Nobel Prize Winners by Year

The Nobel Prizes are awarded annually from a fund bequeathed for that purpose by the Swedish inventor and industrialist Alfred Bernhard Nobel. They are widely regarded as the most prestigious awards given for intellectual achievement in the world and are conferred in six categories: physics, chemistry, physiology or medicine, literature, peace, and economics.

The table provides a chronological list of Nobel Prize winners.

Nobel Prize winners by year

year	category	name	country*	achievement
	chemistry	Jacobus Henricus van 't Hoff	Netherlands	laws of chemical dynamics and osmotic pressure
	literature	Sully Prudhomme	France	
1001		Henri Dunant	Switzerland	
1901	peace	Frédéric Passy	France	
	physics	Wilhelm Conrad Röntgen	Germany	discovery of X-rays
	physiology/medicine	Emil von Behring	Germany	work on serum therapy
	chemistry	Emil Fischer	Germany	work on sugar and purine syntheses
	literature	Theodor Mommsen	Germany	
	peace	Élie Ducommun	Switzerland	
		Charles-Albert Gobat	Switzerland	
1902	physics	Hendrik Antoon Lorentz	Netherlands	investigation of the influence of magnetism on radiation
		Pieter Zeeman	Netherlands	investigation of the influence of magnetism on radiation
1903	physiology/medicine	Sir Ronald Ross	U.K.	discovery of how malaria enters an organism
	chemistry	Svante Arrhenius	Sweden	theory of electrolytic dissociation
	literature	Bjørnstjerne Martinius Bjørnson	Norway	

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year	category	name	country*	achievement
	peace	Sir Randal Cremer	U.K.	
		Henri Becquerel	France	discovery of spontaneous radioactivity
	physics	Marie Curie	France	investigations of radiation phenomena discovered by Becquerel
		Pierre Curie	France	investigations of radiation phenomena discovered by Becquerel
	physiology/medicine	Niels Ryberg Finsen	Denmark	treatment of skin diseases with light
	chemistry	Sir William Ramsay	U.K.	discovery of inert gas elements and their places in the periodic system
	literature	José Echegaray y Eizaguirre	Spain	
1904		Frédéric Mistral	France	
	peace	Institute of International Law	(founded 1873)	
	physics	Lord Rayleigh	U.K.	discovery of argon
	physiology/medicine	Ivan Pavlov	Russia	work on the physiology of digestion
	chemistry	Adolf von Baeyer	Germany	work on organic dyes, hydroaromatic compounds
	literature	Henryk Sienkiewicz	Poland	
1905	peace	Bertha, baroness von Suttner	Austria-Hungary	
	physics	Philipp Lenard	Germany	research on cathode rays
	physiology/medicine	Robert Koch	Germany	tuberculosis research
1906	chemistry	Henri Moissan	France	isolation of fluorine; introduction of Moissan furnace
	literature	Giosuè Carducci	Italy	
	peace	Theodore Roosevelt	U.S.	
	physics	Sir J.J. Thomson	U.K.	researches into electrical conductivity of gases

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year	category	name	country*	achievement
		Camillo Golgi	Italy	work on the structure of the nervous system
	physiology/medicine	Santiago Ramón y Cajal	Spain	work on the structure of the nervous system
	chemistry	Eduard Buchner	Germany	discovery of noncellular fermentation
	literature	Rudyard Kipling	U.K.	
1907	peace	Ernesto Teodoro Moneta	Italy	
1907		Louis Renault	France	
	physics	A.A. Michelson	U.S.	spectroscopic and metrological investigations
	physiology/medicine	Alphonse Laveran	France	discovery of the role of protozoa in diseases
	chemistry	Ernest Rutherford	U.K.	investigations into the disintegration of elements and the chemistry of radioactive substances
	literature	Rudolf Christoph Eucken	Germany	
1908		Klas Pontus Arnoldson	Sweden	
	peace	Fredrik Bajer	Denmark	
	physics	Gabriel Lippmann	France	photographic reproduction of colours
	1 1 / 1 1	Paul Ehrlich	Germany	work on immunity
	physiology/medicine	Élie Metchnikoff	Russia	work on immunity
1909	chemistry	Wilhelm Ostwald	Germany	pioneer work on catalysis, chemical equilibrium, and reaction velocities
	literature	Selma Lagerlöf	Sweden	
	peace	Auguste-Marie- François Beernaert	Belgium	

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		Paul-HB. d'Estournelles de Constant	France	
	alassi sa	Ferdinand Braun	Germany	development of wireless telegraphy
	physics	Guglielmo Marconi	Italy	development of wireless telegraphy
	physiology/medicine	Emil Theodor Kocher	Switzerland	physiology, pathology, and surgery of the thyroid gland
	chemistry	Otto Wallach	Germany	pioneer work in alicyclic combinations
	literature	Paul Johann Ludwig von Heyse	Germany	
1910	peace	International Peace Bureau	(founded 1891)	
	physics	Johannes Diederik van der Waals	Netherlands	research concerning the equation of state of gases and liquids
	physiology/medicine	Albrecht Kossel	Germany	researches in cellular chemistry
	chemistry	Marie Curie	France	discovery of radium and polonium; isolation of radium
	literature	Maurice Maeterlinck	Belgium	
1911	peace	Tobias Michael Carel Asser	Netherlands	
		Alfred Hermann Fried	Austria-Hungary	
	physics	Wilhelm Wien	Germany	discoveries regarding laws governing heat radiation
	physiology/medicine	Allvar Gullstrand	Sweden	work on dioptrics of the eye
1912		Victor Grignard	France	discovery of the Grignard reagents
	chemistry	Paul Sabatier	France	method of hydrogenating organic compounds
	literature	Gerhart Hauptmann	Germany	
	peace	Elihu Root	U.S.	

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year	category	name	country*	achievement
	physics	Nils Dalén	Sweden	invention of automatic regulators for lighting coastal beacons and light buoys
	physiology/medicine	Alexis Carrel	France	work on vascular suture; transplantation of organs
	chemistry	Alfred Werner	Switzerland	work on the linkage of atoms in molecules
	literature	Rabindranath Tagore	India	
1013	peace	Henri-Marie Lafontaine	Belgium	
1913	physics	Heike Kamerlingh Onnes	Netherlands	investigation into the properties of matter at low temperatures; production of liquid helium
	physiology/medicine	Charles Richet	France	work on anaphylaxis
	chemistry	Theodore William Richards	U.S.	accurate determination of the atomic weights of numerous elements
1914	physics	Max von Laue	Germany	discovery of diffraction of X-rays by crystals
	physiology/medicine	Robert Bárány	Austria-Hungary	work on vestibular apparatus
	chemistry	Richard Willstätter	Germany	pioneer researches in plant pigments, especially chlorophyll
	literature	Romain Rolland	France	
1915	physics	Sir Lawrence Bragg	U.K.	analysis of crystal structure by means of X-rays
	physics	Sir William Bragg	U.K.	analysis of crystal structure by means of X-rays
1916	literature	Verner von Heidenstam	Sweden	
1917	literature	Karl Adolph Gjellerup	Denmark	
	niciature	Henrik Pontoppidan	Denmark	
	peace	International Committee of the Red Cross	(founded 1863)	

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year	category	name	country*	achievement
	physics	Charles Glover Barkla	U.K.	discovery of characteristic X-radiation of elements
	chemistry	Fritz Haber	Germany	synthesis of ammonia
1918	literature	Erik Axel Karlfeldt (declined)	Sweden	
	physics	Max Planck	Germany	discovery of the elemental quanta
	literature	Carl Spitteler	Switzerland	
	peace	Woodrow Wilson	U.S.	
1919	physics	Johannes Stark	Germany	discovery of Doppler effect in positive ion rays and division of spectral lines in electric field
	physiology/medicine	Jules Bordet	Belgium	work on immunity factors in blood serum
	chemistry	Walther Hermann Nernst	Germany	work in thermochemistry
	literature	Knut Hamsun	Norway	
1920	peace	Léon Bourgeois	France	
1920	physics	Charles Édouard Guillaume	Switzerland	discovery of anomalies in alloys
	physiology/medicine	August Krogh	Denmark	discovery of capillary motor- regulating mechanism
	chemistry	Frederick Soddy	U.K.	chemistry of radioactive substances; occurrence and nature of isotopes
1001	literature	Anatole France	France	
1921		Karl Hjalmar Branting	Sweden	
	peace	Christian Lous Lange	Norway	
	physics	Albert Einstein	Switzerland	work in theoretical physics
1922	chemistry	Francis William Aston	U.K.	work with mass spectrograph; whole-number rule

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year	category	name	country*	achievement
	literature	Jacinto Benavente y Martínez	Spain	
	peace	Fridtjof Nansen	Norway	
	physics	Niels Bohr	Denmark	investigation of atomic structure and radiation
	physiology/medicine	A.V. Hill	U.K.	discoveries concerning heat production in muscles
	physiology/medicine	Otto Meyerhof	Germany	work on metabolism of lactic acid in muscles
	chemistry	Fritz Pregl	Austria	method of microanalysis of organic substances
	literature	William Butler Yeats	Ireland	
1923	physics	Robert Andrews Millikan	U.S.	work on elementary electric charge and the photoelectric effect
	physiology/medicine	Sir Frederick Grant Banting	Canada	discovery of insulin
		J.J.R. Macleod	U.K.	discovery of insulin
	literature	Władysław Stanisław Reymont	Poland	
1924	physics	Karl Manne Georg Siegbahn	Sweden	work in X-ray spectroscopy
	physiology/medicine	Willem Einthoven	Netherlands	discovery of electrocardiogram mechanism
1925	chemistry	Richard Zsigmondy	Austria	elucidation of the heterogeneous nature of colloidal solutions
	literature	George Bernard Shaw	Ireland	
	m 0000	Sir Austen Chamberlain	U.K.	
	peace	Charles G. Dawes	U.S.	
	physics	James Franck	Germany	discovery of the laws governing the impact of an electron upon an atom

