in the unmagnetized condition, or if they are brought into being as a result of magnetization. The result of the experiment did not settle this question. . . But once again we find Demonferrand anticipating a later statement (1833) by Ampere of his objective in performing the experiment. . . Some years later, after the publication of Faraday’s discovery, the history of this experiment suddenly acquired some importance” (Ross 92).

“Demonferrand’s account of the Ampere-de La Rive experiment has a certain precision of description that suggests he may have derived it in part from Ampere himself; it is, at all events, a more explicit account than any previously published. . . Ampere, himself, promoted Demonferrand’s work, sending many copies of Manuel d’Electricité Dynamique abroad, including one to Michael Faraday” (Ross 90). Demonferrand (1795-1844) was a pupil of Ampere and a professor of mathematics and physics at the Colege Royale in Versailles. In this work, he describes many of Ampere’s theories, supplemented with experimental research and theories of his own.

Three papers: On the Magnetic Moments of Atomic Nuclei. 2. On the Calculation of the Ionic Spectra. 3. The Raman Effect in Molecules and Crystals. AN IMPORTANT GROUP OF ORIGINAL FERMI OFFPRINTS that includes the key work *SUI MOMENTI MAGNETICI DEI NUCLEI ATOMICI*, which forms an important step in the development of the theory of nuclear magnetism. This was “the first of five papers on nuclear physics, in which Fermi investigated the theory of the hyperfine structure of spectral lines (first proposed by Pauli in 1923) and the nuclear magnetic momenta demonstrating that the nuclear magnetic moment was not of the order of magnitude of the Bohr magneton, as had been previously supposed, but was only 1/1000 of the magnitude of the Bohr magneton.” – Norman Library, no. 779.
Fermi was awarded the Nobel Prize for physics in 1938, and later (while working on the Manhattan Project) led the team that built the first atomic pile.

PROVENANCE: Abraham Pais (1918-2000) was a Dutch-American physicist and science historian. Pais earned his Ph.D. from University of Utrecht just prior to a Nazi ban on Jewish participation in Dutch universities during World War II. He was a physics professor at Rockefeller University until his retirement. His writings on the history of 20th century physics include his personal relationships with leading figures of physics: Einstein, Oppenheimer, Niels Bohr, Max Born, Paul Dirac, George Uhlenbeck, etc.

See: Gribbin, Q is for Quantum; DSB IV; Pais, Inward Bound; Norman Library, no. 779, 780, & 781. See: Samuel K. Allison, Enrico Fermi, National Academy of Sciences, 1957.
LA LUNE

par

AMÉRÉ GUILLÉMIN

OUVRAGE HISTORIQUE

de 2 gravures plongées dans l'eau brute

et de 48 planches

PARIS

LIBRAIRIE DE L'AGACETTE ET C.

IMPRIMÉS PAR JANET, n° 77

1864

Tous droits réservés

French astronomer Jacques Crovisier, from the Observatoire de Paris, suggested that Guillemin may have been a source of inspiration for Jules Verne’s 1865 novel, *From the Earth to the Moon*.

First edition. Klugel based his writings on that of Leonhard Euler (1707-1783) (to whom the book is dedicated) dedicated and his famous work on optics. In his parts VII and VIII he deals with the telescope and especially the microscope.

Euler’s own work on the theory of the achromatic microscope was written as early as 1762 and 1771, when he dealt with the subject more fully. In 1774, Euler’s pupil and friend, Nicolas Fuss, wrote a little book on how to construct an achromatic microscope. Klugel translated that work in 1778 and then followed that with this more thorough treatment, being his Analytische Dioptrik [also 1778]. Due to the crudeness of design of the objective made in 1791 by Francois Beeldsnyder (1755-1808), a colonel in the Amsterdam cavalry, Mayall asserts (and others uphold this view) that he feels the discussion of the dates of origin or this instrument are at best unclear. – Mayall. See also: S. Bradbury, The Evolution of the Microscope, pp. 179-180.

GEORG SIMON KLUGEL (1739-1812), German mathematician and physicist, born in Hamburg, studied under Abraham Kastner (1719-1800) [“the best teacher of mathematics in Germany” – Vincenzo De Risi, Gerolamo Saccheri (1667-1733), Euclid Vindicated from Every Blemish: Edited and Annotated . . . (2014), p.52] at the University of Gottingen. He was appointed professor of mathematics at the University of Helmstedt and then was chair of mathematics and physics at the University of Halle. In this compendious work he corrected some of Euler’s results and expanded with his own findings. In 1803-31 he published his famous dictionary of mathematics, Mathematisches Wörterbuch (5 vols.).
PROVENANCE [2]: [1] Johann Gottfried Kohler (1745-1801), German astronomer, known for discovering a number of nebulae, star clusters and galaxies. He was a colleague of Johann Elert Bode, another German astronomer of importance. In 1785 Kohler was appointed jointly director of the Dresden Mathematisch-Physikalischer Salon and the Kunstkammer. His catalogue of nebulae was published in 1780. He wrote a number of astronomical papers in German, and the following in the Philosophical Translations, “Observations on the transit of Mercury 1786, May 4, at Dresden”, [1787]. See: Hockey, Thomas, The Biographical Encyclopedia of Astronomers, 2009; Poggendorff, pp. 1290-1.

[2] Ing. Dr. Edmund Neusser (1852-1912), born in Krakow, was appointed in 1893 a full professor and director of medicine in the University of Vienna. A highly respected clinician, he specialized in disorders of the blood and wrote about the circulatory system, liver and adrenal glands.


$ 1500

**FIRST EDITION.** This magnificent architectural folio primarily documents the structure of the New Custom House in Lower Thames Street, begun in 1813. Leading the list of subscribers is King George III, and the work is dedicated to the Prince of Wales (eventually George IV) who undoubtedly had provided royal patronage for this deluxe volume. The text describes the site preparation, including test bores of the soil, to a depth of 30 feet. Initially, the investigation indicated that the site was suitable to support the massive weight of the proposed building. However, when the actual trenching began, it was discovered that the underlying soil was of a quite variable nature and density, having been the result of centuries of
variation in the width of the adjacent Thames River. It was decided to insert beech pilings, at three-foot intervals, to support the river front of the building. The pilings eventually decayed, [contributing] to the collapse of that side of the building. The cost overruns in completing the foundation were considerable, and unfortunately insufficient, leading to the eventual collapse, necessitating its rebuilding. The remainder of the book documents the work performed on St. Dunstan’s Church, public buildings and a few grand villas of the wealthy.

David Laing is principally known as the architect of the New Custom House in London, which was completed in 1817 and collapsed in 1825. Assisted by a young William Tite, he also rebuilt the church of St Dunstan-in-the-East between 1817 and 1821. In 1818 Laing published this book of plans and drawings which included details of the problems he had encountered in laying the foundations of the New Custom House. The subsidence of those foundations was later to cause the collapse of the building, which had to be rebuilt, under the direction of Sir Robert Smirke. After the collapse of the New Custom House Laing was suspended from his post as Architect & Surveyor of the Board of Customs, and his practice was ruined.
PROVÉNANCE: George Aitchison (1792–1861) and George Aitchison, Jr. (1825–1910) were both prominent English architects. An expert in interior design, the son’s finest work is the house he designed for Frederic, Baron Leighton of Stretton, at Holland Park Road, Kensington, which includes the Arab Hall (added 1877–9, built to display the collection of glazed tiles Leighton had acquired during his visits to the East) and the artist’s studio. Aitchison (junior) enjoyed a considerable reputation, being Professor of Architecture at the Royal Academy (1887–1905) and President of the Royal Institute of British Architects (1896–9).

□ DNB Vol. XI, pp. 400-1.

$650

A long run of this journal devoted to studies in the history of engineering and technology. Named after Thomas Newcomen (1664-1729), the inventor of the “fire engine” or steam engine, the Newcomen Society presents and publishes historical articles on the invention and development of mechanical technology. The society is the world’s oldest learned society devoted to the study of the history of engineering and technology, is based in London and is concerned with all branches of engineering: civil, mechanical, electrical, structural, aeronautical, marine, chemical and manufacturing. Invention of the steam engine is often considered the catalyst which enabled The Industrial Revolution, and is therefore of paramount importance.

