

Discoveries	Name of discoverer
Laws of chemical dynamics and osmotic pressure	Jacobus Henricus van 't Hoff
Serum therapy	Emil Adolf von Behring
X-rays	Wilhelm Röntgen
Sugar and purine syntheses	Hermann Emil Fischer
Combating malaria	Ronald Ross
Influence of magnetism upon radiation phenomena	Hendrik Antoon Lorentz, Pieter Zeeman
Electrolytic theory of dissociation	Svante August Arrhenius
Light radiation treatment	Niels Ryberg Finsen
Spontaneous radioactivity	Antoine Henri Becquerel, Pierre Curie, Marie Curie
Inert gaseous elements	Sir William Ramsay
Physiology of digestion	Ivan Petrovich Pavlov
Density of gases and discovery of argon	Lord Rayleigh (John William Strutt)
Organic dyes and hydroaromatic compounds	Adolf von Baeyer
Tuberculosis bacterium	Robert Koch
Cathode rays	Philipp Eduard Anton von Lenard
Isolation of the element fluorine	Henri Moissan
Structure of the nervous system	Camillo Golgi, Santiago Ramón y Cajal
Electron	Joseph John Thomson
Cell-free fermentation	Eduard Buchner
Causative agent of malaria	Charles Louis Alphonse Laveran
Interferometer for measuring speed of light	Albert Abraham Michelson
Chemistry of radioactive substances	Ernest Rutherford
Disintegration of chemical elements	Ernest Rutherford
Immunity	Ilya Ilyich Mechnikov, Paul Ehrlich
Method for color photography	Gabriel Lippmann
Chemical equilibria and rates of reaction	Wilhelm Ostwald
Catalysis	Wilhelm Ostwald
Function and surgery of thyroid gland	Emil Theodor Kocher
Wireless telegraphy	Guglielmo Marconi, Karl Ferdinand Braun
Alicyclic compounds	Otto Wallach
Composition of nucleic acids	Albrecht Kossel
Equation of state for gases and liquids	Johannes Diderik van der Waals
Elements radium and polonium and isolation of radium	Marie Curie
Dioptrics of the eye	Allvar Gullstrand
Laws governing the radiation of heat	Wilhelm Wien
Method for combining basic into complex organic compounds (Grignard reagent)	Victor Grignard
Method of hydrogenation by catalysis	Paul Sabatier
Method for transplantation of blood vessels and organs	Alexis Carrel
Invention of solar valve	Nils Gustaf Dalén
Linkage of atoms in molecules	Alfred Werner
Anaphylaxis	Charles Robert Richet
Liquid helium	Heike Kamerlingh Onnes
Superconductivity	Heike Kamerlingh Onnes
Methods for determining atomic masses	Theodore William Richards
Physiology of the vestibular apparatus	Robert Bárány
Diffraction of X-rays by crystals	Max von Laue
Chlorophyll composition	Richard Martin Willstätter
Crystal structure by means of X-rays	Sir William Henry Bragg, William Lawrence Bragg
Characteristic Röntgen radiation	Charles Glover Barkla
Method for producing ammonia	Fritz Haber
Quantum theory	Max Planck
Immunity factors of blood serum	Jules Bordet
Doppler effect in canal rays	Johannes Stark
Stark effect	Johannes Stark
Third law of thermodynamics	Walther Hermann Nernst
Capillary motor regulating mechanism	Schack August Steenberg Krogh
Precision measurement using anomalies in nickel steel alloys	Charles Edouard Guillaume
Origin and nature of isotopes	Frederick Soddy
Law of the photoelectric effect	Albert Einstein
Mass spectrography and isotopes	Francis William Aston
Physiology of the muscular system	Archibald Vivian Hill, Otto Fritz Meyerhof
Structure of atoms based on quantum theory	Niels Bohr
Method of micro-analysis of organic substances	Fritz Pregl
Insulin	Frederick Banting, John Macleod
Elementary charge of electricity	Robert Andrews Millikan
Method and mechanism of electrocardiogram	Willem Einthoven
Improved X-ray spectroscopy	Karl Manne Georg Siegbahn
Nature of colloids using developed ultramicroscope	Richard Adolf Zsigmondy
Laws governing impact of electron on an atom	James Franck, Gustav Ludwig Hertz
Research on disperse systems and developed the ultracentrifuge	The (Theodor) Svedberg
Spiroptera carcinoma	Johannes Andreas Grib Fibiger
Sedimentation equilibrium	Jean Baptiste Perrin
Chemistry of bile acids	Heinrich Otto Wieland

Therapeutic value of malaria inoculation	Julius Wagner-Jauregg
Compton effect	Arthur Holly Compton
Development of cloud chamber	Charles Thomson Rees Wilson
Constitution of sterols	Adolf Otto Reinhold Windaus
Cause of typhus	Charles Jules Henri Nicolle
Cause of the thermionic phenomenon	Owen Willans Richardson
	Arthur Harden, Hans Karl August Simon von Euler-Chelpin
Fermentation of sugar	Christiaan Eijkman
Antineuritic vitamin	Sir Frederick Gowland Hopkins
Growth-stimulating vitamins	Louis de Broglie
Wave nature of electrons	Hans Fischer
Constitution of haemin and chlorophyll	Karl Landsteiner
Human blood groups	Sir Chandrasekhara Venkata Raman
Raman effect	Carl Bosch, Friedrich Bergius
Chemical high pressure methods	Otto Heinrich Warburg
Nature and mode of action of the respiratory enzyme	Irving Langmuir
Theory of atomic structure/Lewis theory of shared electrons	Sir Charles Scott Sherrington, Edgar Douglas Adrian
Functions of neurons	Werner Karl Heisenberg
Development of quantum mechanics	Thomas Hunt Morgan
Chromosome theory of heredity	Erwin Schrödinger
Wave equation	Paul Dirac
Relativistic quantum theory	Harold Clayton Urey
Heavy hydrogen	George Hoyt Whipple, George Richards Minot, William Parry Murphy