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year	category	name	country*	achievement
		Gustav Hertz	Germany	discovery of the laws governing the impact of an electron upon an atom
	chemistry	Theodor H.E. Svedberg	Sweden	work on disperse systems
	literature	Grazia Deledda	Italy	
	nagaa	Aristide Briand	France	
1926	peace	Gustav Stresemann	Germany	
	physics	Jean Perrin	France	work on discontinuous structure of matter
	physiology/medicine	Johannes Fibiger	Denmark	contributions to cancer research
	chemistry	Heinrich Otto Wieland	Germany	researches into the constitution of bile acids
	literature	Henri Bergson	France	
	peace	Ferdinand-Édouard Buisson	France	
1927		Ludwig Quidde	Germany	
1927	physics	Arthur Holly Compton	U.S.	discovery of wavelength change in diffused X-rays
		C.T.R. Wilson	U.K.	method of making visible the paths of electrically charged particles
	physiology/medicine	Julius Wagner-Jauregg	Austria	work on malaria inoculation in dementia paralytica
	chemistry	Adolf Windaus	Germany	constitution of sterols and their connection with vitamins
	literature	Sigrid Undset	Norway	
1928	physics	Sir Owen Willans Richardson	U.K.	work on electron emission by hot metals
	physiology/medicine	Charles-Jules-Henri Nicolle	France	work on typhus
1929	chemistry	Hans von Euler-Chelpin	Sweden	investigations in the fermentation of sugars and the enzyme action

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year	category	name	country*	achievement
				involved
				investigations in the fermentation of
		Sir Arthur Harden	U.K.	sugars and the enzyme action
				involved
	literature	Thomas Mann	Germany	
	peace	Frank B. Kellogg	U.S.	
	physics	Louis de Broglie	France	discovery of the wave nature of electrons
		Christiaan Eijkman	Netherlands	discovery of the antineuritic vitamin
	physiology/medicine	Sir Frederick Gowland Hopkins	U.K.	discovery of growth-stimulating vitamins
	chemistry	Hans Fischer	Germany	hemin, chlorophyll research; synthesis of hemin
	literature	Sinclair Lewis	U.S.	
1930	peace	Nathan Söderblom	Sweden	
	ularei aa	Sir Chandrasekhara	India	work on light diffusion; discovery of
	physics	Venkata Raman	muia	Raman effect
	physiology/medicine	Karl Landsteiner	U.S.	grouping of human blood types
	ah amiatur.	Friedrich Bergius	Germany	invention and development of chemical high-pressure methods
	chemistry	Carl Bosch	Germany	invention and development of chemical high-pressure methods
1931	literature	Erik Axel Karlfeldt (posthumous award)	Sweden	
		Jane Addams	U.S.	
	peace	Nicholas Murray Butler	U.S.	
	1	O# - W- 1	Carrie	discovery of nature and action of
	physiology/medicine	Otto warburg	Germany	respiratory enzyme
1932	chemistry	Irving Langmuir	U.S.	discoveries and investigations in surface chemistry

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year	category	name	country*	achievement
	literature	John Galsworthy	U.K.	
	physics	Werner Heisenberg	Germany	creation of quantum mechanics
		Edgar Douglas Adrian, 1st Baron Adrian	U.K.	discoveries regarding function of neurons
	physiology/medicine	Sir Charles Scott Sherrington	U.K.	discoveries regarding function of neurons
	literature	Ivan Bunin	U.S.S.R.	
	peace	Sir Norman Angell	U.K.	
1022	.1	P.A.M. Dirac	U.K.	introduction of wave equations in quantum mechanics
1933	physics	Erwin Schrödinger	Austria	introduction of wave equations in quantum mechanics
	physiology/medicine	Thomas Hunt Morgan	U.S.	heredity transmission functions of chromosomes
	chemistry	Harold C. Urey	U.S.	discovery of heavy hydrogen
	literature	Luigi Pirandello	Italy	
	peace	Arthur Henderson	U.K.	
1934		George Richards Minot	U.S.	discoveries concerning liver treatment for anemia
	physiology/medicine	William P. Murphy	U.S.	discoveries concerning liver treatment for anemia
		George H. Whipple	U.S.	discoveries concerning liver treatment for anemia
	chemistry	Frédéric and Irène Joliot-Curie	France	synthesis of new radioactive elements
1935	peace	Carl von Ossietzky	Germany	
	physics	Sir James Chadwick	U.K.	discovery of the neutron
	physiology/medicine	Hans Spemann	Germany	organizer effect in embryo
1936	chemistry	Peter Debye	Netherlands	work on dipole moments and diffraction of X-rays and electrons in

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year	category	name	country*	achievement
				gases
	literature	Eugene O'Neill	U.S.	
	peace	Carlos Saavedra Lamas	Argentina	
	physics	Carl David Anderson	U.S.	discovery of the positron
	physics	Victor Francis Hess	Austria	discovery of cosmic radiation
	physiology/medicine	Sir Henry Dale	U.K.	work on chemical transmission of nerve impulses
	physiology/medicine	Otto Loewi	Germany	work on chemical transmission of nerve impulses
	ala auri atura	Sir Norman Haworth	U.K.	research on carbohydrates and vitamin C
	chemistry	Paul Karrer	Switzerland	research on carotenoids, flavins, and vitamins
	literature	Roger Martin du Gard	France	
1037	peace	Robert Gascoyne-Cecil, 1st Viscount Cecil	U.K.	
1937	physics	Clinton Joseph Davisson	U.S.	experimental demonstration of the interference phenomenon in crystals irradiated by electrons
		Sir George Paget Thomson	U.K.	experimental demonstration of the interference phenomenon in crystals irradiated by electrons
	physiology/medicine	Albert Szent-Györgyi	Hungary	work on biological combustion
1938	chemistry	Richard Kuhn (declined)	Germany	carotenoid and vitamin research
	literature	Pearl Buck	U.S.	
	peace	Nansen International Office for Refugees	(founded 1931)	
	physics	Enrico Fermi	Italy	disclosure of artificial radioactive elements produced by neutron irradiation

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year	category	name	country*	achievement
	physiology/medicine	Corneille Heymans	Belgium	discovery of role of sinus and aortic mechanisms in respiration regulation
	1	Adolf Butenandt (declined)	Germany	work on sexual hormones
	chemistry	Leopold Ruzicka	Switzerland	work on polymethylenes and higher terpenes
1939	literature	Frans Eemil Sillanpää	Finland	
	physics	Ernest Orlando Lawrence	U.S.	invention of the cyclotron
	physiology/medicine	Gerhard Domagk (declined)	Germany	antibacterial effect of Prontosil
1943	chemistry	Georg Charles von Hevesy	Hungary	use of isotopes as tracers in chemical research
	physics	Otto Stern	U.S.	discovery of the magnetic moment of the proton
	physiology/medicine	Henrik Dam	Denmark	discovery of vitamin K
		Edward Adelbert Doisy	U.S.	discovery of chemical nature of vitamin K
	chemistry	Otto Hahn	Germany	discovery of the fission of heavy nuclei
	literature	Johannes V. Jensen	Denmark	
1944	peace	International Committee of the Red Cross	(founded 1863)	
	physics	Isidor Isaac Rabi	U.S.	resonance method for registration of various properties of atomic nuclei
	physiology/medicine	Joseph Erlanger	U.S.	researches on differentiated functions of nerve fibres
	physiology/medicine	Herbert Spencer Gasser	U.S.	researches on differentiated functions of nerve fibres
1945	chemistry	Artturi Ilmari Virtanen	Finland	invention of fodder preservation method

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year	category	name	country*	achievement
	literature	Gabriela Mistral	Chile	
	peace	Cordell Hull	U.S.	
	physics	Wolfgang Pauli	Austria	discovery of the exclusion principle of electrons
		Sir Ernst Boris Chain	U.K.	discovery of penicillin and its curative value
	physiology/medicine	Sir Alexander Fleming	U.K.	discovery of penicillin and its curative value
		Howard Walter Florey, Baron Florey	Australia	discovery of penicillin and its curative value
		John Howard Northrop	U.S.	preparation of enzymes and virus proteins in pure form
	chemistry	Wendell Meredith Stanley	U.S.	preparation of enzymes and virus proteins in pure form
		James Batcheller Sumner	U.S.	discovery of enzyme crystallization
1946	literature	Hermann Hesse	Switzerland	
		Emily Greene Balch	U.S.	
	peace	John R. Mott	U.S.	
	physics	Percy Williams Bridgman	U.S.	discoveries in the domain of high- pressure physics
1947	physiology/medicine	Hermann Joseph Muller	U.S.	production of mutations by X-ray irradiation
	chemistry	Sir Robert Robinson	U.K.	investigation of alkaloids and other plant products
	literature	André Gide	France	
	20000	American Friends Service Committee	U.S.	
		Friends Service Council (FSC)	U.K.	

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year	category	name	country*	achievement
	physics	Sir Edward Victor Appleton	U.K.	discovery of Appleton layer in upper atmosphere
	physiology/medicine	Carl and Gerty Cori	U.S.	discovery of how glycogen is catalytically converted
	physiology/medicine	Bernardo Alberto Houssay	Argentina	pituitary hormone function in sugar metabolism
	chemistry	Arne Tiselius	Sweden	researches in electrophoresis and adsorption analysis; serum proteins
1948	literature	T.S. Eliot	U.K.	
1940	physics	Patrick M.S. Blackett	U.K.	discoveries in the domain of nuclear physics and cosmic radiation
	physiology/medicine	Paul Hermann Müller	Switzerland	properties of DDT
	chemistry	William Francis Giauque	U.S.	behaviour of substances at extremely low temperatures
	literature	William Faulkner	U.S.	
		John Boyd Orr, Baron		
1949	peace	Boyd-Orr of Brechin Mearns	U.K.	
	physics	Yukawa Hideki	Japan	prediction of the existence of mesons
	physiology/medicine	António Egas Moniz	Portugal	therapeutic value of leucotomy in psychoses
		Walter Rudolf Hess	Switzerland	discovery of function of interbrain
1950	chemistry	Kurt Alder	West Germany	discovery and development of diene synthesis
		Otto Paul Hermann Diels	West Germany	discovery and development of diene synthesis
	literature	Bertrand Russell	U.K.	
	peace	Ralph Bunche	U.S.	
	physics	Cecil Frank Powell	U.K.	photographic method of studying nuclear processes; discoveries

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				concerning mesons
		Philip Showalter Hench	U.S.	research on adrenal cortex hormones, their structure and biological effects
		Edward Calvin Kendall	U.S.	research on adrenal cortex hormones, their structure and biological effects
		Tadeus Reichstein	Switzerland	research on adrenal cortex hormones, their structure and biological effects
		Edwin Mattison McMillan	U.S.	discovery of and research on transuranium elements
	chemistry	Glenn T. Seaborg	U.S.	discovery of and research on transuranium elements
	literature	Pär Lagerkvist	Sweden	
1951	peace	Léon Jouhaux	France	
	physics	Sir John Douglas Cockcroft	U.K.	work on transmutation of atomic nuclei by accelerated particles
		Ernest Thomas Sinton Walton	Ireland	work on transmutation of atomic nuclei by accelerated particles
	physiology/medicine	Max Theiler	South Africa	yellow fever discoveries
	chemistry	A.J.P. Martin	U.K.	development of partition chromatography
		R.L.M. Synge	U.K.	development of partition chromatography
	literature	François Mauriac	France	
1952	peace	Albert Schweitzer	Alsace	
		Felix Bloch	U.S.	discovery of nuclear magnetic resonance in solids
	physics	E.M. Purcell	U.S.	discovery of nuclear magnetic resonance in solids
	physiology/medicine	Selman Abraham Waksman	U.S.	discovery of streptomycin