There are examples of Newcomen engines in the Science Museum (London) and the Ford Museum, Dearborn amongst other places. Perhaps the last Newcomen-style engine to be used commercially and the last still remaining on its original site is at Elsecar, near Barnsley in South Yorkshire. The set consists of: Volumes I, III-
XLVIII, L-76. Every volume contains numerous plates of inventions and machines. Among the thousands of papers presented are ones on the topics of: Coal gas production for lighting, Diagrams for the “Stourbridge Lion” & a history of Richard Trevithick, inventor of the locomotive, Agricola’s three-stage water pump, von Guericke’s air pump, various steam engine designs, devices for raising water (pumps, windmills, screws, etc.), Early steam-powered vehicles, Mechanical refrigeration, Investigation of the Sutton Hoo burial site, Invention of viscose rayon, Development of postal franking machines, and the scientific basis for Leonardo da Vinci’s work in technology.
11. SIGAUD DE LA FOND, Joseph-Aignan (1730-1810). *Précis Historique et Expérimental des Phénomènes Electriques depuis l’Origine de cette Découverte jusqu’à ce Jour . . . Seconde édition, Revue et augmentée*. Paris: Rue et Hôtel Serpente, 1785. ¶ 200 x 125 mm. 8vo. xvi, [4], 624 pp. Half-title, 10 folding engraved copperplates (by Sellier), [pl. 3 has a manuscript annotation relating to the electrical machine of the author’s design], errata; lacks the 2 privilege leaves at end. Contemporary calf-backed marbled boards; cover corners showing, newly rebacked with original spine mounted. 19th-century stamp on title and elsewhere of Binet Dufour; inscription “Electrobiologique Traitement Electropathique, Par M. Guerin, Boulevard de Strasbourg . . .” Occasional neat manuscript ink corrections or marginalia. Very good. [S14189] $ 500

Second edition of a work on electricity and magnetism originally published in 1781. The work mentions a number of electrical devices used to make demonstrations and experiments. This period marks a stark contrast in instruments used for experiments and instruments used for demonstrations. See: Thomas L. Hankins, Robert J. Silverman, Instruments and the Imagination, 2014, p. 58.
“The final, greatly enlarged edition . . . of this comprehensive history of electricity and magnetism, and their development and applications, including use for curing diseases. Benjamin Franklin and his experiments are fully discussed as are those of Gilbert, Hauksbee, Ingenhousz, Nollet, [Volta] and others. Extensive accounts are given of atmospheric electricity and lightning conductors, with some original experiments of the author, who claims to have been the first to use glass plates with electrical machines in 1756. He also described an improved Leyden jar. “A work of merit” (Wheeler Gift). As with his other works on physics, this contains numerous references to chemical experiments and phenomena.” :: Neville catalog.

Arranged in five sections, the first offers a history of the origins and progress of electricity to the present period (c.1785) and the Leyden jar. Section II relates to “Leyde” (Leyden Jar invented by Pieter van Musschenbroek of Leiden, with Ewald Kleist also achieving the same invention) and the theories of Benjamin Franklin. Sec. III: Analyzing electricity and comparing it to thunder and magnetism. Within this section deals with meteorology as thunder applied to electrical phenomena, and also the means to divert lightning, the relationship between magnetism and electricity. Sec. IV: Applications made using electrical fluid. With electricity in a void, in electrical fish, electrical properties of tourmaline, “The electric stone.” Also: using the electrophorus generator [invented by Johan Carl Wilcke in 1762], producing a static charge. Article V in this section offers more on two pocket-sized electric machines that produce ‘some strange phenomena of electric commotion.’ The volume finishes with four proposed problems. Adding to all this, the half-title bears an advertisement for his nephew* Rouland, a demonstrator of physics at the University of Paris, and also a course for electrical instruments. See: Rouland, Description des machines electriques a taffetas, de leurs effets et des divers avantages que presentent ces nouveaux appareils, 1785. * [Mottelay suggests “N.” for Rouland’s first name, though [WorldCat] and other sources do not have his first name]. See: Hankins & Silverman, p. 59.
Sigaud de la Fond (1730-1810) was a pupil of Nollet, and taught experimental physics in Paris, succeeding him in 1760 at the College Louis-le-Grand, following his mentor. “Sigaud was a prolific writer in the fields of experimental physics, chemistry, medicine, and (apparently as a consequence of his early Jesuit training) theology. Experimental science was a fashionable pursuit among the leisured classes in eighteenth-century France, and Sigaud was one of several illustrious popularizers who satisfied the intellectual appetites and curiosities of an ever-increasing number of amateurs of science. Popular interest tended toward the more spectacular examples of natural phenomenon: and lectures accompanied by demonstrations, especially on electricity and on the newly discovered gases, always attracted large and enthusiastic crowds.” :: Encyclopedia.

“The Thomas-Fermi model has been used in approximating the properties of molecules. On the other hand, J.W. Sheldon finds no stable equilibrium in a calculation applying the Thomas-Fermi-Dirac model to the N2 molecule. At the end of his paper, Sheldon gives arguments to support the view that similar calculations will not give rise to stable molecular binding. In the following a proof is given that statistical models cannot give rise to lower energies in the molecular state than obtained for the separated atoms. The proof applies to the stability of both neutral molecules and under certain conditions to positive molecular ions.” (Author).

“In 1962, Edward Teller showed that Thomas–Fermi theory cannot describe molecular bonding – the energy of any molecule calculated with TF theory is higher than the sum of the energies of the constituent atoms. More generally, the total energy of a molecule decreases when the bond lengths are uniformly increased. This can be overcome by improving the expression for the kinetic energy.” — Wikip.; Lieb, Elliott H.; Simon, Barry (1977). “The Thomas–Fermi theory of atoms, molecules and solids”. *Advances in Mathematics*. 23 (1): 22–116.

Edward Teller was a Hungarian-American theoretical physicist and chemical engineer who is known colloquially as “the father of the hydrogen bomb” and one of the creators of the Teller–Ulam design. Teller was one of Oppenheimer’s first recruits at Los Alamos at the beginning of the Manhattan Project in the spring of 1943. “He was Director of the Lawrence Livermore National Laboratory, which he helped to found with Ernest O. Lawrence, from 1958 to 1960, and after that he continued as an associate director. He chaired the committee that founded the Space Sciences Laboratory at Berkeley. He also served concurrently as a professor of physics at the University of California, Berkeley.”

With:

“One can build up a quantum field theory by working from a classical action principle. If one takes the action to be Lorentz invariant, the classical theory must be relativistic. With much an action, by following a standard method, one can put
the classical equations of motion into the Hamiltonian form. They then refer to the concept of a state at a certain time, which is a nonrelativistic concept, so they are no longer manifestly relativistic. Still, one knows that they must be relativistic in their content, since they follow entirely from Lorentz-invariant assumptions.” – Author.

WITH:

Central Telephone Office in the Avenue de l'Opéra, Paris.

Part II: *What is in an A?*

14. **ABBOT, Charles Greeley** (b. 1872). *The radiation of the planet Earth to space*. Washington: Smithsonian Institution, 1929. ¶ At head of title: Smithsonian Miscellaneous Collections, Vol. 82, No. 3, November 16, 1929. Hodgkins Fund. 242 x 162 mm. 8vo. [ii], 12 pp. 7 tables, 2 large folding plates (i.e.: printed on both sides). Printed wrappers. Fine. [SS5880] $10

In 1907 Charles Abbot determined the solar constant (the quantity of ray energy crossing one square centimeter of surface set perpendicular to the solar rays outside the earth’s atmosphere or one astronomical unit from the sun).
15. ABBOT, Charles Greeley (b.1872); H.B. [Hugh] FREEMAN. *Absorption Lines of the Infra-Red Solar Spectrum*. Washington: Smithsonian, 1929. ¶ At head of title: Smithsonian Miscellaneous Collections, Vol. 82, No. 1, August 31, 1929. 245 x 163 mm. 8vo. [ii], 17 pp. 1 fig., 3 tables, 5 large folding plates (i.e.: 2 plates printed on both sides). Printed wrappers. Fine. [SS5881]

Freeman was with the Langley Memorial Aeronautical Laboratory. $ 10


$10

LIMITED EDITION of 825 copies. A tribute to John J. Abel. He established the pharmacology department at Johns Hopkins University School of Medicine in 1893, and then became America’s first full-time professor of pharmacology.

“Abel embarked on what many might have regarded as an even more difficult and unpromising enterprise, aiming at the isolation of insulin. His instinct was justified, and his scientific courage rewarded, by an achievement which will probably be one of those most permanently associated with his name. In 1926 he described the first preparation of insulin in the form of well-defined crystals. His observation was soon confirmed by others, and, with improved methods, the crystallization and
recrystallization of insulin has now become applicable to the large-scale purification of the hormone, and has furnished an ultimate and invariable standard for its quantitative determination.” – Royal Society, by H.H. Dale.

“Abel’s work on insulin started with an invitation from his old friend Arthur A. Noyes at California Institute of Technology. Noyes had just received a grant from the Carnegie Corporation for research on insulin, and he thought that Abel would be the right person to lead that research. After some preliminary experiments on the subject, Abel decided to take on the research, and replied to his friend, “Will attack insulin. Writing, J. J. Abel.” Abel invested the next few years on purifying insulin. While he was trying various means to purify insulin, he had the idea to measure sulfur content of his extracts and found that the higher the sulfur content, the greater the activity. The discovery not only significantly precipitated progress on extracting active fractions but also offered the very first concrete information on the structure of insulin—sulfur is an integral part of insulin molecules. Continuing with his research on extracting insulin, in November 1925, Abel finally was able to witness one of the most beautiful sights of his life, “glistening crystals of insulin forming on the sides of a test tube”.” – Wikip.