	Frédéric Joliot, Irène Joliot-Curie
Liver therapy in cases of anaemia	Hans Spemann
Synthesis of new radioactive elements	James Chadwick
Organizer effect in embryonic development	Petrus (Peter) Josephus Wilhelmus Debye
Neutron	Sir Henry Hallett Dale, Otto Loewi
Research on molecular structure using new X-ray methods	Victor Franz Hess
Chemical transmission of nerve impulses	Carl David Anderson
Cosmic radiation	Walter Norman Haworth, Paul Karrer
Positron	Albert von Szent-Györgyi Nagyrápolt
Carbohydrates and vitamins	Clinton Joseph Davison, George Paget Thomson
Catalysis and vitamin C	Richard Kuhn
Diffraction of electrons by crystals	Corneille Jean François Heymans
Carotenoids, Vitamins B2 and B6, and chromatographic techniques	Enrico Fermi
Sinus and aortic mechanisms in respiration	Adolf Friedrich Johann Butenandt
Radioactivity produced by neutron bombardment	Leopold Ruzicka
Sex hormones	Gerhard Domagk
Polymethylenes and higher terpenes	Ernest Orlando Lawrence
Antibacterial effects of prontosil	George de Hevesy
Invention of cyclotron and study of artificial radioactive elements	Henrik Dam, Edward A. Doisy
Method of using isotopes as tracers	
Vitamin K and its chemical nature	Otto Stern
Proton's magnetic moment using newly developed molecular ray method	Otto Hahn
Fission of heavy nuclei	Joseph Erlanger, Herbert Spencer Gasser
Differentiated functions of single nerve fibres	Isidor Isaac Rabi
Method for recording magnetic properties of atomic nuclei	Artturi Ilmari Virtanen
Fodder preservation method	Alexander Fleming, Ernst Chain, Howard Florey
Penicillin and its curative effect	Wolfgang Pauli
Exclusion (Pauli) principle	James Batcheller Sumner, John Howard Northrop, Wendell Meredith Stanley
	Hermann Joseph Muller
Preparation of enzymes and virus proteins	Percy Williams Bridgman
Mutations by means of x-ray radiation	Sir Robert Robinson
Invention of Bridgman pressure apparatus to produce extremely high pressures	Bernardo Alberto Houssay
Methods for producing alkaloids	Carl Ferdinand Cori, Gerty Theresa Cori, née Radnitz
Role of pituitary lobe in metabolism of sugar	Sir Edward Victor Appleton
Catalytic conversion of glycogen	Arne Wilhelm Kaurin Tiselius
Ionosphere and the Appleton layer	Paul Hermann Müller
Method of electrophoresis and adsorption analysis	Patrick Maynard Stuart Blackett
DDT as an insecticide	William Francis Giauque
Development of Wilson cloud chamber and subsequent discoveries	Egas Moniz
Evidence of third law of thermodynamics	Walter Rudolf Hess
Leucotomy as treatment for mental illnesses	Hideki Yukawa
Functional organization of the interbrain	Otto Paul Hermann Diels, Kurt Alder
Strong force (existence of mesons)	Edward Calvin Kendall, Tadeus Reichstein, Philip Showalter Hench
Diene synthesis	Cecil Frank Powell
	Edwin Mattison McMillan, Glenn Theodore Seaborg
Hormones of adrenal cortex	Max Theiler
Photographic method and discoveries regarding mesons	Sir John Douglas Cockcroft, Ernest Thomas Sinton
Transuranium elements	Walton
Yellow fever vaccine	Archer John Porter Martin, Richard Laurence Millington
	Syngé
Particle accelerators for studying atomic nuclei	Selman Abraham Waksman
	Felix Bloch, Edward Mills Purcell
Partition chromatography	
Streptomycin (antibiotic against tuberculosis)	
Methods for nuclear magnetic precision measurements	

Macromolecular chemistry	Hermann Staudinger
Metabolism - citric acid cycle	Hans Adolf Krebs
Coenzyme A and its importance for intermediary metabolism	Fritz Albert Lipmann
Phase contrast microscope	Frits Zernike
Nature of the chemical bond	Linus Carl Pauling
	John Franklin Enders, Thomas Huckle Weller, Frederick Chapman Robbins
Cultivation of poliomyelitis viruses in tissue culture	Max Born
Statistical interpretation of quantum mechanics	Walther Bothe
Coincidence method	Vincent du Vigneaud
Synthesis of polypeptide hormones	Axel Hugo Theodor Theorell
Nature and mode of action of oxidation enzymes	Willis Eugene Lamb
Fine structure of hydrogen spectrum	Polykarp Kusch
Magnetic moment of electron	Sir Cyril Norman Hinshelwood, Nikolay Nikolaevich Semenov
Mechanism of chemical reactions	André Frédéric Cournand, Werner Forssmann, Dickinson W. Richards
Cardiac catheterization	William Bradford Shockley, John Bardeen, Walter Houser Brattain
Semiconductor amplifier (transistor)	Lord (Alexander R.) Todd
Synthesis in study of nucleotides	Daniel Bovet
Antihistamine and drug therapies	Chen Ning Yang, Tsung-Dao Lee
Parity laws	Frederick Sanger
Structure of insulin	George Wells Beadle, Edward Lawrie Tatum
Genes regulate definite chemical events	Joshua Lederberg, Edward Tatum
Organization of genetic material of bacteria	Pavel Alekseyevich Cherenkov, Il'ja Mikhailovich Frank, Igor Yevgenyevich Tamm
Cherenkov effect	Jaroslav Heyrovsky
Polarographic methods of analysis	Severo Ochoa, Arthur Kornberg
Synthesis of ribonucleic acid and deoxyribonucleic acid	Emilio Gino Segrè, Owen Chamberlain
Antiproton	Willard Frank Libby
Radiocarbon dating method	Sir Frank Macfarlane Burnet, Peter Brian Medawar
Acquired immunological tolerance	Donald Arthur Glaser
Development of bubble chamber	Melvin Calvin
Carbon dioxide assimilation in plants	Georg von Békésy