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	chemistry	Hermann Staudinger	West Germany	work on macromolecules
	literature	Sir Winston Churchill	U.K.	
	peace	George C. Marshall	U.S.	
	physics	Frits Zernike	Netherlands	method of phase-contrast microscopy
1953		Sir Hans Adolf Krebs	U.K.	discovery of coenzyme A-citric acid cycle in metabolism of carbohydrates
	physiology/medicine	Fritz Albert Lipmann	U.S.	discovery of coenzyme A-citric acid cycle in metabolism of carbohydrates
	chemistry	Linus Pauling	U.S.	study of the nature of the chemical bond
	literature	Ernest Hemingway	U.S.	
	peace	Office of the United Nations High Commissioner for Refugees	(founded 1951)	
1954	physics	Max Born	U.K.	statistical studies of atomic wave functions
		Walther Bothe	West Germany	invention of coincidence method
	physiology/medicine	John Franklin Enders	U.S.	cultivation of the poliomyelitis virus in tissue cultures
		Frederick Chapman Robbins	U.S.	cultivation of the poliomyelitis virus in tissue cultures
		Thomas H. Weller	U.S.	cultivation of the poliomyelitis virus in tissue cultures
1955	chemistry	Vincent du Vigneaud	U.S.	first synthesis of a polypeptide hormone
	literature	Halldór Laxness	Iceland	

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	physics	Polykarp Kusch	U.S.	measurement of magnetic moment of electron
		Willis Eugene Lamb, Jr.	U.S.	discoveries in the hydrogen spectrum
	physiology/medicine	Axel Hugo Teodor Theorell	Sweden	nature and mode of action of oxidation enzymes
	ahamistury	Sir Cyril Norman Hinshelwood	U.K.	work on the kinetics of chemical reactions
	chemistry	Nikolay Nikolayevich Semyonov	U.S.S.R.	work on the kinetics of chemical reactions
	literature	Juan Ramón Jiménez	Spain	
		John Bardeen	U.S.	investigations on semiconductors and invention of the transistor
	physics	Walter H. Brattain	U.S.	investigations on semiconductors and invention of the transistor
1956		William B. Shockley	U.S.	investigations on semiconductors and invention of the transistor
		André F. Cournand	U.S.	discoveries concerning heart catheterization and circulatory changes
	physiology/medicine	Werner Forssmann	West Germany	discoveries concerning heart catheterization and circulatory changes
		Dickinson Woodruff Richards	U.S.	discoveries concerning heart catheterization and circulatory changes
1957	chemistry	Alexander Robertus Todd, Baron Todd	U.K.	work on nucleotides and nucleotide coenzymes
	literature	Albert Camus	France	
	peace	Lester B. Pearson	Canada	
	physics	Tsung-Dao Lee	China	discovery of violations of the principle of parity

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^{**}Prize awarded in 2019.

year	category	name	country*	achievement
		Chen Ning Yang	China	discovery of violations of the principle of parity
	physiology/medicine	Daniel Bovet	Italy	production of synthetic curare
	chemistry	Frederick Sanger	U.K.	determination of the structure of the insulin molecule
	literature	Boris Leonidovich Pasternak (declined)	U.S.S.R.	
	peace	Dominique Pire	Belgium	
		Pavel Alekseyevich Cherenkov	U.S.S.R.	discovery and interpretation of the Cherenkov effect
1958	physics	Ilya Mikhaylovich Frank	U.S.S.R.	discovery and interpretation of the Cherenkov effect
		Igor Yevgenyevich Tamm	U.S.S.R.	discovery and interpretation of the Cherenkov effect
	physiology/medicine	George Wells Beadle	U.S.	genetic regulation of chemical processes
		Joshua Lederberg	U.S.	genetic recombination
		Edward L. Tatum	U.S.	genetic regulation of chemical processes
1959	chemistry	Jaroslav Heyrovský	Czechoslovakia	discovery and development of polarography
	literature	Salvatore Quasimodo	Italy	
	peace	Philip John Noel-Baker, Baron Noel-Baker	U.K.	
		Owen Chamberlain	U.S.	confirmation of the existence of the antiproton
	physics	Emilio Segrè	U.S.	confirmation of the existence of the antiproton
	physiology/medicine	Arthur Kornberg	U.S.	work on producing nucleic acids artificially

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year	category	name	country*	achievement
		Severo Ochoa	U.S.	work on producing nucleic acids artificially
	chemistry	Willard Frank Libby	U.S.	development of radiocarbon dating
	literature	Saint-John Perse	France	
	peace	Albert John Luthuli	South Africa	
1960	physics	Donald A. Glaser	U.S.	development of the bubble chamber
		Sir Macfarlane Burnet	Australia	acquired immunity to tissue transplants
	physiology/medicine	Sir Peter B. Medawar	U.K.	acquired immunity to tissue transplants
	chemistry	Melvin Calvin	U.S.	study of chemical steps that take place during photosynthesis
	literature	Ivo Andric	Yugoslavia	
	peace	Dag Hammarskjöld	Sweden	
1961		Robert Hofstadter	U.S.	determination of shape and size of atomic nucleons
	physics	Rudolf Ludwig Mössbauer	West Germany	discovery of the Mössbauer effect
	physiology/medicine	Georg von Békésy	U.S.	functions of the inner ear
1962		Sir John Cowdery Kendrew	U.K.	determination of the structure of hemoproteins
	chemistry	Max Ferdinand Perutz	U.K.	determination of the structure of hemoproteins
	literature	John Steinbeck	U.S.	
	peace	Linus Pauling	U.S.	
	physics	Lev Davidovich Landau	U.S.S.R.	contributions to the understanding of condensed states of matter
	physiology/medicine	Francis Harry Compton Crick	U.K.	discoveries concerning the molecular structure of DNA

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year	category	name	country*	achievement
		James Dewey Watson	U.S.	discoveries concerning the molecular structure of DNA
		Maurice Wilkins	U.K.	discoveries concerning the molecular structure of DNA
	ahamistur	Giulio Natta	Italy	structure and synthesis of polymers in the field of plastics
	chemistry	Karl Ziegler	West Germany	structure and synthesis of polymers in the field of plastics
	literature	George Seferis	Greece	
		International Committee of the Red Cross	(founded 1863)	
	peace	League of Red Cross Societies		
1963	physics	J. Hans D. Jensen	West Germany	development of shell model theory of the structure of the atomic nuclei
		Maria Goeppert Mayer	U.S.	development of shell model theory of the structure of the atomic nuclei
		Eugene Paul Wigner	U.S.	principles governing interaction of protons and neutrons in the nucleus
		Sir John Carew Eccles	Australia	study of the transmission of impulses along a nerve fibre
1964	physiology/medicine	Sir Alan Hodgkin	U.K.	study of the transmission of impulses along a nerve fibre
		Sir Andrew Fielding Huxley	U.K.	study of the transmission of impulses along a nerve fibre
	chemistry	Dorothy Mary Crowfoot Hodgkin	U.K.	determining the structure of biochemical compounds essential in combating pernicious anemia
	literature	Jean-Paul Sartre (declined)	France	
	peace	Martin Luther King, Jr.	U.S.	

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year	category	name	country*	achievement
		Nikolay Gennadiyevich Basov	U.S.S.R.	work in quantum electronics leading to construction of instruments based on maser-laser principles
	physics	Aleksandr Mikhaylovich Prokhorov	U.S.S.R.	work in quantum electronics leading to construction of instruments based on maser-laser principles
		Charles Hard Townes	U.S.	work in quantum electronics leading to construction of instruments based on maser-laser principles
	nhysiology/modiaino	Konrad Bloch	U.S.	discoveries concerning cholesterol and fatty-acid metabolism
	physiology/medicine	Feodor Lynen	West Germany	discoveries concerning cholesterol and fatty-acid metabolism
	chemistry	R.B. Woodward	U.S.	synthesis of sterols, chlorophyll, and other substances
	literature	Mikhail Aleksandrovich Sholokhov	U.S.S.R.	
	peace	United Nations Children's Fund	(founded 1946)	
		Richard P. Feynman	U.S.	basic principles of quantum electrodynamics
1965	physics	Julian Seymour Schwinger	U.S.	basic principles of quantum electrodynamics
		Tomonaga Shin'ichiro	Japan	basic principles of quantum electrodynamics
		François Jacob	France	discoveries concerning regulatory activities of the body cells
	physiology/medicine	André Lwoff	France	discoveries concerning regulatory activities of the body cells
		Jacques Monod	France	discoveries concerning regulatory activities of the body cells

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year	category	name	country*	achievement
	chemistry	Robert Sanderson Mulliken	U.S.	work concerning chemical bonds and the electronic structure of molecules
	The same	S.Y. Agnon	Israel	
	literature	Nelly Sachs	Sweden	
1966	physics	Alfred Kastler	France	discovery of optical methods for studying Hertzian resonances in atoms
	mby siglo oy/m odicino	Charles B. Huggins	U.S.	research on causes and treatment of cancer
	physiology/medicine	Peyton Rous	U.S.	research on causes and treatment of cancer
	chemistry	Manfred Eigen	West Germany	studies of extremely fast chemical reactions
		Ronald George Wreyford Norrish	U.K.	studies of extremely fast chemical reactions
		Sir George Porter	U.K.	studies of extremely fast chemical reactions
	literature	Miguel Ángel Asturias	Guatemala	
1967	physics	Hans Bethe	U.S.	discoveries concerning the energy production of stars
		Ragnar Arthur Granit	Sweden	discoveries about chemical and physiological visual processes in the eye
	physiology/medicine	Haldan Keffer Hartline	U.S.	discoveries about chemical and physiological visual processes in the eye
		George Wald	U.S.	discoveries about chemical and physiological visual processes in the eye
1968	chemistry	Lars Onsager	U.S.	work on theory of thermodynamics of irreversible processes

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^{**}Prize awarded in 2019.