“By a sad coincidence, the official notification to Professor Abel of his election to the Foreign Membership of the Royal Society was delivered on the day of his death, 26 May 1938.”

DSB Vol. I, p.12; cf. Garrison & Morton 1206; Gedeon, Science and technology in medicine, #77.1 (pp. 396-398).

$35

Abelson was a remarkable scientist with a wide range of areas in which he was expert. In 1939 he and Edwin McMillan discovered the first transuranic element (Neptunium), and Abelson went on to develop a liquid thermal diffusion process which was used to enrich uranium for the first atomic bomb. During the 1950’s he discovered that amino acids can survive in fossils, a finding that would greatly influence biochemists and the study of paleontology. He later became editor of *Science*.

PROVENANCE: Norman Harold Horowitz (1915-2005) was a geneticist at Caltech who achieved national fame as the scientist who devised experiments to determine whether life might exist on Mars. His experiments were carried out by the Viking Lander of 1976, the first U.S. mission to successfully land an unmanned
probe on the surface of Mars. He completed his PhD at Caltech in 1939 under embryologist Albert Tyler, and then became a postdoctoral researcher at Stanford University in the laboratory of George W. Beadle. As a scientist, Horowitz is best known for his discovery and demonstration in 1944 that a metabolic pathway is a series of steps, each catalyzed by a single enzyme. Working with Neurospora crassa, Horowitz demonstrated that each step in the metabolism of arginine from its precursors depends on the intactness of a single gene. His discovery helped to clinch the case for George Beadle and Edward Tatum’s “one gene-one enzyme hypothesis” (a term Horowitz coined for their concept).

Inscribed by the Author (Abir-Am) to Roger Hahn


These pioneering studies of women in science pay special attention to the mutual impact of family life and scientific career. The contributors address five key themes: historical changes in such concepts as scientific career, profession, patronage, and family; differences in gender image associated with various branches of sciences; consequences of national differences and emigration; opportunities for scientific work opened or closed by marriage; and levels of women’s awareness about the role of gender in science.
An international group of historians of science discuss a wide range of European and American women scientists, from early nineteenth-century English botanists to Marie Curie to the twentieth-century theoretical biologist, Dorinda Outram. – Author.


PROVENANCE: Roger Hahn (1932-2011), emeritus professor of history at the University of California, Berkeley, and a leader in shaping the academic field of the history of science. “One of his most notable and influential works, The Anatomy of a Scientific Institution. The Paris Academy of Sciences 1666-1803, (1971) provides a comprehensive account of the elite Paris Academy of Sciences from its founding to its dissolution as a royal institution during the French Revolution, and its subsequent revision in the Napoleonic era. Hahn described the Academy as “the anvil on which the often-conflicting values of science and society are shaped into a visible form.”

Abney was one of the first to utilize photographic techniques in the study of spectroscopy. *DSB*, 1, pp. 21-22.

PROVENANCE: Dr. Hermann A. Bruck (1905-2000), seventh Astronomer Royal for Scotland. Upon graduation from Munich, Bruck followed his friend Albrecht Unsold to the Potsdam Astrophysical Observatory. With growing difficulties under National Socialism, Bruck left Germany in 1936 to take a temporary research assistantship at the Vatican Observatory. In 1937 he moved to the University of
Cambridge to join the circle of the modern astrophysicists around Arthur Eddington. In time, Bruck became Assistant Director of the Observatories and John Couch Adams Astronomer, specializing in solar spectroscopy.


Contains papers on Philosophy, Mathematics, Physics, Chemistry, Technology, Biology, Medicine, Economics, history of philosophy, history of psychology, history of logic, and linguistics. Numerous contributors wrote the specialist papers. See Weber Rare Books online for the list of contents (pictured).


$10


$ 15

The contents of this work offers statements, in English, from many leaders in Soviet science:
The \( K^+ \) and \( K^0 \) Decay through a Current of Definite Isotopic Rank.

J. L. ACIOLI and S. W. MACDOWELL
Centre Brasileiro de Pesquisas Fisicas - Rio de Janeiro

Summary. — The energy distribution and polarization of muons and electrons are calculated assuming an interaction through a vector current of definite isospin character, and using form factors obtained by means of dispersion relations. The effect of the \( K^* \) resonance is taken into account. The spectra, and to a lesser extent the polarization, are quite insensitive to this effect.

Introduction.

Theoretical investigations on the three-body leptonic decay modes of \( K \)-mesons have been carried out by several authors \(^1\), on the assumption that the lepton pair is locally produced. Within the concept of universality in weak interactions these decay processes would proceed through the coupling of vector currents. The matrix element is then given in terms of two form factors, which depend on the pion energy.

These form factors have been investigated by means of dispersion relation techniques \(^2\). The expressions obtained involve \( S \) and \( P \)-wave phase shifts for \( K\)-scattering and depend on only one coupling parameter provided that

\(^2\) S. W. MacDowell: Nuovo Cimento, 8, 1445 (1957).


Summary: The energy distribution and polarization of muons and electrons are calculated assuming an interaction through a vector current of definite isospin character, and using form factors obtained by means of dispersion relations. The effect of the \( K^* \) resonance is taken into account. The spectra, and to a lesser extent the polarization, are quite insensitive to this effect.

FIRST SEPARATE EDITION. Walter Adams turned from studies of the sun to other, larger stars. He later wrote “The study attained its primary objectives, but in addition it provided in the field of physics the first clues to the analysis of complex spectra according to energy levels in the atom, in solar physics the discovery of magnetism in the sun, and in astro-physics a new and fundamental method for determining the distances of the stars.” Adams, Cooperation in solar research, pp. 135-137. DSB, I, pp. 55-58.

Walter Sydney Adams, born in Turkey, was an American astronomer, renowned for his pioneering work in spectroscopy.

Michel Adanson was an 18th-century French botanist and naturalist who traveled to Senegal to study flora and fauna. He proposed a “natural system” of taxonomy distinct from the binomial system forwarded by Linnaeus. In 1763 he published his *Familles naturelles des plantes*. In this work he developed the principle of arrangement above mentioned, which, in its adherence to natural botanical relations, was based on the system of Joseph Pitton de Tournefort, and had been anticipated to some extent nearly a century before by John Ray. The success of this work was hindered by its innovations in the use of terms, which were ridiculed by the defenders of the popular sexual system of Linnaeus; but it did much to open the way for the establishment, by means principally of Antoine Laurent de Jussieu’s *Genera Plantarum* (1789), of the natural method of the classification of plants. – Wikip.
30. **ADELBERG, Edward A.** (1920–2009). Group of 2 offprints. Includes:


Ownership rubber stamp of Norman Horowitz, California Institute of Technology. Fine. S7419

Edward Allen Adelberg was a founder of microbial genetics and biochemist who spent much of his career at Yale University. Adelberg was associated with the Dept. of Bacteriology, University of California, Berkeley. His writing partner, Harold Edwin Umbarger, was an American bacteriologist and biochemist. In 1960 he joined the Cold Spring Harbor Laboratory in Cold Spring Harbor, New York. In 1964 he took a professorship at Purdue University in West Lafayette, Indiana.

$ 15
ADELBERG; David M. BONNER (1916–1964); Edward L. TATUM
(1909–1975). “A Precursor of Isoleucine Obtained from a Mutant Strain of
Neurospora Crassa.” Offprint from: Journal of Biological Chemistry, vol. 190,
Printed wrappers. INSCRIBED BY ADELBERG to Norman Horowitz.

WITH: ADELBERG. “Isoleucine Biosynthesis from Threonine.” Offprint from:
Journal of the American Chemical Society, 76, 1954. 4to. 4241 pp. Printed wrappers;
creased along middle, else fine. Ownership rubber stamp of Norman Horowitz,
California Institute of Technology.

WITH: ADELBERG; John W. MYERS. “The Biosynthesis of Isoleucine and
Valine. I. Enzymatic Transformation of the Dihydroxy Acid Precursors to the Keto
Acid Precursors.” Offprint from: Proceedings of the National Academy of Sciences,
Horowitz, California Institute of Technology. Fine.


Ownership rubber stamp of Norman Horowitz, California Institute of Technology. Fine. [S7621]

SIX PAPERS: $ 250

Adelberg was an influential early geneticist who was associated with the Dept. of Bacteriology, University of California, Berkeley & the Osborn Botanical Laboratory, Yale University. Tatum (1909-1975) was one of the fathers of modern genetics and worked extensively with George W. Beadle on drosophila and Neurospora. This work culminated in the 1958 Nobel Prize for physiology or medicine, which Tatum shared with Beadle and Joshua Lederberg.