Mechanism of stimulation in the cochlea	Robert Hofstadter
Electron scattering method	Rudolf Ludwig Mössbauer
Mossbauer effect	Max Ferdinand Perutz, John Cowdery Kendrew
Structures of globular proteins	Francis Crick, James Watson, Maurice Wilkins
Structure of DNA molecule	Lev Davidovich Landau
Quantum theory of superfluid liquid helium	Karl Ziegler, Giulio Natta
Technology of high polymers	Sir John Carew Eccles, Alan Lloyd Hodgkin, Andrew Fielding Huxley
Functioning of synapses	Eugene Paul Wigner
Fundamental symmetry principles	Maria Goeppert-Mayer, J. Hans D. Jensen
Nuclear shell model	Dorothy Crowfoot Hodgkin
Structure of penicillin and vitamin B12	Konrad Bloch, Feodor Lynen
Mechanism and regulation of cholesterol	Charles Hard Townes, Nicolay Gennadiyevich Basov, Aleksandr Mikhailovich Prokhorov
Oscillators and amplifiers based on maser-laser principle	Robert Burns Woodward
Synthesis of organic substances	André Lwoff
Functioning of lysogeny	François Jacob, Jacques Monod
Genetic control of enzyme and virus synthesis	Sin-Itiro Tomonaga
Development of quantum electrodynamics	Julian Schwinger
Relativistic quantum field theory	Richard P. Feynman
Feynman diagrams	Robert S. Mulliken
Molecular orbitals	Charles Brenton Huggins
Hormonal treatment of prostatic cancer	Peyton Rous
Tumour-inducing viruses	Alfred Kastler
Optical methods for studying hertzian resonances	Manfred Eigen
Immeasurably fast reactions	George Porter, Ronald G.W. Norrish
Flash photolysis and kinetic spectroscopy	Ragnar Granit, Haldan Keffer Hartline, George Wald
Physiological and chemical visual processes in the eye	Hans Albrecht Bethe
Energy production in stars	Lars Onsager
Reciprocal relations	Robert W. Holley, Har Gobind Khorana, Marshall W. Nirenberg
Interpretation of genetic code	Luis Walter Alvarez
Development of hydrogen bubble chamber	Derek H. R. Barton, Odd Hassel
Conformational analysis	Ragnar Frisch, Jan Tinbergen
Econometrics	Max Delbrück, Salvador E. Luria
Bacteria develop via mutations	Alfred D. Hershey
DNA as bearer of genetic information	Murray Gell-Mann
Quarks	Luis F. Leloir
Sugar nucleotides	Paul A. Samuelson
Formalization of economic research using mathematics	Sir Bernard Katz
Quantal mechanism of neural transmitter release	Ulf von Euler
Neurotransmitter norepinephrine	Julius Axelrod
Research on noradrenaline	Hannes Olof Gösta Alfvén
Magneto-hydrodynamics	Louis Eugène Félix Néel
Antiferromagnetism	Louis Eugène Félix Néel
Ferrimagnetism	

Spectroscopic studies of molecular structure	Gerhard Herzberg
Development of gross national product (GNP)	Simon Kuznets
Mechanism of hormone action	Earl W. Sutherland, Jr.
Holographic method	Dennis Gabor
Configuration of ribonuclease	Christian B. Anfinsen
Chemical composition of ribonuclease	Stanford Moore, William H. Stein
Renewal of general equilibrium theory	John R. Hicks
Theory of uncertainty, and theory of social choice	Kenneth J. Arrow
Chemical structure of antibodies	Gerald M. Edelman, Rodney R. Porter
Theory of superconductivity	John Bardeen, Leon Neil Cooper, John Robert Schrieffer
Sandwich compounds	Ernst Otto Fischer, Geoffrey Wilkinson
Input-output method	Wassily Leontief
Behavioral patterns in animals	Karl von Frisch, Konrad Lorenz, Nikolaas Tinbergen
Tunnelling supercurrents	Brian David Josephson
Tunneling in semiconductor material	Leo Esaki
Tunneling in superconductors	Ivar Giaever
Spatial configuration of macromolecular chains	Paul J. Flory
Theory of business cycles	Friedrich August von Hayek
Interrelations between economic, social and political processes	Gunnar Myrdal
Cell structure	Albert Claude
Lysosomes	Christian de Duve
Ribosomes	George E. Palade
Aperture synthesis technique/interferometry	Sir Martin Ryle
Pulsars	Antony Hewish
Enzyme-catalyzed reactions	John Warcup Cornforth
Stereochemistry of organic molecules and reactions/R-S system	Vladimir Prelog
Method of resolving multipliers	Leonid Vitaliyevich Kantorovich
Activity analysis	Tjalling C. Koopmans
Tumour viruses and genetic material of the cell	Renato Dulbecco
DNA provirus hypothesis	Howard Martin Temin
Reverse transcriptase	David Baltimore
Atomic nucleus distortion	Aage Niels Bohr, Ben Roy Mottelson, James Rainwater
Structure of boranes	William N. Lipscomb
Complexity of stabilization policy	Milton Friedman
Origin and disappearance of Kuru	D. Carleton Gajdusek
Hepatitis B (Australia antigen)	Baruch S. Blumberg
J/psi particle	Burton Richter, Samuel Chao Chung Ting
Theory of dissipative structures	Ilya Prigogine
Modern theory of international trade	Bertil Ohlin
Effects of economic policy on foreign trade	James E. Meade
Radioimmunoassays (RIA) technique (for peptide hormones)	Rosalyn Yalow
Structure of peptide hormone	Roger Guillemin, Andrew V. Schally
Modern quantum mechanical theory of magnetism	John Hasbrouck van Vleck
Local moments and localized states of an electron	Philip Warren Anderson
Mott transitions	Sir Nevill Francis Mott
Chemiosmotic theory	Peter D. Mitchell
Decision-making process within economic organizations	Herbert A. Simon
Restriction enzymes	Werner Arber, Hamilton O. Smith, Daniel Nathans
Method for producing liquid helium in large quantities	Pyotr Leonidovich Kapitsa