year	category	name	country*	achievement
	literature	Kawabata Yasunari	Japan	
	peace	René Cassin	France	
	physics	Luis W. Alvarez	U.S.	work with elementary particles, discovery of resonance states
		Robert William Holley	U.S.	deciphering of the genetic code
	physiology/medicine	Har Gobind Khorana	U.S.	deciphering of the genetic code
	physiciogy/medicine	Marshall William Nirenberg	U.S.	deciphering of the genetic code
	ah amiatur.	Sir Derek H.R. Barton	U.K.	work in determining actual three- dimensional shape of molecules
	chemistry	Odd Hassel	Norway	work in determining actual three- dimensional shape of molecules
	economics	Ragnar Frisch	Norway	work in econometrics
	economics	Jan Tinbergen	Netherlands	work in econometrics
	literature	Samuel Beckett	Ireland	
1969	peace	International Labour Organisation	(founded 1919)	
	physics	Murray Gell-Mann	U.S.	classification of elementary particles and their interactions
		Max Delbrück	U.S.	research and discoveries concerning viruses and viral diseases
1970	physiology/medicine	A.D. Hershey	U.S.	research and discoveries concerning viruses and viral diseases
		Salvador Luria	U.S.	research and discoveries concerning viruses and viral diseases
	chemistry	Luis Federico Leloir	Argentina	discovery of sugar nucleotides and their role in the biosynthesis of carbohydrates
	economics	Paul Samuelson	U.S.	work in scientific analysis of economic theory

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year	category	name	country*	achievement
	literature	Aleksandr Isayevich Solzhenitsyn	U.S.S.R.	
	peace	Norman Ernest Borlaug	U.S.	
	physics	Hannes Alfvén	Sweden	work in magnetohydrodynamics and in antiferromagnetism and ferrimagnetism
	physics	Louis-Eugène-Félix Néel	France	work in magnetohydrodynamics and in antiferromagnetism and ferrimagnetism
		Julius Axelrod	U.S.	discoveries concerning the chemistry of nerve transmission
	physiology/medicine	Ulf von Euler	Sweden	discoveries concerning the chemistry of nerve transmission
		Sir Bernard Katz	U.K.	discoveries concerning the chemistry of nerve transmission
	chemistry	Gerhard Herzberg	Canada	research in the structure of molecules
	economics	Simon Kuznets	U.S.	extensive research on the economic growth of nations
1971	literature	Pablo Neruda	Chile	
	peace	Willy Brandt	West Germany	
	physics	Dennis Gabor	U.K.	invention of holography
	physiology/medicine	Earl W. Sutherland, Jr.	U.S.	action of hormones
1972		Christian B. Anfinsen	U.S.	fundamental contributions to enzyme chemistry
	chemistry	Stanford Moore	U.S.	fundamental contributions to enzyme chemistry
		William H. Stein	U.S.	fundamental contributions to enzyme chemistry
	economics	Kenneth J. Arrow	U.S.	contributions to general economic equilibrium theory and welfare theory

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year	category	name	country*	achievement
		Sir John R. Hicks	U.K.	contributions to general economic equilibrium theory and welfare theory
	literature	Heinrich Böll	West Germany	
		John Bardeen	U.S.	development of the theory of superconductivity
	physics	Leon N. Cooper	U.S.	development of the theory of superconductivity
		John Robert Schrieffer	U.S.	development of the theory of superconductivity
	alessia la ser/ma di sina	Gerald Maurice Edelman	U.S.	research on the chemical structure of antibodies
	physiology/medicine	Rodney Robert Porter	U.K.	research on the chemical structure of antibodies
1973	chemistry	Ernst Otto Fischer	West Germany	organometallic chemistry
		Sir Geoffrey Wilkinson	U.K.	organometallic chemistry
	economics	Wassily Leontief	U.S.	input-output analysis
	literature	Patrick White	Australia	
	peace	Henry A. Kissinger	U.S.	
	peace	Le Duc Tho (declined)	North Vietnam	
		Leo Esaki	Japan	tunneling in semiconductors and superconductors
	physics	Ivar Giaever	U.S.	tunneling in semiconductors and superconductors
		Brian D. Josephson	U.K.	tunneling in semiconductors and superconductors
	physiology/medicine	Karl von Frisch	Austria	discoveries in animal behaviour patterns
		Konrad Lorenz	Austria	discoveries in animal behaviour patterns

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year	category	name	country*	achievement
		Nikolaas Tinbergen	U.K.	discoveries in animal behaviour patterns
	chemistry	Paul J. Flory	U.S.	studies of long-chain molecules
		Friedrich von Hayek	U.K.	pioneering analysis of the interdependence of economic, social, and institutional phenomena
	economics	Gunnar Myrdal	Sweden	pioneering analysis of the interdependence of economic, social, and institutional phenomena
	12.	Eyvind Johnson	Sweden	
	literature	Harry Martinson	Sweden	
1974	peace	Seán MacBride	Ireland	
		Sato Eisaku	Japan	
	physics	Antony Hewish	U.K.	work in radio astronomy
		Sir Martin Ryle	U.K.	work in radio astronomy
1975	physiology/medicine	Albert Claude	U.S.	research on structural and functional organization of cells
		Christian René de Duve	Belgium	research on structural and functional organization of cells
		George E. Palade	U.S.	research on structural and functional organization of cells
	chemistry	Sir John Warcup Cornforth	U.K.	work in stereochemistry
		Vladimir Prelog	Switzerland	work in stereochemistry
		Leonid Vitalyevich Kantorovich	U.S.S.R.	contributions to the theory of optimum allocation of resources
	economics	Tjalling C. Koopmans	U.S.	contributions to the theory of optimum allocation of resources
	literature	Eugenio Montale	Italy	

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year	category	name	country*	achievement
	peace	Andrey Dmitriyevich Sakharov	U.S.S.R.	
		Aage N. Bohr	Denmark	work on the atomic nucleus that paved the way for nuclear fusion
	physics	Ben R. Mottelson	Denmark	work on the atomic nucleus that paved the way for nuclear fusion
		James Rainwater	U.S.	work on the atomic nucleus that paved the way for nuclear fusion
		David Baltimore	U.S.	interaction between tumour viruses and the genetic material of the cell
	physiology/medicine	Renato Dulbecco	U.S.	interaction between tumour viruses and the genetic material of the cell
		Howard Martin Temin	U.S.	interaction between tumour viruses and the genetic material of the cell
	chemistry	William Nunn Lipscomb, Jr.	U.S.	structure of boranes
	economics	Milton Friedman	U.S.	consumption analysis, monetary theory, and economic stabilization
	literature	Saul Bellow	U.S.	
		Mairéad Corrigan	Northern Ireland	
	peace	Betty Williams	Northern Ireland	
1976		Burton Richter	U.S.	discovery of new class of elementary particles (psi, or J)
	physics	Samuel C.C. Ting	U.S.	discovery of new class of elementary particles (psi, or J)
	uhvai ala azykus disina	Baruch S. Blumberg	U.S.	studies of origin and spread of infectious diseases
	physiology/medicine	D. Carleton Gajdusek	U.S.	studies of origin and spread of infectious diseases
1977	chemistry	Ilya Prigogine	Belgium	widening the scope of thermodynamics

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year	category	name	country*	achievement
	·	James Edward Meade	U.K.	contributions to theory of international trade
	economics	Bertil Ohlin	Sweden	contributions to theory of international trade
	literature	Vicente Aleixandre	Spain	
	peace	Amnesty International	(founded 1961)	
		Philip W. Anderson	U.S.	contributions to understanding the behaviour of electrons in magnetic, noncrystalline solids
	physics	Sir Nevill F. Mott	U.K.	contributions to understanding the behaviour of electrons in magnetic, noncrystalline solids
		John H. Van Vleck	U.S.	contributions to understanding the behaviour of electrons in magnetic, noncrystalline solids
	physiology/medicine	Roger Charles Louis Guillemin	U.S.	research on pituitary hormones
		Andrew Victor Schally	U.S.	research on pituitary hormones
		Rosalyn S. Yalow	U.S.	development of radioimmunoassay
1978	3 chemistry	Peter Dennis Mitchell	U.K.	formulation of a theory of energy transfer processes in biological systems
	economics	Herbert Alexander Simon	U.S.	decision-making processes in economic organizations
	literature	Isaac Bashevis Singer	U.S.	
	peace	Menachem Begin	Israel	
	peace	Anwar el-Sadat	Egypt	
	physics	Pyotr Leonidovich Kapitsa	U.S.S.R.	invention and application of helium liquefier
		Arno Penzias	U.S.	discovery of cosmic microwave background radiation, providing

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^{**}Prize awarded in 2019.

year	category	name	country*	achievement
				support for the big-bang theory
		Robert Woodrow Wilson	U.S.	discovery of cosmic microwave background radiation, providing support for the big-bang theory
		Werner Arber	Switzerland	discovery and application of enzymes that fragment DNA
	physiology/medicine	Daniel Nathans	U.S.	discovery and application of enzymes that fragment DNA
		Hamilton Othanel Smith	U.S.	discovery and application of enzymes that fragment DNA
	chemistry	Herbert Charles Brown	U.S.	introduction of compounds of boron and phosphorus in the synthesis of organic substances
		Georg Wittig	West Germany	introduction of compounds of boron and phosphorus in the synthesis of organic substances
	economics	Sir Arthur Lewis	U.K.	analyses of economic processes in developing nations
		Theodore William Schultz	U.S.	analyses of economic processes in developing nations
	literature	Odysseus Elytis	Greece	
	peace	Mother Teresa	India	
	physics	Sheldon Lee Glashow	U.S.	unification of electromagnetism and the weak interactions of subatomic particles
		Abdus Salam	Pakistan	unification of electromagnetism and the weak interactions of subatomic particles
		Steven Weinberg	U.S.	unification of electromagnetism and the weak interactions of subatomic particles

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year	category	name	country*	achievement
		Allan MacLeod Cormack	U.S.	development of the CAT scan
	physiology/medicine	Sir Godfrey Newbold Hounsfield	U.K.	development of the CAT scan
		Paul Berg	U.S.	first preparation of a hybrid DNA
	chemistry	Walter Gilbert	U.S.	development of chemical and biological analyses of DNA structure
		Frederick Sanger	U.K.	development of chemical and biological analyses of DNA structure
	economics	Lawrence Robert Klein	U.S.	development and analysis of empirical models of business fluctuations
	literature	Czesław Miłosz	U.S.	
	peace	Adolfo Pérez Esquivel	Argentina	
1980	physics	James Watson Cronin	U.S.	demonstration of simultaneous violation of both charge-conjugation and parity-inversion symmetries
		Val Logsdon Fitch	U.S.	demonstration of simultaneous violation of both charge-conjugation and parity-inversion symmetries
	physiology/medicine	Baruj Benacerraf	U.S.	investigations of genetic control of the response of the immune system to foreign substances
		Jean-Baptiste-Gabriel- Joachim Dausset	France	investigations of genetic control of the response of the immune system to foreign substances
		George Davis Snell	U.S.	investigations of genetic control of the response of the immune system to foreign substances
1981	chemistry	Fukui Kenichi	Japan	orbital symmetry interpretation of chemical reactions