Author: Edward Lawrie Tatum was an American geneticist. He shared half of the Nobel Prize in Physiology or Medicine in 1958 with George Beadle for showing that genes control individual steps in metabolism. The other half of that year’s award went to Joshua Lederberg.
Author: “David Mahlon Bonner’s short scientific career—he died at the age of 48—spanned the bloom period of Neurospora biochemical genetics and he was one of its main practitioners and contributors. He started life as a plant physiologist and became a biochemical geneticist working with Neurospora crassa after joining the group of George Beadle and Edward Tatum as a postdoctoral researcher at Stanford University. Initially he explored the use of Neurospora for biochemical investigations and identified intermediary steps in biochemical pathways. Finding that mutations that affect one enzyme are located on the same small segment of genetic material, he provided support for the “one gene, one enzyme” theory proposed by Beadle and Tatum in 1941. The nature of the genetic unit fascinated him . . .” See: [Obituary, NAP] by Maarten J. Chrispeels – National Academies of Sciences, Engineering, and Medicine. 2006. *Biographical Memoirs*: Volume 88. Washington, DC: The National Academies Press.
33. [Advances in Genetics] DEMEREC, Milislav (1895-1966) (ed.).


$ 25


Milislav Demerec was a Croatian-American geneticist, and the director of the Department of Genetics, Carnegie Institution of Washington [CIW], now Cold Spring Harbor Laboratory from 1941 to 1960, recruiting Barbara McClintock and Alfred Hershey. Demerec was born and raised in Kostajnica. “In the 1940s the direction of Demerec’s research changed to the genetics of bacteria and their viruses after a symposium given by Max Delbrück. During World War II he used his knowledge of bacterial genetics to increase the yield from the Penicillium. Following the war he continued to work on bacterial genetics and the problem of antibiotic resistance in E. coli, Salmonella, and Staphylococcus. In 1946 he was elected to the National Academy of Sciences, and in 1947 became the founding editor of *Advances in Genetics*, the first journal to review the finding of modern genetics. In the 1950s he served on the genetics panel of the National Academy of
Sciences’ Committee on the Biological Effects of Atomic Radiation. In 1952 he was elected to the American Philosophical Society.”


$25

Dedicated to Nathaniel Thayer. In 1865 Louis Agassiz, already a famed naturalist and explorer, traveled to Brazil both to research fish and in hopes of recovering his health. He was accompanied by a number of assistants, as well as his wife. This volume describes in detail their experiences in the country, focusing principally on the experiences with Brazilian societies, and including descriptions of both urban and rural environs.

Subjects of interest include chapters Physical History of the Amazons, Life in Tefee, Life at Manaos. — Voyage from Manaos to Tabatinga., Public Institutions of Rio. — Organ Mountains.


M.-C. Déprez-Masson, “by courageously taking up the examination of a considerable work, has added to an immense bibliography a title which offers a new reading of one of the texts the most famous in the history of technology.”

“It is through this notion of utility that the work of M.-C. Déprez-Masson opens a new field of reflection and the vision which imposes itself on the reader places the work of Agricola in its context, from two manners. The first clearly defines the position of a humanist, who addresses the honest man, reading Latin, ready to
invest in a booming sector of industrial enterprise: Agricola, office man, at the
unlike a metal practitioner like Biringuccio, gives him the benefit of long experience
of prospecting and field visits in his native region, Saxony, and transmits him
technical information which eventually allows him to work with metal specialists.
the mine and the foundry. Agricola achieves this by mastering logical rules of
demonstration, by the quality of written expression, by the systematic use of images
incorporated into the text: he names, describes and represents at the same time,
offering the reader chapter after chapter. chapter the chronological order in which
an operator is confronted with a series of operations, from ore prospecting to
metal production. How can we explain the fortune of this treatise, republished and
translated for more than two centuries, if it had not been the first and only one to
create an industrial inscribing the knowledge of mining and metallurgy at the level
of the grammar of the universe sciences company? The first merit of M.-C.
Déprez-Masson’s book is to have given an answer to the question raised by
intellectual investment, during his life entire, of a scientist who himself became a
mining operator, in a cutting-edge sector of the market economy.”

“A second contribution is no less remarkable: the book sheds convincing light on
the scientific biography of the author by placing the De re metallica in the whole of a
work and in the perspective which could have been that of a doctor, nourished by
ancient authors and anxious, if possible, to complete Aristotle. M.C. Déprez Masson emphasizes the fact that *De re metallica* was not the crowning achievement of a long enterprise; the traditional error is to forget that Agricola intended to complete two other works, one on mining law, the other on the medicinal use of metals.” – Reviewed by Philippe Braunstein.


Ahmad was professor in the Dept. of Botany, University of Dacca, Pakistan. He was widely respected for his extensive research in genetics with a particular focus on revealing the action of the gene.

$25

Appolonius of Perga (fl. ca. 200 BCE) is usually associated with the development of the eccentric circle (in which the center of the circle is not the center of the earth) and the deferent-epicycle model (in which a planet is described as moving on a point on a circle, known as an epicycle, whose center is moving on yet another circle, known as a deferent). Johann Thomas Ahrens was professor of mathematics at the Gymnasium and Polytechnical School of Augsburg. Poggendorff, I, col. 19.
Summary. — The general theory of particle mixtures is developed and their remarkable time behavior at decay is shown to be a natural consequence of degeneracy of the initial state. Applications to several simple cases, positronium in a magnetic field, $K^0$ and $K^-$ particle mixtures and a possible $0^-$ doublet are discussed. In particular it is shown that, if the $K^0$ has two lifetimes, the mass difference between $K^0$ and $\bar{K}^0$ caused by a possible non-invariance of strong interaction under charge-conjugation cannot exceed much the value $10^{-5}$ eV.

Aizu was associated with the Dept. of Physics, Rikkyo University, Tokyo.
44. AKDOGAN, Cemil. *Science in Islam and the West*. Kuala Lumpur, Malaysia: International Institute of Islamic Thought and Civilization; International Islamic University, 2008. ¶ 8vo. xxii, 265 pp. Printed wrappers; nick on back cover edge. INSCRIBED BY THE AUTHOR TO DAVID C. LINDBERG. Very good +. Rare. RH1419

$75

PROVENANCE: David C. Lindberg (1935-2015) was an American historian of science. His main focus was on the history of medieval and early modern science, especially physical science and the relationship between religion and science. Lindberg was the Hilldale Professor Emeritus of History of Science and past director of the Institute for Research in the Humanities, at the University of Wisconsin, Madison.
45. **ALBERT, David Z.** (1954-). *Quantum Mechanics and Experience.*

Cambridge: Harvard University, 1993. ¶ 236 x 159 mm. 8vo. x, 206 pp. Illus., bibliog., index. Gray cloth, dust-jacket. Fine. S0854

$10

The more science tells us about the world, the stranger it looks. Ever since physics first penetrated the atom, early in this century, what it found there has stood as a radical and unanswered challenge to many of our most cherished conceptions of nature. It has literally been called into question since then whether or not there are always objective matters of fact about the whereabouts of subatomic particles, or about the locations of tables and chairs, or even about the very contents of our thoughts. A new kind of uncertainty has become a principle of science.

Albert is the Frederick E. Woodbridge Professor of Philosophy, Columbia University.

Survey of the Pennsylvania government.

$ 25

First edition. “In this groundbreaking work, Alexander explores the nature of life itself, from its molecular building blocks to its complex evolutionary history. Drawing on the latest scientific discoveries and insights, he presents a comprehensive and compelling account of the origins and development of life on Earth. A must-read for anyone interested in biology, evolution, and the mysteries of the living world.” – [online]

“Jerome Alexander, the distinguished colloid chemist, presents his stimulating theory of the origin and nature of life in this refreshing book, which is packed with erudition. Mr. Alexander’s knowledge of chemistry is profound, and yet he has had the time and interest to acquire a wealth of information about biology and medicine; these combine to furnish a rational account of many processes occurring in the living cell which because of the author’s chemical point of view will be read with profit by all those seeking a deeper insight into the nature of living things and a more fundamental understanding of medicine. / Mr. Alexander begins by stating
that life is an accomplished fact, a practical going concern and not a figment of someone’s imagination—there must be some mechanism through which it got started. The most reasonable view is that life began with the chance formation of a self-reproducing unit of molecular or near molecular complexity. Life depends on a great variety of ordered chemical reactions which are limited in space, mass and time.” [JAMA, 1948; 137(15): pp.1341-1342].


S7868 $ 12
James Sircom Allen was a “Canadian-American physicist who worked at the Massachusetts Institute of Technology and Los Alamos during the Manhattan Project. During World War II, Allen worked first at the Massachusetts Institute of Technology Radiation Lab on the development of radar. In 1943 he moved to Los Alamos, where he worked with gaseous particle detectors and electron multipliers. After the war, he returned to the University of Chicago as an assistant professor. His research focused on measurements of the energy distribution of nuclear recoils and its correlation with the direction of emitted electrons, which helped provide information on the type of weak interactions involved in beta decay. In 1948, Allen moved to the University of Illinois at Urbana-Champaign, where he continued his study of beta decay. Allen stayed at the University of Illinois for twenty-five years.” – Atomic Heritage Foundation.