Superfluidity	Pyotr Leonidovich Kapitsa
Cosmic microwave background radiation	Arno Allan Penzias, Robert Woodrow Wilson
Method for producing phosphorus-containing compounds	Georg Wittig
Method for producing compounds containing boron	Herbert C. Brown
Economic models of causes of poverty	Sir Arthur Lewis
Human capital for economic development, particularly agriculture	Theodore W. Schultz
Computer assisted tomography	Allan M. Cormack, Godfrey N. Hounsfield
Electroweak theory	Sheldon Glashow, Abdus Salam, Steven Weinberg
Recombinant DNA	Paul Berg
DNA Sequencing	Walter Gilbert, Frederick Sanger
Econometric models	Lawrence R. Klein
Histocompatibility antigens	George D. Snell
Human leukocyte antigens	Jean Dausset
Immune response	Baruj Benacerraf
Symmetry violation in decay of neutral K-mesons	James Watson Cronin, Val Logsdon Fitch
Theory of conservation of orbital symmetry	Kenichi Fukui, Roald Hoffmann
Portfolio selection theory	James Tobin
Information processing in visual system	David H. Hubel, Torsten N. Wiesel
Functional specialization of cerebral hemispheres	Roger W. Sperry
Nonlinear optics and laser spectroscopy	Nicolaas Bloembergen
Electron spectroscopy for chemical analysis	Kai M. Siegbahn
Doppler-free spectroscopy	Arthur L. Schawlow
Crystallographic electron microscopy	Aaron Klug
Market processes and analysis of structure of industries	George J. Stigler
Endoperoxides, thromboxanes and leukotrienes	Bengt I. Samuelsson
Prostacyclin	John R. Vane
Structure of prostaglandins	Sune K. Bergström
Critical points for phase transitions and renormalization	Kenneth G. Wilson
Mechanisms of electron transfer in metal complexes	Henry Taube
Equilibrium-creating prices	Gerard Debreu

Mobile genetic elements	Barbara McClintock
Physical processes in the evolution of stars	Subrahmanyan Chandrasekhar
Formation of chemical elements in universe	William Alfred Fowler
Method for chemical synthesis on a solid matrix	Robert Bruce Merrifield
Method of national accounting	Richard Stone
Method for producing monoclonal antibodies	Georges J.F. Köhler, César Milstein
Natural-selection theory of antibody formation	Niels K. Jerne
Weak force (existence of W and Z particles)	Carlo Rubbia
Stochastic cooling method	Simon van der Meer
Methods for determining crystal structures	Herbert A. Hauptman, Jerome Karle
Life-cycle hypothesis of household saving and financial markets	Franco Modigliani
Regulation of cholesterol metabolism	Michael S. Brown, Joseph L. Goldstein
Quantized Hall effect	Klaus von Klitzing
Method of crossed molecular beams	Dudley R. Herschbach, Yuan T. Lee
Method of infrared chemiluminescence	John C. Polanyi
Public choice theory	James M. Buchanan Jr.
Growth factors	Rita Levi-Montalcini, Stanley Cohen
Electron microscope	Ernst Ruska
Scanning tunneling microscope	Gerd Binnig, Heinrich Rohrer
Crown ethers	Charles J. Pedersen
Host-guest reactions	Donald J. Cram
Cryptands	Jean-Marie Lehn
Solow's economic growth model	Robert M. Solow
Genetic principle for generation of antibody diversity	Susumu Tonegawa
Superconductivity in ceramic materials	J. Georg Bednorz, K. Alexander Müller
Structure of a photosynthetic reaction centre	Johann Deisenhofer, Robert Huber, Hartmut Michel
Market equilibrium and efficiency properties of markets	Maurice Allais
Method for producing medical drugs	Gertrude Elion, George Hitchings
Drug treatments propranolol and cimetidine	Sir James W. Black
Neutrino beam method	Leon M. Lederman, Melvin Schwartz, Jack Steinberger
Catalytic properties of RNA	Sidney Altman, Thomas R. Cech
Probability theory foundations of econometrics	Trygve Haavelmo
Cellular origin of retroviral oncogenes	J. Michael Bishop, Harold E. Varmus
Ion trap technique	Hans G. Dehmelt, Wolfgang Paul
Separated oscillatory fields method	Norman F. Ramsey
Theory and methodology of organic synthesis	Elias James Corey
Theory of portfolio management	Harry M. Markowitz
Theory of corporate finance	Merton H. Miller
Capital asset pricing model	William F. Sharpe
Methods of providing bone marrow transplantation	E. Donnall Thomas
Organ transplantation in humans	Joseph E. Murray
	Jerome I. Friedman, Henry W. Kendall, Richard E. Taylor
Deep inelastic scattering	Richard R. Ernst
Improvements to nuclear magnetic resonance spectroscopy	Ronald H. Coase
Transaction costs and institutional structure of production	Erwin Neher, Bert Sakmann
Method for identifying function of single ion channels in cells	Pierre-Gilles de Gennes
Method for studying liquid crystals and polymers	Rudolph A. Marcus
Electron transfer reactions in chemical systems	Gary S. Becker
Microeconomic analysis of human behavior	Edmond H. Fischer, Edwin G. Krebs
Reversible protein phosphorylation	Georges Charpak
Development of multiwire proportional chamber (particle detector)	Kary B. Mullis
Polymerase chain reaction (PCR) method	Michael Smith
Site-directed mutagenesis	Douglass C. North, Robert W. Fogel
Foundation of cliometrics (economic history)	Richard J. Roberts, Phillip A. Sharp
Split genes	Russell A. Hulse, Joseph H. Taylor Jr.
Binary pulsars	George A. Olah
Carbocation chemistry	John C. Harsanyi
Theoretical foundation for economics of information	John F. Nash Jr.