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year	category	name	country*	achievement
		Roald Hoffmann	U.S.	orbital symmetry interpretation of chemical reactions
	economics	James Tobin	U.S.	portfolio selection theory of investment
	literature	Elias Canetti	Bulgaria	
	peace	Office of the United Nations High Commissioner for Refugees	(founded 1951)	
		Nicolaas Bloembergen	U.S.	applications of lasers in spectroscopy
	physics	Arthur Leonard Schawlow	U.S.	applications of lasers in spectroscopy
		Kai Manne Börje Siegbahn	Sweden	electron spectroscopy for chemical analysis
		David Hunter Hubel	U.S.	processing of visual information by the brain
	physiology/medicine	Roger Wolcott Sperry	U.S.	functions of the cerebral hemispheres
		Torsten Nils Wiesel	Sweden	processing of visual information by the brain
1982	chemistry	Aaron Klug	U.K.	determination of structure of biological substances
	economics	George J. Stigler	U.S.	economic effects of governmental regulation
	literature	Gabriel García Márquez	Colombia	
	2000	Alfonso García Robles	Mexico	
	peace	Alva Myrdal	Sweden	
	physics	Kenneth Geddes Wilson	U.S.	analysis of continuous phase transitions
	physiology/medicine	Sune K. Bergström	Sweden	biochemistry and physiology of prostaglandins

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year	category	name	country*	achievement
		Bengt Ingemar Samuelsson	Sweden	biochemistry and physiology of prostaglandins
		John Robert Vane	U.K.	biochemistry and physiology of prostaglandins
	chemistry	Henry Taube	U.S.	study of electron transfer reactions
	economics	Gerard Debreu	U.S.	mathematical proof of supply and demand theory
	literature	Sir William Golding	U.K.	
	peace	Lech Wałęsa	Poland	
1983	physics	Subrahmanyan Chandrasekhar	U.S.	contributions to understanding the evolution and devolution of stars
	physics	William A. Fowler	U.S.	contributions to understanding the evolution and devolution of stars
	physiology/medicine	Barbara McClintock	U.S.	discovery of mobile plant genes that affect heredity
1984	chemistry	Bruce Merrifield	U.S.	development of a method of polypeptide synthesis
	economics	Sir Richard Stone	U.K.	development of national income accounting system
	literature	Jaroslav Seifert	Czechoslovakia	
	peace	Desmond Tutu	South Africa	
		Simon van der Meer	Netherlands	discovery of subatomic particles W and Z, which supports the electroweak theory
	physics	Carlo Rubbia	Italy	discovery of subatomic particles W and Z, which supports the electroweak theory
	physiology/medicine	Niels K. Jerne	U.KDenmark	theory and development of a technique for producing monoclonal antibodies

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year	category	name	country*	achievement
		Georges J.F. Köhler	West Germany	theory and development of a technique for producing monoclonal antibodies
		César Milstein	Argentina	theory and development of a technique for producing monoclonal antibodies
	ah amiatur	Herbert A. Hauptman	U.S.	development of a way to map the chemical structures of small molecules
	chemistry	Jerome Karle	U.S.	development of a way to map the chemical structures of small molecules
	economics	Franco Modigliani	U.S.	analyses of household savings and financial markets
	literature	Claude Simon	France	
1985	peace	International Physicians for the Prevention of Nuclear War	(founded 1980)	
	physics	Klaus von Klitzing	West Germany	discovery of the quantized Hall effect, permitting exact measurements of electrical resistance
		Michael S. Brown	U.S.	discovery of cell receptors relating to cholesterol metabolism
1986	physiology/medicine	Joseph L. Goldstein	U.S.	discovery of cell receptors relating to cholesterol metabolism
		Dudley R. Herschbach	U.S.	development of methods for analyzing basic chemical reactions
	chemistry	Yuan T. Lee	U.S.	development of methods for analyzing basic chemical reactions
		John C. Polanyi	Canada	development of methods for analyzing basic chemical reactions

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year	category	name	country*	achievement
	economics	James M. Buchanan	U.S.	public-choice theory bridging economics and political science
	literature	Wole Soyinka	Nigeria	
	peace	Elie Wiesel	U.S.	
		Gerd Binnig	West Germany	development of special electron microscopes
	physics	Heinrich Rohrer	Switzerland	development of special electron microscopes
		Ernst Ruska	West Germany	development of special electron microscopes
	physiology/medicine	Stanley Cohen	U.S.	discovery of chemical agents that help regulate the growth of cells
		Rita Levi-Montalcini	Italy	discovery of chemical agents that help regulate the growth of cells
	chemistry	Donald J. Cram	U.S.	development of molecules that can link with other molecules
		Jean-Marie Lehn	France	development of molecules that can link with other molecules
		Charles J. Pedersen	U.S.	development of molecules that can link with other molecules
	economics	Robert Merton Solow	U.S.	contributions to the theory of economic growth
	literature	Joseph Brodsky	U.S.	
	peace	Oscar Arias Sánchez	Costa Rica	
	whysica	J. Georg Bednorz	West Germany	discovery of new superconducting materials
	physics	Karl Alex Müller	Switzerland	discovery of new superconducting materials
	physiology/medicine	Tonegawa Susumu	Japan	study of genetic aspects of antibodies

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^{**}Prize awarded in 2019.

year	category	name	country*	achievement
		Johann Deisenhofer	West Germany	discovery of structure of proteins needed in photosynthesis
	chemistry	Robert Huber	West Germany	discovery of structure of proteins needed in photosynthesis
		Hartmut Michel	West Germany	discovery of structure of proteins needed in photosynthesis
	economics	Maurice Allais	France	contributions to the theory of markets and efficient use of
	literature	Naguib Mahfouz	Egypt	resources
1988	peace	United Nations Peacekeeping Forces		
	physics	Leon Max Lederman	U.S.	research in subatomic particles
		Melvin Schwartz	U.S.	research in subatomic particles
		Jack Steinberger	U.S.	research in subatomic particles
1989	physiology/medicine	Sir James Black	U.K.	development of new classes of drugs for combating disease
		Gertrude Belle Elion	U.S.	development of new classes of drugs for combating disease
		George Herbert Hitchings	U.S.	development of new classes of drugs for combating disease
		Sidney Altman	U.S.	discovery of certain basic properties of RNA
	chemistry	Thomas Robert Cech	U.S.	discovery of certain basic properties of RNA
	economics	Trygve Haavelmo	Norway	development of statistical techniques for economic forecasting
	literature	Camilo José Cela	Spain	
	peace	Dalai Lama	Tibet	
	physics	Hans Georg Dehmelt	U.S.	development of methods to isolate atoms and subatomic particles for

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^{**}Prize awarded in 2019.

year	category	name	country*	achievement
				study
		Wolfgang Paul	West Germany	development of methods to isolate atoms and subatomic particles for study
		Norman Foster Ramsey	U.S.	development of the atomic clock
	physiology/medicine	J. Michael Bishop	U.S.	study of cancer-causing genes called oncogenes
	physiology/medicine	Harold Varmus	U.S.	study of cancer-causing genes called oncogenes
	chemistry	Elias James Corey	U.S.	development of retrosynthetic analysis for synthesis of complex molecules
		Harry M. Markowitz	U.S.	study of financial markets and investment decision-making
	economics	Merton H. Miller	U.S.	study of financial markets and investment decision-making
		William F. Sharpe	U.S.	study of financial markets and investment decision-making
1990	literature	Octavio Paz	Mexico	
	peace	Mikhail Gorbachev	U.S.S.R.	
		Jerome Isaac Friedman	U.S.	discovery of atomic quarks
	physics	Henry Way Kendall	U.S.	discovery of atomic quarks
		Richard E. Taylor	Canada	discovery of atomic quarks
	nhysiology/medicine	Joseph E. Murray	U.S.	development of kidney and bone- marrow transplants
	physiology/medicine	E. Donnall Thomas	U.S.	development of kidney and bone- marrow transplants
1991	chemistry	Richard R. Ernst	Switzerland	improvements in nuclear magnetic resonance spectroscopy

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year	category	name	country*	achievement
	economics	Ronald Coase	U.S.	application of economic principles to the study of law
	literature	Nadine Gordimer	South Africa	
	peace	Aung San Suu Kyi	Myanmar	
	physics	Pierre-Gilles de Gennes	France	discovery of general rules for behaviour of molecules
	why gial a cy/m a diain a	Erwin Neher	Germany	discovery of how cells communicate, as related to diseases
	physiology/medicine	Bert Sakmann	Germany	discovery of how cells communicate, as related to diseases
	chemistry	Rudolph A. Marcus	U.S.	explanation of how electrons transfer between molecules
	economics	Gary S. Becker	U.S.	application of economic theory to social sciences
	literature	Derek Walcott	St. Lucia	
1992	peace	Rigoberta Menchú	Guatemala	
1772	physics	Georges Charpak	France	inventor of detector that traces subatomic particles
1993		Edmond H. Fischer	U.S.	discovery of class of enzymes called protein kinases
	physiology/medicine	Edwin Gerhard Krebs	U.S.	discovery of class of enzymes called protein kinases
	1	Kary B. Mullis	U.S.	inventors of techniques for gene study and manipulation
	chemistry	Michael Smith	Canada	inventors of techniques for gene study and manipulation
		Robert William Fogel	U.S.	contributions to economic history
	economics	Douglass C. North	U.S.	contributions to economic history
	literature	Toni Morrison	U.S.	
	peace	F.W. de Klerk	South Africa	

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year	category	name	country*	achievement
		Nelson Mandela	South Africa	
	ubroi o o	Russell Alan Hulse	U.S.	identifying binary pulsars
	physics	Joseph H. Taylor, Jr.	U.S.	identifying binary pulsars
		Richard J. Roberts	U.K.	discovery of "split," or interrupted,
	physiology/medicine			genetic structure
	F-1,8,/	Phillip A. Sharp	U.S.	discovery of "split," or interrupted, genetic structure
	chemistry	George A. Olah	U.S.	development of techniques to study hydrocarbon molecules
		John C. Harsanyi	U.S.	development of game theory
	economics	John F. Nash	U.S.	development of game theory
		Reinhard Selten	Germany	development of game theory
	literature	Oe Kenzaburo	Japan	
	peace	Yasser Arafat	Palestinian	
		Shimon Peres	Israel	
1994		Yitzhak Rabin	Israel	
	physics	Bertram N. Brockhouse	Canada	development of neutron-scattering techniques
	physics	Clifford G. Shull	U.S.	development of neutron-scattering techniques
		Alfred G. Gilman	U.S.	discovery of cell signalers called G-proteins
1995	physiology/medicine	Martin Rodbell	U.S.	discovery of cell signalers called G-proteins
		Paul Crutzen	Netherlands	explanation of processes that deplete Earth's ozone layer
	chemistry	Mario Molina	U.S.	explanation of processes that deplete Earth's ozone layer
		F. Sherwood Rowland	U.S.	explanation of processes that deplete Earth's ozone layer