Dinsmore Alter was an American astronomer, meteorologist, and United States Army officer. He is known for his work with the Griffith Observatory and his creation of a lunar atlas. In 1956, he used the 60” reflector at the Mount Wilson Observatory to observe a peculiar obscuration on part of the floor of Alphonsus crater, which brought him worldwide notice. (This is a class of events now called a transient lunar phenomenon.)

53. ALTSHULER, Jose. “La Telegrafía sin Hilos en Cuba (1899-1916)”.

Paper on the making of telegraph communications between the US and Cuba circa 1899 and 1916. Other articles include: Babini on the first computers in Argentina in 1960; Cervera on European missionaries coming to the Far East in the 16th century; Bueno & Lancharrro on Francisco Vera, the eminent Argentinian historian of science; Magallon on Spanish women of science in physics and chemistry from 1910-1930, and others.
Summary. — The group SU₄ is probably the most straightforward and economical generalization of SU₃, which allows for basic triplets of integral charges. In this paper we analyse in detail the predictions of a few models for strong interactions based on SU₄. In addition to the usual (nonpeculiar) eightfold-way particles new peculiar particles are predicted. However, they can be allowed to be created and to decay semi-strongly by the mass-breaking interactions. Mass relations are obtained. It is pointed out that some difficulties concerning these mass formulæ occur when one tries to attribute the p, K*, w and a vector meson to the regular representation of SU₄.

1. Introduction.

The marked success of the eightfold-way version (I) of SU₃ for particles and resonances enhanced the interest of physicists in finding a physical meaning for the basic representation of dimension 5 of each group. The straightforward application of the eightfold-way relation between charges, isospins and hypercharge leads to a triplet with nonintegral charge and harmonic number. This model has been proposed by Gell-Mann and Zweig (4). It is by far the most economical because it does not involve new quantum numbers and implies only one fundamental triplet. It has, however, the disadvantage of predicting the actual physical existence of particles of nonintegral charge. This


Summary. The group SU₄ is probably the most straightforward and economical generalization of SU₃, which allows for basic triplets of integral charges. In this paper we analyse in detail the predictions of a few models for strong interactions based on SU₄. In addition to the usual (nonpeculiar) eightfold-way particles new peculiar particles are predicted. However, they can be allowed to be created and to decay semi-strongly by the mass-breaking interactions. Mass relations are obtained. It is pointed out that some difficulties concerning these mass formulæ occur when one tries to attribute the p, K*, w and a vector meson to the regular representation of SU₄.

Amati is a distinguished Italian physicist who spent many influential years at CERN in Geneva.
SU$_4$ AND STRONG INTERACTIONS

D. AMATI, H. BACRY, J. NUYTS, AND J. PRENTKI

CERN, Geneva

Received 22 June 1964

1. The success of the eightfold way version 1)
(SU$_3$/Z$_3$?) of SU$_4$ and the difficulties connected
with the existence of basic triplets have excited
the interest and the imagination of many physi-
cists 2). Direct products of simple groups or
groups of rank higher than two have been pro-
posed. A general feature of these extensions of the
SU$_3$ group is the prediction of new “peculiar”
particles appearing in triplets, sextets and so on.
In the quark or cace model proposed by Gell-Mann
and Zweig 3), the basic triplets have non-integer
charge. Other models, on the contrary, predict
“peculiar” particles with integer charges.

2. The most straightforward generalisation of the
SU$_3$ group along the line of higher rank simple
groups is SU$_4$ (precisely SU$_4$ if one includes the
baryonic number). This has already been pro-
posed 4). We want to study some models based
on the SU$_4$ group and some further predictions
concerning mass formulae.

Model 1: the quartet has baryonic number $N=1$,
the charges are $A^+, A^-, B^+, C^-$ or
$Q = T_3 + \frac{1}{2} + \frac{1}{2} = T_3 + N$.

Model 2: the quartet has $N=1$, the charges are
$A^+, A^-, B^+, C^-$ or
$Q = T_3 + \frac{1}{2} = T_3 - N$.

Models 3 and 4 are obtained from models 1 and 3,
respectively, by assigning $N = -1$ to the basic
quartets and changing the sign of $N$ in the charge
formulae. Models 3 and 4 are appealing for weak
interactions. One now defines the “peculiarities”
as $W$

$$W = Q - T_3 - \frac{1}{2}.$$  

(3)

Usual particles are characterized by $W = 0$.

The mass octets and singlets ($Z = N = 0$) are
obtained through the product $q q' = 4 \times 4 = 1 + 15$
where 15 is the dimension of the regular or ad-
joint representation. The baryon octets are given
by $qq$ or $q q q'$ depending on the baryonic number
of the quartet. Restricting to lower dimensional
representations one is led to put the baryons in
$20'$ for models 1 and 3 and in $20$ for models 2
and 4 (Table I). The spin $\frac{1}{2}$ baryon decuplet
has to decay into mesons and baryons and should
belong to $20'$ or $20$ or $20'$. For $20'$ or $20'$. Is.
A baryon decuplet appears only in representation
$60'$, for $20$ or $20'$ it appears in representation $20$. This favours
models 2 and 4 with respect to models 1 and 3.

b) Mass formulae. We define the normal mass
breaking interaction by the following require-
ments

i) it belongs to the regular representation,

ii) it conserves charge and isospin,

iii) it has to be taken only in the first order of
perturbation.

For models 1 and 2, the mass splitting operator
involves three terms. The two first terms are
the components of the regular representation
which transform as the hypercharge $Y$ and the
third quantum number $Z$. The third term, which
is not diagonal in the usual representation, sat-
fies

$$3 A Y = -2 A Z.$$  

(4)

It does not exist in models 3 and 4 because relation
(4) does not ensure conservation of charge.

As regard to their effects, the breaking operator
corresponding to $Z$ separates in mass the
different SU$_3$ submultiplets; the operator corre-

55. AMATI, Daniele; H. BACRY; J. NUYTS; J. PRENTKI. “SU$_4$ and


Amati is a distinguished Italian physicist who spent many influential years at CERN
in Geneva.

Contains numerous papers on drilling and producing equipment, drilling fluids and cement, electric logging, fluid injection, physical properties, natural gas technology, reservoir engineering, etc.


WITH: AMES, Herschel K. MITCHELL, & Mary B. MITCHELL.  “Some New Naturally Occurring Imidazoles Related to the Biosynthesis of Histidine.”

$35

“The first comprehensive review of histidine biosynthesis was written by Brenner and B. N. Ames in 1971.” These four papers are much earlier studies that lead to his 1971 review. See: Malcolm E. Winkler and Smirla Ramos-Montañez, “Biosynthesis of Histidine,” EcoSal Plus. 2009 Aug; 3(2): 10.

Ames was associated with the National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, United States Public Health Service, Bethesda, & Caltech.


Ames was associated with the National Institute of Arthritis and Metabolic Diseases, Bethesda. Some of the papers bear the rubber stamp or signature of Pioneer Caltech geneticist Norman Horowitz. Full list available on request.
Detection of carcinogens as mutagens in the Salmonella/microsome test: Assay of 200 chemicals. Part II

Jayme McClain and Bruce N. Ames
Department of Biochemistry
University of California
Berkeley, California 94720

Contributed by Bruce N. Ames, Jan. 5, 1978

Abstract:

About 200 carcinogens and non-carcinogens of a wide variety of chemical types have been tested for mutagenicity in the simple Salmonella/microsome test. The test uses bacteria as sensitive indicators of DNA damage, and normal liver extracts for metabolic conversion of carcinogens to their active mutagenic forms. There is a high correlation between carcinogenicity and mutagenicity: 90% (185/200) of the carcinogens were mutagenic in the test. Including almost all of the known human carcinogens that were tested.

Despite the severe limitations imposed in defining non-carcinogenicity, few non-carcinogens showed any degree of mutagenicity. Carcinogens negative in the test and apparent false positives are discussed. We also discuss evidence that the damage to DNA by environmental chemicals and radiation that is likely to initiate most human cancer and specific effects. The Salmonella test can play a central role in a program of prevention: to identify mutagenic chemicals in the environment (all indications are there are many) and to aid in the development of non-mutagenic products to prevent future human exposures.