Nash equilibrium	Reinhard Selten
Subgame perfection	Martin Rodbell, Alfred G. Gilman
G-proteins in signal transduction	Bertram N. Brockhouse
Neutron spectroscopy	Clifford G. Shull
Neutron diffraction technique	Mario J. Molina, F. Sherwood Rowland
CFC gases effects on ozone	Paul J. Crutzen
Ozone depletion by nitric oxide	Robert E. Lucas Jr.
Theory of rational expectations	Edward Lewis, Christiane Nüsslein-Volhard, Eric Wieschaus
	Frederick Reines
Genetic control of early embryonic development	Martin L. Perl
Detection of neutrino	Robert Curl Jr., Sir Harold Kroto, Richard Smalley
Tau particle	James A. Mirrlees
Fullerenes	William Vickrey
Optimal income taxation	Peter C. Doherty, Rolf M. Zinkernagel
Methods for analyzing asymmetrical information and auction theory	David M. Lee, Douglas D. Osheroff, Robert C. Richardson
Specificity of cell mediated immune defence	Jens C. Skou
	Paul D. Boyer
Superfluidity in helium-3	John E. Walker
Ion-transporting enzyme	Robert C. Merton, Myron S. Scholes
Theory of the functioning of ATP synthase	
Structure of ATP synthase	
Method to determine value of derivatives/Black-Scholes formula	

Prions (principle of infection)	Stanley B. Prusiner
Doppler cooling and optical molasses	Steven Chu
Zeeman slower	William D. Phillips
Velocity selective coherent population trapping method	Claude Cohen-Tannoudji
Density-functional theory	Walter Kohn
Computational methods in quantum chemistry	John A. Pople
Collective choice and social welfare	Amartya Sen
Biological effects of nitric oxide	Ferid Murad
Endothelium-derived relaxing factor	Robert F. Furchgott, Louis J Ignarro
Fractional quantum Hall effect	Horst L. Störmer, Daniel C. Tsui, Robert B. Laughlin
Femtochemistry	Ahmed H. Zewail
Importance of exchange rate regime	Robert A. Mundell
Protein targeting	Günter Blobel
Quantum structure of electroweak interactions	Gerardus 't Hooft, Martinus J.G. Veltman
Conductive polymers	Alan J. Heeger, Alan G. MacDiarmid, Hideki Shirakawa
Theory and methods for discrete choice	Daniel L. McFadden
Theory and methods for selective samples	James J. Heckman
Dopamine as neurotransmitter in the brain	Arvid Carlsson
Neurobiology of dopamine signaling	Paul Greengard
Formation of memories	Eric R. Kandel
Integrated circuit (microchip)	Jack S. Kilby
Semiconductor heterostructures	Zhores I. Alferov, Herbert Kroemer
Chirally catalysed hydrogenation reactions	William S. Knowles, Ryoji Noyori
Chirally catalysed oxidation reactions	K. Barry Sharpless
Adverse selection	George A. Akerlof
Signaling	A. Michael Spence
Asymmetric information and screening	Joseph E. Stiglitz
CDC-genes and cell division	Leland H. Hartwell
Gene cdc2 and controlling the cell cycle	Sir Paul M. Nurse
Protein synthesis, proteolysis and cell cycle transitions (cyclins)	Tim Hunt
Bose-Einstein condensation in dilute gases	Eric A. Cornell, Carl E. Wieman, Wolfgang Ketterle
Soft desorption ionisation methods	John B. Fenn, Koichi Tanaka
Nuclear magnetic resonance spectroscopy and studying macromolecules	Kurt Wüthrich
Method of laboratory experimentation in economics	Vernon L. Smith
Behavior under uncertainty/prospect theory	Daniel Kahneman
Genetic analysis of cell division and organ formation	Sydney Brenner
Genetic mutation in cell-death process	John E. Sulston
Functional ced-3 and ced-4 genes for programmed cell death	H. Robert Horvitz
X-ray telescope and cosmic x-ray sources	Riccardo Giacconi
Detection of cosmic neutrinos	Raymond Davis Jr, Masatoshi Koshiba
Aquaporin water channels	Peter Agre
Spatial structure of a potassium ion channel	Roderick MacKinnon
ARCH method for economic time series	Robert F. Engle III
Cointegration method for economic time series	Clive W.J. Granger
MRI technique for 2D image of human body	Paul C. Lauterbur
MRI technique and echo-planar scanning	Sir Peter Mansfield
Type I superconductor theory	Vitaly L. Ginzburg
Type II superconductor theory	Alexei A. Abrikosov
Theory for ³ He superfluidity	Anthony J. Leggett
Ubiquitin-mediated protein degradation	Aaron Ciechanover, Avram Hershko, Irwin Rose
Time consistency problem of economic policy	Finn E. Kydland, Edward C. Prescott
Molecular logic of olfactory perception	Richard Axel, Linda B. Buck
Asymptotic freedom in the strong interaction	David J. Gross, H. David Politzer, Frank Wilczek
Metathesis method in organic synthesis	Yves Chauvin, Richard R. Schrock, Robert H. Grubbs
Game theory analysis of conflict and cooperation	Robert J. Aumann, Thomas C. Schelling
Cause of gastritis and peptic ulcer	Barry J. Marshall, J. Robin Warren
Frequency comb technique in spectroscopy	John L. Hall, Theodor W. Hänsch
Quantum theory of optical coherence	Roy J. Glauber
Molecular basis of eukaryotic transcription	Roger D. Kornberg
Expectations-augmented Phillips curve	Edmund S. Phelps
RNA interference	Andrew Z. Fire, Craig C. Mello
Anisotropy of cosmic microwave background radiation	George F. Smoot
Blackbody form of cosmic microwave background radiation	John C. Mather
Methods and chemical processes of solid surfaces	Gerhard Ertl
Mechanism design theory	Leonid Hurwicz, Eric S. Maskin, Roger B. Myerson
Cultivation of embryonic stem cells	Sir Martin J. Evans
Modifications in mice genomes	Mario R. Capecchi, Oliver Smithies
Giant magnetoresistance	Albert Fert, Peter Grünberg
Development of green fluorescent protein	Osamu Shimomura, Martin Chalfie, Roger Y. Tsien
International trade and new economic geography	Paul Krugman
Human Immunodeficiency Virus (HIV)	Françoise Barré-Sinoussi, Luc Montagnier
HPV as cause of cervical cancer	Harald zur Hausen
Origin of broken symmetry	Makoto Kobayashi, Toshihide Maskawa
Mechanism of broken symmetry in subatomic physics	Yoichiro Nambu
	Venkatraman Ramakrishnan, Thomas A. Steitz, Ada E. Yonath
Mapping of ribosomes	Elinor Ostrom
Management of the commons and natural resources	Oliver E. Williamson
Analysis of boundaries of the firm	Elizabeth H. Blackburn, Carol W. Greider, Jack W.