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year	category	name	country*	achievement
	economics	Robert E. Lucas, Jr.	U.S.	incorporation of rational expectations in macroeconomic theory
	literature	Seamus Heaney	Ireland	
	m 2000	Pugwash Conferences	(founded 1957)	
	peace	Joseph Rotblat	U.K.	
		Martin Lewis Perl	U.S.	discovery of tau subatomic particle
	physics	Frederick Reines	U.S.	discovery of neutrino subatomic particle
		Edward B. Lewis	U.S.	identification of genes that control the body's early structural development
1996	physiology/medicine	Christiane Nüsslein- Volhard	Germany	identification of genes that control the body's early structural development
		Eric F. Wieschaus	U.S.	identification of genes that control the body's early structural development
	chemistry	Robert F. Curl, Jr.	U.S.	discovery of new carbon compounds called fullerenes
		Sir Harold W. Kroto	U.K.	discovery of new carbon compounds called fullerenes
		Richard E. Smalley	U.S.	discovery of new carbon compounds called fullerenes
		James A. Mirrlees	U.K.	contributions to theory of incentives under conditions of asymmetric information
	economics	William Vickrey	U.S.	contributions to theory of incentives under conditions of asymmetric information
	literature	Wisława Szymborska	Poland	

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year	category	name	country*	achievement
	peace	Carlos Felipe Ximenes Belo	Timorese	
		José Ramos-Horta	Timorese	
		David M. Lee	U.S.	discovery of superfluidity in isotope helium-3
	physics	Douglas D. Osheroff	U.S.	discovery of superfluidity in isotope helium-3
		Robert C. Richardson	U.S.	discovery of superfluidity in isotope helium-3
	nhysiology/medicine	Peter C. Doherty	Australia	discovery of how the immune system recognizes virus-infected cells
	physiology/medicine	Rolf M. Zinkernagel	Switzerland	discovery of how the immune system recognizes virus-infected cells
1997	chemistry	Paul D. Boyer	U.S.	explanation of the enzymatic conversion of adenosine triphosphate
		Jens C. Skou	Denmark	discovery of sodium-potassium- activated adenosine triphosphatase
		John E. Walker	U.K.	explanation of the enzymatic conversion of adenosine triphosphate
		Robert C. Merton	U.S.	methods for determining the value of stock options and other derivatives
	economics	Myron S. Scholes	U.S.	methods for determining the value of stock options and other derivatives
	literature	Dario Fo	Italy	
	peace	International Campaign to Ban Landmines	(founded 1992)	
		Jody Williams	U.S.	
	physics	Steven Chu	U.S.	process of trapping atoms with laser cooling
		Claude Cohen- Tannoudji	France	process of trapping atoms with laser cooling

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year	category	name	country*	achievement
		William D. Phillips	U.S.	process of trapping atoms with laser cooling
	physiology/medicine	Stanley B. Prusiner	U.S.	discovery of the prion, a type of disease-causing protein
	chemistry	Walter Kohn	U.S.	development of the density- functional theory
	chemistry	John A. Pople	U.K.	development of computational methods in quantum chemistry
	economics	Amartya Sen	India	contribution to welfare economics
	literature	José Saramago	Portugal	
		John Hume	Northern Ireland	
	peace	David Trimble	Northern Ireland	
		Robert B. Laughlin	U.S.	discovery of fractional quantum Hall effect
1998	physics	Horst L. Störmer	U.S.	discovery of fractional quantum Hall effect
		Daniel C. Tsui	U.S.	discovery of fractional quantum Hall effect
		Robert F. Furchgott	U.S.	discovery that nitric oxide (NO) acts as a signaling molecule in the cardiovascular system
	physiology/medicine	Louis J. Ignarro	U.S.	discovery that nitric oxide (NO) acts as a signaling molecule in the cardiovascular system
		Ferid Murad	U.S.	discovery that nitric oxide (NO) acts as a signaling molecule in the cardiovascular system
1999	chemistry	Ahmed H. Zewail	Egypt/U.S.	study of the transition states of chemical reactions using femtosecond spectroscopy

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year	category	name	country*	achievement
	economics	Robert A. Mundell	Canada	analysis of optimum currency areas and of policy under different exchange rate regimes
	literature	Günter Grass	Germany	
	peace	Doctors Without Borders	(founded 1971)	
	physics	Gerardus 't Hooft	Netherlands	study of quantum structure of electroweak interactions
	physics	Martinus J.G. Veltman	Netherlands	study of quantum structure of electroweak interactions
	physiology/medicine	Günter Blobel	U.S.	discovery that proteins have signals governing cellular organization
2000	chemistry	Alan J. Heeger	U.S.	discovery of plastics that conduct electricity
		Alan G. MacDiarmid	U.S.	discovery of plastics that conduct electricity
		Shirakawa Hideki	Japan	discovery of plastics that conduct electricity
	economics	James J. Heckman	U.S.	development of methods of statistical analysis of individual and household behaviour
		Daniel L. McFadden	U.S.	development of methods of statistical analysis of individual and household behaviour
	literature	Gao Xingjian	France	
	peace	Kim Dae-Jung	South Korea	
	physics	Zhores I. Alferov	Russia	development of fast semiconductors for use in microelectronics
		Jack S. Kilby	U.S.	development of the integrated circuit (microchip)

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year	category	name	country*	achievement
		Herbert Kroemer	Germany	development of fast semiconductors for use in microelectronics
		Arvid Carlsson	Sweden	discovery of how signals are transmitted between nerve cells in the brain
	physiology/medicine	Paul Greengard	U.S.	discovery of how signals are transmitted between nerve cells in the brain
		Eric R. Kandel	U.S.	discovery of how signals are transmitted between nerve cells in the brain
2001		William S. Knowles	U.S.	work on chirally catalyzed hydrogenation reactions
	chemistry	Noyori Ryoji	Japan	work on chirally catalyzed hydrogenation reactions
		K. Barry Sharpless	U.S.	work on chirally catalyzed oxidation reactions
		George A. Akerlof	U.S.	analysis of markets with asymmetric information
	economics	A. Michael Spence	U.S.	analysis of markets with asymmetric information
		Joseph E. Stiglitz	U.S.	analysis of markets with asymmetric information
	literature	Sir V.S. Naipaul	Trinidad	
	peace	United Nations	(founded 1945)	
	peace	Kofi Annan	Ghana	
	physics	Eric A. Cornell	U.S.	achievement of Bose-Einstein condensation in dilute gases of alkali atoms; early fundamental studies of the properties of the condensates

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year	category	name	country*	achievement
		Wolfgang Ketterle	Germany	achievement of Bose-Einstein condensation in dilute gases of alkali atoms; early fundamental studies of the properties of the condensates
		Carl E. Wieman	U.S.	achievement of Bose-Einstein condensation in dilute gases of alkali atoms; early fundamental studies of the properties of the condensates
		Leland H. Hartwell	U.S.	discovery of key regulators of the cell cycle
	physiology/medicine	R. Timothy Hunt	U.K.	discovery of key regulators of the cell cycle
		Sir Paul M. Nurse	U.K.	discovery of key regulators of the cell cycle
		John B. Fenn	U.S.	development of techniques to identify and analyze proteins and other large molecules
	chemistry	Tanaka Koichi	Japan	development of techniques to identify and analyze proteins and other large molecules
		Kurt Wüthrich	Switzerland	development of techniques to identify and analyze proteins and other large molecules
	economics	Daniel Kahneman	U.S./Israel	integration of psychological research into economic science, especially concerning human judgment and decision-making under uncertainty
		Vernon L. Smith	U.S.	establishment of laboratory experiments as a tool in empirical economic analysis
	literature	Imre Kertész	Hungary	

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year	category	name	country*	achievement
	peace	Jimmy Carter	U.S.	
		Raymond Davis, Jr.	U.S.	detection of neutrinos
	physics	Riccardo Giacconi	U.S.	seminal discoveries of cosmic sources of X-rays
		Koshiba Masatoshi	Japan	detection of neutrinos
		Sydney Brenner	U.K.	discoveries concerning genetic regulation of organ development and programmed cell death (apoptosis)
	physiology/medicine	H. Robert Horvitz	U.S.	discoveries concerning genetic regulation of organ development and programmed cell death (apoptosis)
		John E. Sulston	U.K.	discoveries concerning genetic regulation of organ development and programmed cell death (apoptosis)
2003	chemistry	Peter Agre	U.S.	discoveries regarding water channels and ion channels in cells
		Roderick MacKinnon	U.S.	discoveries regarding water channels and ion channels in cells
		Robert F. Engle	U.S.	development of techniques for the analysis of time series data
	economics	Clive W.J. Granger	U.K.	development of techniques for the analysis of time series data
	literature	J.M. Coetzee	South Africa	
	peace	Shirin Ebadi	Iran	
	physics	Alexei A. Abrikosov	U.S.	discoveries regarding superconductivity and superfluidity at very low temperatures
		Vitaly L. Ginzburg	Russia	discoveries regarding superconductivity and superfluidity at very low temperatures

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year	category	name	country*	achievement
		Anthony J. Leggett	U.S.	discoveries regarding superconductivity and superfluidity at very low temperatures
	سامين المسام	Paul Lauterbur	U.S.	development of magnetic resonance imaging (MRI)
	physiology/medicine	Sir Peter Mansfield	U.K.	development of magnetic resonance imaging (MRI)
		Aaron Ciechanover	Israel	discovery of ubiquitin-mediated protein degradation
	chemistry	Avram Hershko	Israel	discovery of ubiquitin-mediated protein degradation
		Irwin Rose	U.S.	discovery of ubiquitin-mediated protein degradation
	economics	Finn E. Kydland	Norway	contributions to dynamic macroeconomics
		Edward C. Prescott	U.S.	contributions to dynamic macroeconomics
	literature	Elfriede Jelinek	Austria	
2004	peace	Wangari Maathi	Kenya	
200.		David J. Gross	U.S.	discovery of asymptotic freedom in the theory of the strong interaction
	physics	H. David Politzer	U.S.	discovery of asymptotic freedom in the theory of the strong interaction
		Frank Wilczek	U.S.	discovery of asymptotic freedom in the theory of the strong interaction
	physiology/medicine	Richard Axel	U.S.	discovery of odorant receptors and the organization of the olfactory system
		Linda B. Buck	U.S.	discovery of odorant receptors and the organization of the olfactory system