Environmntal Cancer and Cancer: Some Misconceptions

Bruce N. Ames and Lois Swinsky Gold
Division of Biochemistry and Molecular Biology
Baker Hall
University of California
Berkeley, California 94720

Professor Ames is Director, N.I.H.S.E. Environmental Health Sciences Center, University of California, Berkeley, and was formerly on the board of trustees of the National Cancer Institute (National Cancer Advisory Board). He is a member of the National Academy of Sciences. He was recipient of the most prestigious award for cancer research, the General Motors Cancer Research Foundation Prize (1983), and of the American Cancer Society Award (1987). Prof. Ames is the author of more than 200 scientific papers, has received the Adolpho Lutz Award of The Brazilian Cancer Society and is a fellow of the Royal Society of Canada. He is the author of more than 200 scientific papers.

The public are numerous misconceptions about the relationship between environmental pollution and human cancer. Underlying these misconceptions is an erroneous belief that cancers in human are caused by environmental factors. The belief in this has been scientifically substantiated. Below we highlight 6 of these misconceptions and describe the scientific information that underlies each one.

Misconception No. 1: Cancer Rates Are Soaring

Cancer death rates in the United States (after adjusting the times for age and smoking) are rising steadily or decreasing. According to the latest update from the National Cancer Institute (Feb. 1988), "the age adjusted mortality rate for all cancers combined Except lung cancer has been declining since 1930 for all individual age groups except 85 and above." (That represents a 13-percent decrease overall, 44,000 deaths below expected, and a 0.1-percent increase in the over-85 group.)

The types of cancer deaths that have been decreasing during this period are primarily stomach (by 73 percent), lymphoid by 73 percent, peritoneal by 73 percent, 11,000

FIRST EDITION of this rare monograph on catechu, an extract of acacia and several other genus used in dyeing, tanning, manufacture of fibrous substances, and pharmacy. The author seeks to discover who first identified it and where it was first put to various uses. Catechu (also known as cutch, or cashoo) is an extract of any of several species of Acacia – but especially *Acacia catechu* – produced by boiling the wood in water and evaporating the resulting brew. The extract is an astringent and has been used since ancient times. When called cutch, it is a brown dye used for tanning and dyeing and for preserving fishnets and sails. [Wikip.]

Dr. Pierre Joseph Amoreux was librarian of the medical school in Montpellier, where he published a great number of works on medicine, natural history and
agriculture, including one of the earliest monographs on the cultivation of the olive tree. Wikip., “catechu”.

□ NUC cites one copy at Harvard.


Jules Barthelemy Saint-Hilaire, French philosopher, journalist, statesman, and possible illegitimate son of Napoleon I of France.


Full list available on request.

David Leonard Anderson was with and Dept. of Physics, Oberlin College. He was an American physicist who worked on the Manhattan Project at Los Alamos and in
the Pacific. “Anderson . . . returned to study physics at Harvard, receiving his M.A.
in 1947 and his Ph.D. in 1950. In 1948, he joined the Department of Physics at
Oberlin College, where he was a professor until 1984. From 1963 to 1972, he was
the chair of the department. He authored several books, including *The Discovery of
the Electron* and *The Discovery of Nuclear Fission*, and a number of articles in scientific
journals.” – Atomic Heritage Foundation.

64. **ANDERSON, E. H.** [Edward H.] [Group of 4 offprints]. Includes:

**ANDERSON.** “Growth Requirements of Virus-Resistant Mutants of
Self-wraps. Ownership signature of Norman Horowitz. FINE.

**WITH: ANDERSON.** “The Effect of Oxygen on Mutation Induction by X-Rays.”
Self-wraps.

WITH: ANDERSON & D. BILLEN.  “The Effect of Temperature on X-Ray Induced Mutability in Escherichia Coli.” Offprint from Journal of Bacteriology, vol. 70, no. 1, 1955. 8vo. 35-43 pp. Figs. Self-wraps. All of the papers bear the rubber stamp or signature of pioneer Caltech geneticist Norman Horowitz. [S8203]

Edward H. Anderson was associated with the Biology Division, Oak Ridge National Laboratory.

$40
Field-Theory Restrictions on the Unification of Space-Time and Internal Symmetries

JAMES L. ANDERSON
Department of Physics, Institute of Technology, Hoboken, New Jersey

(Received 26 January 1965)

The problem of combining the Poincaré group of space-time symmetries and an internal symmetry group $S$ in an over-all group $G$ is considered. It is argued that such an over-all group must have representations that are defined on the space-time manifold. As a consequence it is shown that the over-all symmetry group cannot be the product of an internal symmetry group $S$ and a proper Lorentz group and that the latter group $P$ must be isomorphic to a covering group of $P$. However, if one takes account of the fact that the presence of a symmetry group leads to conservation laws, then $P$ must be the direct product of $S$ and a covering group of $P$.

As an additional result we show that the energy-momentum tensor does not contain an internal part, in contrast to the angular-momentum tensor.


James L. Anderson was associated with the Dept. of Physics, Stevens Inst. of Technology, Hoboken, NJ.


During his time at Oak Ridge National Laboratory, he invented the first high-pressure liquid chromatography systems, the zonal ultracentrifuge, and the centrifugal fast analyzer and holds over 30 patents.


*Relativity: The Theory and its Philosophy* provides a completely self-contained treatment of the philosophical foundations of the theory of relativity. It also surveys the most essential mathematical techniques and concepts that are indispensible to an understanding of the foundations of both the special and general theories of relativity. In short, the book includes a crash course in applied mathematics, ranging from elementary trigonometry to the classical tensor calculus. Comprised of 11 chapters, this book begins with an introduction to fundamental mathematical
concepts such as sets, relations, and functions; N-tuples, vectors, and matrices; and vector algebra and calculus. The discussion then turns to the concept of relativity and elementary foundations of Newtonian mechanics, as well as the principle of special relativity and its philosophical interpretation by means of empiricism and rationalism. Subsequent chapters focus on the status of the doctrine of conventionalism in the theory of special relativity; the commensurability of classical and relativistic mechanics; mathematical foundations of special relativistic physics; and the classical or Newtonian theory of gravitation. The principle of general covariance and its relation to the principle of general relativity are also examined. The final chapter addresses the fundamental question as to the actual information concerning the structure of spacetime that is conveyed to us through the theory of general relativity. This monograph will be of interest to students, teachers, practitioners, and researchers in physics, mathematics, and philosophy. – Publisher.

Contains the mathematical and physical tools to enable an informed and independent assessment of the philosophical claims based on the theory of relativity.
Scientific Photography


$10

Scientific photography; an introduction to theory and practice. At the Mount Wilson Observatory (the former owner of this book) scientific photography was a vital tool for their astronomical records.

David Thomas Ansted FRS was an English professor of geology and author of numerous books on geology. His role as a teacher at Addiscombe Military Seminary, where future East India Company army officers were trained, had an influence on the study of geology in the colonies.
“From 1844 to 1847 he acted as assistant-secretary of the Geological Society, and for many years he edited its quarterly journal. In later life, from about 1850, he turned to the practical applications of geology in connection with mining, engineering, water-supply, and the like, and was constantly consulted on such matters both in this country and abroad.” [DNB].

“Ansted had a good career as a geologist, teaching at King’s College London, and lecturing as well to members of the British East India Company and a school for civil engineers. He wrote many books on geology and geography.” [Linda Hall Libr.]

First Printing. This is a contributor’s copy, that of Lindberg, who contributed the paper “The Western reception of Arabic optics,” (pp.716-729).

Arranged in three major sections: Astronomy-theoretical and applied; Mathematics and the Physical Sciences; Technology, Alchemy and Life Sciences.

Roshdi Rashed “is a mathematician, philosopher and historian of science, whose work focuses largely on mathematics and physics of the medieval Arab world,[citation needed] His work explores and illuminates the unrecognized Arab scientific tradition, being one of the first historians to study in detail the ancient and medieval texts, their journey through the Eastern schools and courses, their immense contributions to Western science, particularly in regarding the development of algebra and the first formalization of physics.”

PROVENANCE: David C. Lindberg (1935-2015) was an American historian of science. His main focus was on the history of medieval and early modern science, especially physical science and the relationship between religion and science.
Lindberg was the Hilldale Professor Emeritus of History of Science and past director of the Institute for Research in the Humanities, at the University of Wisconsin, Madison.


$ 17

Dominique François Jean Arago was a French mathematician, physicist, astronomer, and freemason. “Arago’s earliest physical researches were on the pressure of steam at different temperatures, and the velocity of sound, 1818 to 1822. His magnetic observations mostly took place from 1823 to 1826. He discovered rotatory magnetism, what has been called Arago’s rotations, and the fact that most bodies could be magnetized; these discoveries were completed and explained by Michael Faraday.” – Wikip.
Author’s Presentation Copy


Araki was a noted Japanese nuclear physicist who specialized in the study of Mesons, and was associated with the Dept. of Industrial Chemistry, Kyoto University, Kyoto, Japan. After a comparison of the rates of mesotron decay and capture by Hideki Yukawa (1907-1981), Akari and Shinichiro Tomonaga (1906-1979) improved upon the results “by taking into account the very different effect of the Coulomb field of the nucleus on slow mesotrons of opposite sign.” *Twentieth Century Physics,* vol. I, p. 406.
“As we have indicated in the last section, the lack of evidence for strong nuclear interaction of mesotrons began to emerge as the biggest interaction would be the comparison of the rates of mesotron decay and puzzle in elementary particle physics. A crucial measure of nuclear capture, especially for slow mesotrons. An analysis of this ratio was made by Yukawa and Taisuke Okayama in 1939 (1330). They estimated the capture time in a dense medium, such as lead, to be about 10 much shorter than the stopping time due to ionization, while the decay time was longer (about 10-6 s). Thus, they concluded, the main of mesotrons are captured by nuclei after having stopped complete. In gaseous media, e.g. air, they expected that most mesotrons would decay in flight.”