Telomeres and Telomerase	

Transmission of light in fibers	Szostak
Development of CCD sensor	Charles K. Kao
Palladium-catalyzed cross couplings	Willard S. Boyle, George E. Smith
	Richard F. Heck, Ei-ichi Negishi, Akira Suzuki
	Peter A. Diamond, Dale T. Mortensen, Christopher A. Pissarides
Theoretical framework for search markets	Robert G. Edwards
In vitro fertilization	Andre Geim, Konstantin Novoselov
Production of graphene	Thomas J. Sargent
Structural macroeconometrics as an analysis tool	Christopher A. Sims
Vector autoregression method	Ralph Steinman
Dendritic cell and adaptive immunity	Bruce A. Beutler
Lipopolysaccharide (LPS) receptor	Jules A. Hoffmann
Toll-gene in immune system	Dan Shechtman
Quasicrystals	Saul Perlmutter, Brian P. Schmidt, Adam G. Riess
Accelerating expansion of universe	Alvin E. Roth
Practice of market design and matching	Lloyd S. Shapley
Theory of stable allocations and matching	Sir John B. Gurdon
Specialisation of cells is reversible	Shinya Yamanaka
Reprogramming of mature cells as pluripotent	Robert J. Lefkowitz
β -adrenergic receptor	Brian K.obilka
Gene regulator of β -adrenergic receptor	David J. Wineland
Method of laser cooling for quantum systems	Serge Haroche
Method of capturing photons in a trap	Eugene F. Fama
Stock price adjustment to new information	Robert J. Shiller
Predictability in stock markets	Lars Peter Hansen
Generalized Method of Moments (GMM) for stock prices	Randy Schekman
Regulatory genes for vesicle transport	James E. Rothman
Vesicles fuse with specific surfaces in the cell	Thomas C. Südhof
Regulation of neurotransmitter release	Martin Karplus, Arie Warshel
Computer software for studying electrons	Arie Warshel, Michael Levitt
Computer programme of an enzymatic reaction	François Englert, Peter W. Higgs
Theory of the Higgs particle	Jean Tirole
Analysis of market power and regulation	John O'Keefe
Cells as positioning system in the brain	May-Britt Moser, Edvard I. Moser
Grid cells, place cells and memory	Stefan W. Hell
Stimulated emission depletion microscopy	Eric Betzig, William E. Moerner
Single-molecule microscopy	Isamu Akasaki, Hiroshi Amano, Shuji Nakamura
Blue light-emitting diode (LED)	Angus Deaton
Household consumption measurement/Almost Ideal Demand System	Tu Youyou
Artemisinin therapy against malaria	William C. Campbell, Satoshi Ōmura
Ivermectin therapy against parasites	Tomas Lindahl, Paul Modrich, Aziz Sancar
DNA repair mechanisms	Takaaki Kajita, Arthur McDonald
Neutrino oscillations	Oliver Hart
Theory of incomplete contracts	Bengt Holmström
Informativeness principle	Yoshinori Ohsumi
Mechanisms for autophagy	Jean-Pierre Sauvage, Sir J. Fraser Stoddart, Bernard L. Feringa
	David J. Thouless, J. Michael Kosterlitz
Design and synthesis of molecular machines	Duncan Haldane
KT transition (phase transitions at low temperatures)	Richard H. Thaler
Topological quantum matter	Jeffrey C. Hall, Michael Rosbash, Michael W. Young
Endowment effect in behavioural economics	Jacques Dubochet
Circadian clock mechanisms	Joachim Frank
Vitrification water technique for electron cryo-microscopy	Richard Henderson
SPIDER image processing system for electron cryo-microscopy	Rainer Weiss, Barry C. Barish, Kip S. Thorne
Bacteriorhodopsin at high resolution for electron cryo-microscopy	William D. Nordhaus
Developing the LIGO detector and observing gravitational waves	Paul M. Romer
Integrated assessment model of climate change	Tasuku Honjo, James P. Allison
Endogenous growth theory	Frances H. Arnold
Immune checkpoint therapy for cancer	George P. Smith, Sir Gregory P. Winter
Directed evolution of enzymes	Arthur Ashkin
Phage display of peptides and antibodies	Gérard Mourou, Donna Strickland
Optical tweezers	Abhijit Banerjee, Esther Duflo, Michael Kremer
Method for creating ultrashort high-intensity laser pulses	William G. Kaelin Jr, Sir Peter J. Ratcliffe, Gregg L. Semenza
Experimental approach to alleviating global poverty	John B. Goodenough, M. Stanley Whittingham, Akira Yoshino
	James Peebles
Oxygen sensing mechanism in cells	Michel Mayor, Didier Queloz
	Paul R. Milgrom, Robert B. Wilson
Development of lithium-ion batteries	Harvey J. Alter, Michael Houghton, Charles M. Rice
Theoretical framework of physical cosmology	Emmanuelle Charpentier, Jennifer A. Doudna
Planet 51 Pegasi b	Roger Penrose
Improvements to auction theory	Reinhard Genzel, Andrea Ghez
Hepatitis C Virus	David Card
Method for genome editing (CRISPR)	Joshua D. Angrist, Guido W. Imbens
Mathematical proof for black holes	David Julius, Ardem Patapoutian
Supermassive compact object at the centre of our galaxy	Benjamin List, David MacMillan
Empirical contributions to labour economics	Syukuro Manabe, Klaus Hasselmann
Methods for analysing causal relationships (natural experiments)	