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year	category	name	country*	achievement
		Yves Chauvin	France	development of the metathesis method in organic synthesis
	chemistry	Robert H. Grubbs	U.S.	development of the metathesis method in organic synthesis
		Richard R. Schrock	U.S.	development of the metathesis method in organic synthesis
		Robert J. Aumann	Israel	contributions to game-theory analysis
	economics	Thomas C. Schelling	U.S.	contributions to game-theory analysis
	literature	Harold Pinter	U.K.	
2005		Mohamed ElBaradei	Egypt	
	peace	International Atomic Energy Agency	(founded 1957)	
	physics	Roy J. Glauber	U.S.	contributions to the field of optics
		John L. Hall	U.S.	contributions to the development of laser spectroscopy
		Theodor W. Hänsch	Germany	contributions to the development of laser spectroscopy
	physiology/medicine	Barry J. Marshall	Australia	discovery of bacteria's role in peptic ulcer disease
		J. Robin Warren	Australia	discovery of bacteria's role in peptic ulcer disease
2006	chemistry	Roger D. Kornberg	U.S.	work on the molecular basis of eukaryotic transcription
	economics	Edmund S. Phelps	U.S.	analysis of intertemporal trade-offs in macroeconomic policy
	literature	Orhan Pamuk	Turkey	
	neace	Grameen Bank	(founded 1976)	
	peace	Muhammad Yunus	Bangladesh	

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year	category	name	country*	achievement
	physics	John C. Mather	U.S.	discovery of the blackbody form and anisotropy of the cosmic microwave background radiation
		George F. Smoot	U.S.	discovery of the blackbody form and anisotropy of the cosmic microwave background radiation
		Andrew Z. Fire	U.S.	discovery of RNA interference— gene silencing by double-stranded RNA
	physiology/medicine	Craig C. Mello	U.S.	discovery of RNA interference— gene silencing by double-stranded RNA
2007	chemistry	Gerhard Ertl	Germany	studies of chemical processes on solid surfaces
	economics	Leonid Hurwicz	U.S.	work that laid the foundations of mechanism design theory
		Eric S. Maskin	U.S.	work that laid the foundations of mechanism design theory
		Roger B. Myerson	U.S.	work that laid the foundations of mechanism design theory
	literature	Doris Lessing	U.S.	
		Al Gore	U.S.	
	peace	Intergovernmental Panel on Climate Change	(founded 1988)	
		Albert Fert	France	discovery of giant magnetoresistance
	physics	Peter Grünberg	Germany	discovery of giant magnetoresistance
	physiology/medicine	Mario R. Capecchi	U.S.	discovery of principles for introducing specific gene modifications in mice by the use of embryonic stem cells

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^{**}Prize awarded in 2019.

year	category	name	country*	achievement
		Sir Martin J. Evans	U.K.	discovery of principles for introducing specific gene modifications in mice by the use of embryonic stem cells
		Oliver Smithies	U.S.	discovery of principles for introducing specific gene modifications in mice by the use of embryonic stem cells
2008	1	Martin Chalfie	U.S.	discovery and development of the green fluorescent protein, GFP
	chemistry	Osamu Shimomura	U.S.	discovery and development of the green fluorescent protein, GFP
		Roger Y. Tsien	U.S.	discovery and development of the green fluorescent protein, GFP
	economics	Paul Krugman	U.S.	analysis of trade patterns and location of economic activity
	literature	Jean-Marie Gustave Le Clézio	France	
	peace	Martti Ahtisaari	Finland	
	physics	Kobayashi Makoto	Japan	discovery of the origin of the broken symmetry which predicts the existence of at least three families of quarks in nature
		Maskawa Toshihide	Japan	discovery of the origin of the broken symmetry which predicts the existence of at least three families of quarks in nature
		Yoichiro Nambu	U.S.	discovery of the mechanism of spontaneous broken symmetry in subatomic physics

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year	category	name	country*	achievement
		Françoise Barré- Sinoussi	France	discovery of human immunodeficiency virus
	physiology/medicine	Luc Montagnier	France	discovery of human immunodeficiency virus
		Harald zur Hausen	Germany	discovery of human papilloma viruses causing cervical cancer
2009		Venkatraman Ramakrishnan	U.S.	studies of the structure and function of the ribosome
	chemistry	Thomas Steitz	U.S.	studies of the structure and function of the ribosome
		Ada Yonath	Israel	studies of the structure and function of the ribosome
	economics	Elinor Ostrom	U.S.	analysis of economic governance, especially the commons
		Oliver E. Williamson	U.S.	analysis of economic governance, especially the boundaries of the firm
	literature	Herta Müller	Germany	
	peace	Barack Obama	U.S.	
		Willard Boyle	Canada/U.S.	invention of the CCD sensor, an imaging semiconductor circuit
	physics	Charles Kao	U.K./U.S.	achievements concerning the transmission of light in fibres for optical communication
	physiology/medicine	George E. Smith	U.S.	invention of the CCD sensor, an imaging semiconductor circuit
		Elizabeth H. Blackburn	U.S.	discovery of how chromosomes are protected by telomeres and the enzyme telomerase
		Carol W. Greider	U.S.	discovery of how chromosomes are protected by telomeres and the enzyme telomerase

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year	category	name	country*	achievement
		Jack W. Szostak	U.S.	discovery of how chromosomes are protected by telomeres and the enzyme telomerase
		Richard F. Heck	U.S.	development of techniques to synthesize complex carbon molecules
	chemistry	Negishi Ei-ichi	Japan	development of techniques to synthesize complex carbon molecules
		Suzmediuki Akira	Japan	development of techniques to synthesize complex carbon molecules
	economics	Peter A. Diamond	U.S.	analysis of markets with search frictions
2010		Dale T. Mortensen	U.S.	analysis of markets with search frictions
		Christopher A. Pissarides	Cyprus/U.K.	analysis of markets with search frictions
	literature	Mario Vargas Llosa	Peru	
	peace	Liu Xiaobo	China	
	alessica	Andre Geim	Netherlands	experiments regarding the two- dimensional material graphene
	physics	Konstantin Novoselov	Russia/U.K.	experiments regarding the two- dimensional material graphene
	physiology/medicine	Robert Edwards	U.K.	development of in vitro fertilization
2011	chemistry	Daniel Shechtman	Israel	discovery of quasicrystals
	aaan ami'aa	Thomas J. Sargent	U.S.	empirical research on cause and effect in the macroeconomy
	economics	Christopher A. Sims	U.S.	empirical research on cause and effect in the macroeconomy
	literature	Tomas Tranströmer	Sweden	

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year	category	name	country*	achievement
		Leymah Gbowee	Liberia	
	peace	Ellen Johnson Sirleaf	Liberia	
		Tawakkul Karmān	Yemen	
		Saul Perlmutter	U.S.	discovery of the accelerating expansion of the universe through observations of distant supernovae
	physics	Adam G. Riess	U.S./Australia	discovery of the accelerating expansion of the universe through observations of distant supernovae
		Brian P. Schmidt	U.S.	discovery of the accelerating expansion of the universe through observations of distant supernovae
		Bruce A. Beutler	U.S.	discoveries concerning the activation of innate immunity
	physiology/medicine	Jules A. Hoffman	Luxembourg/France	discoveries concerning the activation of innate immunity
		Ralph M. Steinman	Canada	discovery of the dendritic cell and its role in adaptive immunity
2012		Brian K. Kobilka	U.S.	studies of G-protein-coupled receptors
	chemistry	Robert J. Lefkowitz	U.S.	studies of G-protein-coupled receptors
	aconomics	Alvin E. Roth	U.S.	work on market design and matching theory
	economics	Lloyd S. Shapley	U.S.	work on market design and matching theory
	literature	Mo Yan	China	
	peace	European Union	(founded 1993)	
	physics	Serge Haroche	France	development of methods that enable measuring and manipulation of individual quantum systems

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^{**}Prize awarded in 2019.

year	category	name	country*	achievement
		David J. Wineland	U.S.	development of methods that enable measuring and manipulation of individual quantum systems
	physiology/medicine	Sir John Bertrand Gurdon	U.K.	discovery that mature cells can be reprogrammed to become pluripotent
	physiology/medicine	Shinya Yamanaka	Japan	discovery that mature cells can be reprogrammed to become pluripotent
2013		Martin Karplus	Austria/U.S.	development of multiscale models for complex chemical systems
	chemistry	Michael Levitt	U.K./U.S./Israel	development of multiscale models for complex chemical systems
		Arieh Warshel	Israel/U.S.	development of multiscale models for complex chemical systems
		Eugene F. Fama	U.S.	empirical analysis of asset prices
	economics	Lars P. Hansen	U.S.	empirical analysis of asset prices
		Robert J. Shiller	U.S.	empirical analysis of asset prices
	literature	Alice Munro	Canada	
	peace	Organisation for the Prohibition of Chemical Weapons	(founded 1997)	
		François Englert	Belgium	theoretical discovery of a mechanism that contributes to the understanding of the origin of mass of subatomic particles
	physics	Peter Higgs	U.K.	theoretical discovery of a mechanism that contributes to the understanding of the origin of mass of subatomic particles
	physiology/medicine	James E. Rothman	U.S.	discoveries of machinery regulating vesicle traffic, a major transport system in cells

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year	category	name	country*	achievement
		Randy W. Schekman	U.S.	discoveries of machinery regulating vesicle traffic, a major transport system in cells
		Thomas C. Südhof	Germany/U.S.	discoveries of machinery regulating vesicle traffic, a major transport system in cells
2014		Eric Betzig	U.S.	development of super-resolved fluorescence microscopy
	chemistry	Stefan W. Hell	Germany	development of super-resolved fluorescence microscopy
		William E. Moerner	U.S.	development of super-resolved fluorescence microscopy
	economics	Jean Tirole	France	analysis of market power and regulation
	literature	Patrick Modiano	France	
	peace	Kailash Satyarthi	India	
		Malala Yousafzai	Pakistan	
		Akasaki Isamu	Japan	invention of efficient blue light- emitting diodes, which has enabled bright and energy-saving white light sources
	physics	Amano Hiroshi	Japan	invention of efficient blue light- emitting diodes, which has enabled bright and energy-saving white light sources
		Shuji Nakamura	U.S.	invention of efficient blue light- emitting diodes, which has enabled bright and energy-saving white light sources
	physiology/medicine	Edvard I. Moser	Norway	discoveries of cells that constitute a positioning system in the brain