“Tomonaga and Gentaro Araki improved the results of Yukawa and Okayama by taking into account the very different effect of the Coulomh field of the nucleus on slow mesotrons of opposite sign. They found that negative mesotrons should almost always be captured, while positive ones should decay.” – Twentieth Century Physics edited by Laurie M Brown, Abraham Pais, Sir Brian Pippard, 1995, vol I.

PROVENANCE: Abraham Pais (1918-2000) was a Dutch-American physicist and science historian. Pais earned his Ph.D. from University of Utrecht just prior to a Nazi ban on Jewish participation in Dutch universities during World War II. He was a physics professor at Rockefeller University until his retirement. His writings on the history of 20th century physics include his personal relationships with leading figures of physics: Einstein, Oppenheimer, Niels Bohr, Max Born, Paul Dirac, George Uhlenbeck, etc.

$ 30

ARATUS OF SOLI was a Greek poet who flourished in Macedonia in the early C3rd B.C. His only surviving work is the *Phaenomena*, a book describing the constellations and weather signs.

“Three more English translations of the *Phaenomena* were published in the 19th century. In The Skies and Weather Forecasts of Aratus [1880], E. Poste, writing in a predominately iambic line that varies in syllable count, produced a more accurate translation than Lamb and, for the most part, employs a much simpler diction, eschewing the kinds of ornament and embellishment that misrepresent Aratus’ stylistic austerity . . . In many ways, Poste is the best of the 19th century poetic translators. He is especially good on technical passages and his notes, with Greek and Latin quotation kept to a minimum, are efficient, helpful and interesting on matters astronomical and meteorological.” – D. Mark Possanza, University of Pittsburgh [review of *Aratus: Phaenomena*, 2010].
77. [Argentinean Science] Sociedad Científica Argentina Buenos Aires; SANTALÓ, Luis A. (1911-2001); Jose Federico WESTERKAMP (1918-2014); Maximo VALENTINUZZI (1932-2021); Osvaldo SKLIAR; Luis B. MAZOTI; Juan Héctor HUNZIKER (1925-2003); Jose Angel ALVAREZ; Ángel Lulio CABRERA (1908-1999); Simón GERSHANIK (1907-2008); Luis Ambrosio MILONE (1933-2018); Otto SCHNEIDER; Noemi G. ABIUSO [eds.]. *Evolución de las Ciencias en la Republica Argentina 1923-1972. I: Matematica. II: Fisica. III: Cibernetica. IV: Genetica. V: Meteorologia, Oceanografia y Radiopropagacion. VI: Botanica. VII: Astronomia. VIII: Geofisica y Geodesia. IX: Quimica.* [Buenos Aires]: Sociedad Científica Argentina, 1972-81. ¶ Complete set of 9 volumes. 8vo. ix, 243; [x], 220; x, 35; [x], 242; [x], 102; [viii], 107; [x], 224; ix, 518; ix, 326 pp. Printed wrappers; some covers slightly smudged. Burndy Library bookplates. Very good. S11278


$100
AUTHORS:
[1] Luis A. Santaló was “A pioneer in the field of integral geometry, he published over two hundred research papers on integral geometry, metric geometry, affine geometry, projective differential geometry, the geometry of convex bodies, number theory, geometric probability and unified field theory. His works, which have been particularly influential in the scientific community of Spanish-speaking nations, were published in the major North American, British, German and Russian scientific journals. Although the mathematical work of Santaló was basic research, some of his findings were of decisive importance for other applied disciplines, particularly in operative research, biology and stereology. A key aspect of Santaló’s work was his profound contribution to social progress and his constant efforts to modernize the teaching of mathematics in Spanish-speaking countries. Part of his work was devoted to this end in the form of articles and books on the teaching of mathematics in secondary education.”

[2] José Federico “Pipo” Westerkamp was a doctor in Chemistry and Physics and Argentine university professor.
[3] Máximo Eugenio Valentinuzzi, better known as Max Valentinuzzi, was an Argentine Telecommunications Engineer dedicated to teaching and research in the area of Bioengineering. He received more than 25 lifetime achievement awards and honors, including the Bernardo Houssay Award and the Konex Platinum Award.

[6] Juan Héctor Hunziker was a prominent Argentine botanist and geneticist.

[8] Ángel Lulio Cabrera was an Argentine botanist.

[9] Simón Gershanik was an Argentine geophysicist, his life and work focused mainly on research and teaching in the area of Seismology and the development of Geophysics in Argentina and South America.

[10] Luis Ambrosio Milone was a historian of astronomy.

ABSTRACT: “A multi-colour photoelectric stellar photometer using an EMI 0091 photomultiplier tube has been constructed and fitted to the Cassegrainian focus of the 72-inch telescope, Deflections are recorded on a Brown strip-chart recorder. The photometer has performed well down to the magnitude limit of visual guiding. The optical and electrical design of the photometer is described in detail and its performance is illustrated by means of some results obtained by observation of the faint eclipsing binary UX Ureae Majoris.

INTRODUCTION In recent years there has been a growing need for photometric data to support and supplement some of the spectrographic observations carried out at this Observatory. The colours of the B stars on the galactic rotation program, for instance, are required at one step in the process of obtaining the distances necessary for correlation of the radial velocity results, and other needs for photometry have arisen occasionally in connection with spectroscopic binaries, stars of special interest, etc. Consequently, the construction of a stellar photometer was undertaken in 1952. The original instrument has since been modified and, in the following pages, is described in its present form.”
“Cottingham introduced trialism as an alternative interpretation of the mind–body dualism of Descartes. Although composed of two substances, mind and body, the human being possesses distinctive attributes in its own right (including sensations, passions, emotions), and these form a third category, that cannot be reduced to thought or extension. Cottingham has also argued that Descartes’s view of animals as ‘machines’ does not have the reductionistic implications commonly supposed. Finally, Cottingham has explored the importance of Descartes as a moral philosopher, with a comprehensive picture of the good life that draws both on his scientific work (in physiology and psychology) and also on the theistic outlook that informs all his philosophy. Cottingham is co-editor and translator of the three-volume Cambridge edition of *The Philosophical Writings of Descartes.*”
PROVENANCE: David C. Lindberg (1935-2015) was an American historian of science. His main focus was on the history of medieval and early modern science, especially physical science and the relationship between religion and science. Lindberg was the Hilldale Professor Emeritus of History of Science and past director of the Institute for Research in the Humanities, at the University of Wisconsin, Madison.


$50

Aristarchus of Samos was an ancient Greek astronomer and mathematician who presented the first known heliocentric model that placed the Sun at the center of
the universe, with the Earth revolving around the Sun once a year and rotating about its axis once a day.

Sir Thomas Little Heath KCB KCVO FRS FBA was a British civil servant, mathematician, classical scholar, historian of ancient Greek mathematics, translator, and mountaineer. He was educated at Clifton College. Heath translated works of Euclid of Alexandria, Apollonius of Perga, Aristarchus of Samos, and Archimedes of Syracuse into English.


Translation of Alexander of Aphrodisias’ Hypomnemata eis to meizon . . . The full work was published in 5 volumes, this offered being the first issued volume.
“In Alexander’s metaphysical writings, including his commentaries, we find some of the major points of ancient discussion concerning the core, not so much of metaphysics, but of Aristotelian metaphysics. At times, Alexander seems most focused on criticizing contemporaries from an Aristotelian perspective, and at times instead to defend Aristotelianism by elaborating in original ways that address possible criticisms.”

“As an example of the second, apologetic feature: in his commentary on the *Metaphysics*, we find an elaboration of the question whether metaphysics can be a demonstrative science. Alexander makes an effort to show that it is in fact a demonstrative science in the sense of Aristotle’s *Posterior Analytics*, i.e. with its own genus or subject matter, axioms, and derived theorems. As part of this effort, he understands the subject matter of metaphysics, being qua being, as referring to all beings, insofar as they are existent (Bonelli 2001). He also reshapes the concept of common notions, in such a way that in metaphysics common notions may serve as axioms, i.e. provide its fundamental principles. Common notions, which started out, in Aristotle and later the Stoics, as shared starting points for inquiry and argument, are expanded by Alexander to incorporate features of dialectical starting points, points about which there is general agreement, and scientific axioms. They are not innate, but immediately evident to everyone, and serve as indemonstrable starting points for scientific knowledge — the prime example for metaphysics being the principle of non-contradiction (de Haas 2021).” – Frede, Dorothea and Marije Martijn, “Alexander of Aphrodisias”, *The Stanford Encyclopedia of Philosophy* (Summer 2024 Edition).