Receptors for temperature and touch	
Tool for molecular construction - organocatalysis	
Modelling and predicting Earth's climate/global warming	

Disordered complex materials in complex systems	Giorgio Parisi
Analysis of the Great Depression	Ben Bernanke
Role of banks in financial crises	Douglas Diamond, Philip Dybvig
Entangled quantum states	John Clauser, Alain Aspect, Anton Zeilinger
Bioorthogonal chemistry	Carolyn Bertozzi
Click chemistry	K. Barry Sharpless, Morten Meldal
Genomes of extinct hominins and human evolution	Svante Pääbo
Major non-nobel-prize discoveries	
Miletus' five geometric theorems	Thales of Miletus
Pythagorean theorem	Pythagoras
Self-healing power of human body	Hippocrates
Theory of atoms	Democritus
Formal logic	Aristotle
Euclidean geometry	Euclid
Lever	Archimedes
Value of pi	Archimedes
Buoyancy	Archimedes
Earth's circumference	Eratosthenes
Moon's effect on the tides	Seleucus of Seleucia
Precession of equinoxes	Hipparchus
Evolutionary theory	Lucretius
Encyclopedia of natural history	Gaius Secundus (Pliny the Elder)
Ptolemaic geocentric system	Claudius Ptolemy
Function of arteries	Claudius Galenus (Galen)
Algebra (including Hindu-Arabic numerals)	Muhammad Al-Khwārizmī
Evidence-based medicine	Avicenna (Ibn Sīnā)
Numbers	Fibonacci
Method of experimental science	Roger Bacon
Optical theory	Roger Bacon
Theory of impetus	Jean Buridan
Movable-type printing press	Johannes Gutenberg
Heliocentric universe	Nicolaus Copernicus
Cure for syphilis	Paracelsus
Human anatomy	Andreas Vesalius
Supernova	Tycho Brahe
Infinite universe	Giordano Bruno
Law of falling objects	Galileo Galilei
Magnetic bodies	William Gilbert
Planetary motion	Johannes Kepler
Jupiter's moons	Galileo Galilei
Analytic geometry	Rene Descartes
Baconian method of science and induction	Francis Bacon
Human circulatory system	William Harvey
Origin of plant matter	Johann van Helmont
Fermat's Last Theorem	Pierre de Fermat
Barometer for measuring air pressure	Evangelista Torricelli
Pascal's law	Blaise Pascal
Pascal's triangle	Blaise Pascal
Saturn's rings	Christiaan Huygens
Taxonomy of plants	John Ray
Capillaries	Marcello Malpighi
Boyle's law	Robert Boyle
Existence of cells	Robert Hooke
Universal gravitation	Isaac Newton
Fossils	Nicholas Steno
Distance to the sun	Giovanni Cassini
Bacteria	Anton van Leeuwenhoek
Differential and integral calculus	Gottfried Wilhelm Leibniz
Laws of motion	Isaac Newton
Steam engine	Thomas Newcomen
Mercury thermometer	Daniel Fahrenheit
Motion of stars	Edmund Halley
Fahrenheit scale	Daniel Fahrenheit
Hydrodynamics	Daniel Bernoulli
Order and system of nature	Carl Linnaeus
Celsius temperature scale	Anders Celsius
D'Alembert's principle	Jean Le Rond D'Alembert
Infinite analysis	Leonhard Euler
Established field of natural history	Georges-Louis Leclerc (Comte de Buffon)
Galaxies	Thomas Wright, William Herschel
Nature of electricity	Benjamin Franklin
Carbon dioxide	Joseph Black
Mechanism of respiration	Albrecht von Haller
Separate condenser	James Watt
Hydrogen	Henry Cavendish
Oceans control global weather	Benjamin Franklin
Oxygen	Joseph Priestley
Chlorine	Carl Wilhelm Scheele

Catalogue of astronomical objects	Charles Messier
Photosynthesis	Jan Ingenhousz
Uranus	William Herschel
Hot air balloon	Joseph-Michel and Jacques-Étienne Montgolfier
Parallel motion	James Watt
Electrostatic force (of attraction and repulsion)	Charles de Coulomb
Ideal gas law/Charles's law	Jacques Charles
Herschel-Rigollet comet/35P	Caroline Herschel
Conservation of matter	Antoine Lavoisier
Nature of heat	Count Rumford
Animal electricity theory	Luigi Galvani
Erosion of the earth	James Hutton
Calculation of density and weight of Earth	Henry Cavendish
Vaccinations	Lady Mary Wortley Montagu, Edward Jenner
Celestial mechanics	Pierre Simon Laplace
Infrared	William Herschel
Electric battery	Alessandro Volta
Principle of correlated anatomical parts	Georges Cuvier
Ultraviolet	Johann Ritter
Anesthesia	Humphry Davy
Germain's theorem	Sophie Germain
Algebraic number theory	Carl Gauss
Atoms	John Dalton
Inheritance of acquired characteristics	Jean-Baptiste Lamarck
Electrochemical bonding	Humphry Davy
Atomic weights of chemical elements	Jons Jacob Berzelius
Carbohydrates	Joseph Louis Gay Lussac
Existence of molecules	Amedeo Avogadro
Electromagnetism	Hans Oersted
Dinosaur fossil	Gideon Mantell, William Buckland
Law of electromagnetism	Andre Marie Ampere
Ohm's Law	Georg Ohm
Brownian motion	Robert Brown
Group theory	Evariste Galois
Uniformitarianism	Sir Charles Lyell
Electromagnetic induction	Michael Faraday
Self inductance (principle of electricity)	Joseph Henry
Mechanical computer	Charles Babbage
Ice ages	Louis Agassiz
Organic chemistry	Justus Liebig
Joule's law	James Joule
Computer programming	Ada Lovelace