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year	category	name	country*	achievement
		May-Britt Moser	Norway	discoveries of cells that constitute a positioning system in the brain
		John O'Keefe	U.S./U.K.	discoveries of cells that constitute a positioning system in the brain
		Tomas Lindahl	Sweden	mechanistic studies of DNA repair
	chemistry	Paul Modrich	U.S.	mechanistic studies of DNA repair
		Aziz Sancar	Turkey/U.S.	mechanistic studies of DNA repair
	economics	Angus S. Deaton	U.K.	analysis of consumption, poverty, and welfare
	literature	Svetlana Alexievich	Belarus	
	peace	National Dialogue Quartet	(founded 2013)	
2015	physics	Kajita Takaaki	Japan	discovery of neutrino oscillations, which show that neutrinos have mass
		Arthur B. McDonald	Canada	discovery of neutrino oscillations, which show that neutrinos have mass
		William C. Campbell	Ireland	discoveries concerning a novel therapy against infections caused by roundworm parasites
2016	physiology/medicine	Ōmura Satoshi	Japan	discoveries concerning a novel therapy against infections caused by roundworm parasites
		Tu Youyou	China	discoveries concerning a novel therapy against malaria
		Jean-Pierre Sauvage	France	design and synthesis of molecular machines
	chemistry	J. Fraser Stoddart	U.K.	design and synthesis of molecular machines
		Bernard Feringa	Netherlands	design and synthesis of molecular machines

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year	category	name	country*	achievement
		Oliver Hart	U.K.	contributions to contract theory
	economics	Bengt Holmström	Finland	contributions to contract theory
	literature	Bob Dylan	U.S.	
	peace	Juan Manuel Santos	Colombia	
		David Thouless	U.K.	theoretical discoveries of topological phase transitions and topological phases of matter
	physics	Duncan Haldane	U.K.	theoretical discoveries of topological phase transitions and topological phases of matter
		Michael Kosterlitz	U.K.	theoretical discoveries of topological phase transitions and topological phases of matter
2017	physiology/medicine	Yoshinori Ohsumi	Japan	discoveries of mechanisms for autophagy
		Jacques Dubochet	Switzerland	development of cryo-electron microscopy for the high-resolution structure determination of biomolecules in solution
	chemistry	Joachim Frank	Germany/U.S.	development of cryo-electron microscopy for the high-resolution structure determination of biomolecules in solution
		Richard Henderson	U.K.	development of cryo-electron microscopy for the high-resolution structure determination of biomolecules in solution
	economics	Richard H. Thaler	U.S.	contributions to behavioral economics
	literature	Kazuo Ishiguro	U.K.	

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year	category	name	country*	achievement
	peace	International Campaign to Abolish Nuclear Weapons	(founded 2007)	
		Barry C. Barish	U.S.	decisive contributions to the Laser Interferometer Gravitational-Wave Observatory detector and the observation of gravitational waves
	physics	Kip S. Thorne	U.S.	decisive contributions to the Laser Interferometer Gravitational-Wave Observatory detector and the observation of gravitational waves
		Rainer Weiss	U.S.	decisive contributions to the Laser Interferometer Gravitational-Wave Observatory detector and the observation of gravitational waves
		Jeffrey C. Hall	U.S.	discoveries of molecular mechanisms controlling the circadian rhythm
	physiology/medicine	Michael Rosbash	U.S.	discoveries of molecular mechanisms controlling the circadian rhythm
		Michael W. Young	U.S.	discoveries of molecular mechanisms controlling the circadian rhythm
2018		Frances Arnold	U.S.	first directed evolution of enzymes
	chemistry	George P. Smith	U.S.	development of phage display, a method in which a bacteriophage can be used to evolve new proteins
		Gregory P. Winter	U.K.	work using the phage display method for the directed evolution of antibodies

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year	category	name	country*	achievement
		William Nordhaus	U.S.	integration of climate change into long-run macroeconomic analysis
(economics	Paul Romer	U.S.	integration of technological innovations into long-run macroeconomic analysis
	literature**	Olga Tokarczuk	Poland	
	peace	Denis Mukwege	Democratic Republic of the Congo	
		Nadia Murad	Iraq	
		Arthur Ashkin	U.S.	invention of optical tweezers and their application to biological systems
	physics	Gérard Mourou	France	invention of a method of generating high-intensity ultrashort optical pulses
		Donna Strickland	Canada	invention of a method of generating high-intensity ultrashort optical pulses
		James P. Allison	U.S.	discovery of cancer therapy by inhibition of negative immune regulation
	physiology/medicine	Tasuku Honjo	Japan	discovery of cancer therapy by inhibition of negative immune regulation
2019		John B. Goodenough	U.S.	development of lithium-ion batteries
	chemistry	M. Stanley Whittingham	U.K./U.S.	development of lithium-ion batteries
		Yoshino Akira	Japan	development of lithium-ion batteries
	economics	Abhijit Banerjee	U.S.	experimental approach to alleviating global poverty

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year	category	name	country*	achievement
		Esther Duflo	French/U.S.	experimental approach to alleviating global poverty
		Michael Kremer	U.S.	experimental approach to alleviating global poverty
	literature	Peter Handke	Austria	
	peace	Abiy Ahmed	Ethiopia	
		James Peebles	Canada/U.S.	theoretical discoveries in physical cosmology
	physics	Michel Mayor	Switzerland	discovery of an exoplanet orbiting a solar-type star
		Didier Queloz	Switzerland	discovery of an exoplanet orbiting a solar-type star
		William G. Kaelin, Jr.	U.S.	discoveries of how cells sense and adapt to oxygen availability
	physiology/medicine	Peter J. Ratcliffe	U.K.	discoveries of how cells sense and adapt to oxygen availability
		Gregg L. Semenza	U.S.	discoveries of how cells sense and adapt to oxygen availability
2020	chemistry	Emmanuelle Charpentier	France	development of a method for genome editing
		Jennifer Doudna	U.S.	development of a method for genome editing
		Paul R. Milgrom	U.S.	improvements to auction theory and inventions of new auction formats
	economics	Robert B. Wilson	U.S.	improvements to auction theory and inventions of new auction formats
	literature	Louise Glück	U.S.	
	peace	World Food Programme	(founded 1961)	

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year	category	name	country*	achievement
		Reinhard Genzel	Germany	discovery of a supermassive compact object at the centre of the Milky Way Galaxy
	physics	Andrea Ghez	U.S.	discovery of a supermassive compact object at the centre of the Milky Way Galaxy
		Roger Penrose	U.K.	discovery that black hole formation is a robust prediction of the general theory of relativity
		Harvey J. Alter	U.S.	discovery of hepatitis C virus
	physiology/medicine	Michael Houghton	U.K.	discovery of hepatitis C virus
		Charles M. Rice	U.S.	discovery of hepatitis C virus
2021	chemistry	Benjamin List	Germany	development of asymmetric organocatalysis
		David W.C. MacMillan	U.K./U.S.	development of asymmetric organocatalysis
		Joshua Angrist	Israel/U.S.	methodological contributions to the analysis of causal relationships
	economics	David Card	Canada/U.S.	empirical contributions to labour economics
		Guido W. Imbens	Neth./U.S.	methodological contributions to the analysis of causal relationships
	literature	Abdulrazak Gurnah	Tanz.	
		Dmitry Muratov	Russia	
	peace	Maria Ressa	Phil./U.S.	
	physics	Klaus Hasselmann	Germany	physical modelling of Earth's climate, quantifying variability and reliably predicting global warming
		Manabe Syukuro	Japan/U.S.	physical modelling of Earth's climate, quantifying variability and reliably predicting global warming

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year	category	name	country*	achievement
2022	physiology/medicine chemistry	Giorgio Parisi	Italy	discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales
		David Julius	U.S.	discoveries of receptors for temperature and touch
		Ardem Patapoutian	U.S.	discoveries of receptors for temperature and touch
		Carolyn R. Bertozzi	U.S.	development of click chemistry and bioorthogonal chemistry
		Morten P. Meldal	Neth.	development of click chemistry and bioorthogonal chemistry
		K. Barry Sharpless	U.S.	development of click chemistry and bioorthogonal chemistry
	economics	Ben Bernanke	U.S.	research on banks and financial crises
		Douglas Diamond	U.S.	research on banks and financial crises
		Philip Dybvig	U.S.	research on banks and financial crises
	literature	Annie Ernaux	France	
		Ales Bialiatski	Belarus	
		Center for Civil Liberties	Ukraine	
		Memorial	Russia	
	physics	Alain Aspect	France	experiments with quantum entanglement that laid the foundation for a new era of quantum technology
		John F. Clauser	U.S.	experiments with quantum entanglement that laid the foundation for a new era of quantum technology

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year	category	name	country*	achievement
		Anton Zeilinger	Austria	experiments with quantum entanglement that laid the foundation for a new era of quantum technology
2023	physiology/medicine	Svante Pääbo	Sweden	discoveries concerning the genomes of extinct hominins and human evolution
	chemistry	Moungi Bawendi	France/U.S.	discovery and synthesis of quantum dots
		Louis Brus	U.S.	discovery and synthesis of quantum dots
		Alexei Ekimov	Russia/U.S.	discovery and synthesis of quantum dots
	economics	Claudia Goldin	U.S.	research on women's labour market outcomes
	literature	Jon Fosse	U.S.	
	peace	Narges Mohammadi	Iran	
		Pierre Agostini	France	development of experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter
	physics	Ferenc Krausz	Hungary	development of experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter
		Anne L'Huillier	France	development of experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter
	physiology/medicine	Katalin Karikó	Hungary/U.S.	discoveries concerning nucleoside base modifications that enabled the

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year	category	name	country*	achievement
				development of effective mRNA
				vaccines against COVID-19
				discoveries concerning nucleoside
		Drew Weissman	U.S.	base modifications that enabled the
				development of effective mRNA
				vaccines against COVID-19
	chemistry	David Baker	U.S.	work concerning computational
				protein design
		Demis Hassabis	U.K.	work involving protein structure
				prediction
		John M. Jummon	U.S.	work involving protein structure
		John M. Jumper		prediction
	⁴ physics	John Hopfield	U.S.	foundational discoveries and
				inventions that enable machine
				learning with artificial neural
2024				networks
2024		Geoffrey Hinton	U.K./Canada	foundational discoveries and
				inventions that enable machine
				learning with artificial neural
				networks
	physiology/medicine	Victor Ambros	U.S.	discovery of microRNA and its role
				in post-transcriptional gene
				regulation
		Gary Ruvkun	U.S.	discovery of microRNA and its role
				in post-transcriptional gene
				regulation

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