FROM THE CONTENTS: “In the first two chapters of Metaphysics 1, Aristotle asks what is philosophy and in particular philosophical wisdom (sophia), and how is it related to philosophy? He answers that it is a knowledge of causes, or rather of explanations, including God, who is a cause or explanation in one of the few distinguishable ways. The remaining eight chapters examine the account given of cause or explanation by his predecessors.”

“Alexander of Aphrodisias was the greatest expositor and elaborator of Aristotle’s philosophy. But his commentary on this book has a curious feature: over half is devoted to the two chapters in which Aristotle discusses Plato. From this we learn not only about Alexander, but also far more than we could from Aristotle’s text itself about Aristotle, Plato and Plato’s Academy. Aristotle’s battery of objections against the theory of Ideas is spelled out, with fragmentary quotations and paraphrases from four of his lost works, On the Ideas, On the Good, On Philosophy and On the Pythagoreans. There is an expanded account of the
‘unwritten doctrines’ which Plato developed late in his career, according to which the Ideas are numbers, namely the One and the Indefinite Dyad.” – editors.

PROVENANCE: David C. Lindberg (1935-2015) was an American historian of science. His main focus was on the history of medieval and early modern science, especially physical science and the relationship between religion and science. Lindberg was the Hilldale Professor Emeritus of History of Science and past director of the Institute for Research in the Humanities, at the University of Wisconsin, Madison.


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“The importance of the study of nature, and particularly of biology, in Aristotle’s philosophy should be news to nobody. Aristotle’s conceptions of substance, causation and change are dominated by the idea that whole living creatures are the
most fundamental objects of study. His ideas about the nature of the most appropriate modes of study run with this view of the world. Therefore Aristotle is a philosopher for whom metaphysics must be the sovereign study; but the method of metaphysics will be strongly influenced by biology. Metabiology’ would be a more suitable term than ‘metaphysics’, were it not for the fact that the discovery of metaphysics-the thing and its name-ranks as one of Aristotle’s most single achievements.”

“In recent decades a number of leading Aristotelian interpreters, notably Peck, Balme, Grene and Pellegrin, have emphasized the importance of the biological works to any proper study of Aristotle. Such an estimate is demanded not simply by the huge compass of his biological writings, but also because of the evident centrality of biological concepts and examples in discussions which profess to treat quite generally of substance and reality. For Aristotle it is at best doubtful-and very possibly false-that elemental stuffs, animal limbs and, most important, artefacts are substances. Only complete living animals will certainly qualify as substances…”

Lohr “became one of the world’s foremost authorities on Medieval Western Aristotelianism.” “In an incredible academic accomplishment, he catalogued nearly all the Latin commentaries on the works of Aristotle from the Middle Ages to the Renaissance. “It was a great intellectual project and became an incredible work of reference,” said Jesuit Father Joseph E. Lienhard, professor of theology and the journal’s current managing editor. “He considered the collection to be the scholarly achievement of his life.”” – *In Memoriam*, Lohr, Charles H. (Father), Jesuits.


University Microfilms reprint. “In the long process of assimilation into Latin of the Greek and Arabic corpus of natural philosophy, there was a constant tendency for earlier material to be incorporated into later and thus lose its identity. But the
earlier works often persisted, even though in disguised form, and constituted a permanent element of our intellectual heritage. Sometimes modern scholarship has been able to rescue an earlier author from anonymity and to delineate his significance in the growth of Western thought. One such author is Alfred of Sareshel, also known as Alfredus Anglicus. The rediscovery of Alfred has been the work of many scholars, whose writings have shown Alfred to have been a translator from the Arabic, a commentator on Aristotle’s natural philosophy, and the author of a treatise *De motu cordis* which was incorporated into the curricula of many universities in the thirteenth century. Alfred also emerges as one of the most important and oldest witnesses for the reception of the natural philosophy of Aristotle and for the oldest Greek-Latin translations. He has been called by D. A. Callus “a forerunner of the great commentators,” and C. Baeumker asserts that his knowledge of Aristotle is unmatched by any schoolman of the early thirteenth century. The purpose of this paper is to show Alfred’s role in the reacquisition of Aristotle’s natural philosophy by examining his commentary on Aristotle’s *Metheora* to show specifically the sources for Alfred’s commentary, Latin, Greek, Arabic; and to indicate how he employed them.” – Otte.

Friedrich W. Solmsen was a philologist and professor of classical studies, producing some 150 books, articles, and reviews. He was influential in classical studies, including Greek tragedy, Aeschylus, Greek philosophy, Plato and Aristotle. For a long-time he was the Moses Slaughter Professor of Classical Studies at the University of Wisconsin–Madison.


Alfred Edward Taylor, “usually cited as A. E. Taylor, was a British idealist philosopher most famous for his contributions to the philosophy of idealism in his writings on metaphysics, the philosophy of religion, moral philosophy, and the
scholarship of Plato. He was a fellow of the British Academy (1911) and president of the Aristotelian Society from 1928 to 1929.”


Photocopied facsimile of this study by Pansier of the ophthalmological contributions of Arnaldo de Villanova and others, including Johannis de Caso.


Dr. Pierre Pansier (1864-1934), ophthalmologist, was from Avignon. He developed a passion for the history of medicine, the history of charitable institutions, the
history of Avignon and Comtat Venaissin and the history of the Provençal language and folklore.


$ 10

A much-expanded edition of this work, ‘The development of the worlds’ on the heavens, solar dust in the Earth’s atmosphere, the Aurora Borealis, solar radiation, etc. A second section (315 pages) was issued in 1929 relating to the stellar world.

Svante August Arrhenius was a Swedish scientist. Originally a physicist, but often referred to as a chemist, Arrhenius was one of the founders of the science of physical chemistry. He received the Nobel Prize for Chemistry in 1903, becoming the first Swedish Nobel laureate.

$10

Professor Frederick Binkerd Artz was a French and medieval historian at Oberlin College. He specialized in scientific and philosophic currents that can be traced from the Middle Ages to modern thought.

Heisenberg is famous for his work on quantum theory, and his founding of quantum mechanics. He won the 1932 Nobel Prize for physics.


$ 15


Mary L. Austin was with the Dept. of Zoology, Wellesley College.

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$75

“Ibn Rushd, often Latinized as Averroes, was an Andalusian polymath and jurist who wrote about many subjects, including philosophy, theology, medicine, astronomy, physics, psychology, mathematics, Islamic jurisprudence and law, and linguistics.”
Harry A. Wolfson was the first chairman of a Judaic Studies Center in the United States, teaching and doing his research at Harvard. He was extremely productive and wrote works including a translation and commentary on Hasdai Crescas’ Or Adonai, the philosophy of the church fathers, the repercussions of the Kalam on Judaism, and works on Spinoza, Philo, and Averroes.

Francis Howard Fobes was Professor of Latin at Amherst College. He is remembered for his texts of Aristotle and for his translations.

Within Arabic philosophy, Gutas has concentrated in particular on its greatest exponent, Ibn Sina (known as Avicenna in the medieval Latin world), on whom he wrote the fundamental Avicenna and the Aristotelian Tradition. Introduction to Reading Avicenna’s Philosophical Works (Leiden 1988; second, revised and augmented edition, including an inventory of Avicenna’s authentic works, Leiden 2013). – Author.

Arranged in three parts: I: Documents on Avicenna and the Aristotelian Tradition; II: Avicenna’s Reception to the Aristotelian Tradition; III: Avicenna’s Integration to the Aristotelian Tradition.

“In the past fifteen years, research into the life, times, and philosophy of Avicenna has witnessed a resurgence among scholars of medieval Islamic intellectual history. This resurgence can be traced in part to the 1988 publication of Dimitri Gutas’s
Avicenna and the Aristotelian Tradition in which scholars were treated to an evaluation of work on Avicenna since the millenary celebrations of the 1950s, an assessment of the then current state of research, and a detailed map-in Gutas’s own study of Avicenna’s intellectual inheritance and innovation - of the methodology and goals that would be necessary for further progress.” – David C. Reisman, “A New Standard for Avicenna Studies.” (p. 562).

PROVENANCE: David C. Lindberg (1935-2015) was an American historian of science. His main focus was on the history of medieval and early modern science, especially physical science and the relationship between religion and science. Lindberg was the Hilldale Professor Emeritus of History of Science and past director of the Institute for Research in the Humanities, at the University of Wisconsin, Madison.

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