Biogeography	Alexander von Humboldt
Conservation of energy	Hermann von Helmholtz
Doppler effect	Christian Doppler
Absolute zero scale	William Thomson (Baron Kelvin)
Gyroscope	Léon Foucault
Established oceanography	Matthew Fontaine Maury
Glycogen	Claude Bernard
Germ theory	Louis Pasteur
Synthetic dye	William Henry Perkin
Theory of organic composition	August Kekulé
Theory of evolution via natural selection	Charles Darwin, Alfred Russel Wallace
Cellular pathology	Rudolf Virchow
Atomic light signatures	Gustav Kirchhoff, Robert Bunsen
Internal combustion engine	Jean-Joseph Etienne Lenoir
Experimental psychology	Wilhelm Wundt
Theory of electromagnetic radiation	James Clerk Maxwell
Heredity	Gregor Mendel
Entropy	Rudolf Clausius
Biogenetic law	Ernst Haeckel
Antiseptic medicine	Joseph Lister
Dynamite	Alfred Nobel
Boltzmann distribution/statistical mechanics	Ludwig Boltzmann
Hereditary genius ability	Sir Francis Galton
Deep-sea life	Charles Thomson
Plant breeding	Luther Burbank
Set theory	Georg Cantor
Telephone	Alexander Graham Bell
Incandescent light bulb (fiber element)	Thomas Alva Edison
Periodic table of elements	Dmitri Mendeleyev
Cell division	Walther Flemming
Alternating current	Nikola Tesla
Mental illness classification	Emil Kraepelin
Evidence of electromagnetic radiation	Heinrich Rudolf Hertz
Liquid crystals	Friedrich Reinitzer
Contribution to three-body problem	Henri Poincare
Automobile	Wilhelm Gottlieb Daimler
Psychoanalysis	Sigmund Freud
Relationship between CO2 and global temperature	Svante August Arrhenius

Virus	Dmitri Ivanovsky, Martinus Beijerinck
Mitochondria	Carl Benda
Atmospheric layers	Leon Philippe Teisserenc de Bort
Hormones	William Bayliss, Ernest Starling
Vacuum tube (thermionic valve)	John Ambrose Fleming
Relativity (special) / $E = mc^2$	Albert Einstein
Genetics	William Bateson
Configuration of chromosomes	Nettie Maria Stevens
IQ test	Alfred Binet, Théodore Simon
Understanding of soil fertility	George Washington Carver
Practical airplane	Wilbur Wright, Orville Wright
Radioactive dating	Bertram Boltwood
Plastic	Leo Baekeland
Antibiotics	Paul Ehrlich
Fault lines	Harry Reid
Contemporary anthropology	Franz Boas
Relation between period and luminosity in Cepheid variables	Henrietta Swan Leavitt
Moseley's law (x-rays emitted by atoms)	Henry Moseley
Earth's core and mantle	Beno Gutenberg
Liquid fueled rocket	Robert Goddard
Continental drift	Alfred Wegener
Black holes	Karl Schwarzschild, Louise Webster, Paul Murdin
Partition of numbers	Srinivasa Ramanujan
Analytic psychology/psychoanalytic method	Carl Jung
Explanation of law of gravitation	Arthur Eddington
Human evolution	Raymond Dart
Composition of the sun	Cecilia Payne-Gaposchkin
Expanding universe	Edwin Hubble
Game theory	John von Neumann
Cultural determinism	Margaret Mead
Vernalization	Trofim Lysenko
Turbojet engine	Sir Frank Whittle
Incompleteness theorem	Kurt Gödel
Ecosystem	Arthur Tansley
Radar detection	Robert Alexander Watson-Watt
Turing machine	Alan M. Turing
Stress response	Hans Selye
Role of genetics in evolution/Modern synthesis	Theodosius Dobzhansky
Coelacanth	J. L. B. Smith
Behaviorism	B. F. Skinner
Nuclear fission	Lise Meitner
Blood plasma	Charles Drew
Peripatric speciation in evolution/Modern synthesis	Ernst Mayr
Pace of evolution (via paleontological evidence)	George Gaylord Simpson
Atomic bomb	J. Robert Oppenheimer
Big bang theory	George Gamow, Georges Lemaître
Information theory	Claude Shannon
Steady-state theory	Fred Hoyle
Child development	Jean Piaget
Human sexuality	Alfred Kinsey
Compiler for developing computer codes	Grace Brewster Murray Hopper
Fusion	Lyman Spitzer
Empirical foundation of molecular structure of DNA	Rosalind Franklin
Hydrogen bomb	Edward Teller
Origins of life	Stanley Miller
High-productivity wheat (agricultural revolution)	Norman Borlaug
Vaccine for polio	Jonas Edward Salk
Pheromones	Edward O. Wilson
Seafloor spreading	Harry Hess
Syntactic structure of language (universal grammar)	Noam Chomsky
Homo Habilis	Louis S. B. Leakey
Nature of the atmosphere	Edward Lorenz
Negative effects of pesticides	Rachel Carson
Structural anthropology	Claude Levi Strauss
Quasars	Allan Rex Sandage
Symbiosis as evolutionary force	Lynn Margulis
Dark matter	Vera Rubin, Fritz Zwicky
Social behavior of chimpanzees	Jane Goodall
Punctuated equilibrium in evolution	Stephen Jay Gould
Black hole lifespan (Hawking radiation)	Stephen Hawking
Nature of dinosaurs	Robert Bakker
Fractal geometry	Benoit Mandelbrot
World wide web	Sir Tim Berners-Lee
Genes-causing genetic diseases	Francis Collins
Danger model of the immune system	Polly Matzinger
Computational theory of mind	Steven Pinker
Human genome	James Watson, J. Craig Venter
Coronavirus mRNA vaccine	Özlem Türeci, Ugur Sahin