

PHYSICS NOBEL LAUREATES

YEAR	LAUREATE	COUNTRY	CONTRIBUTION
1901	Wilhelm Conrad Rontgen	Germany	Discovery of X rays
1902	Hendrik Lorentz	Netherlands	Influence of magnetism on radiation
	Pieter Zeeman	Netherlands	Influence of magnetism on radiation
1903	Antoine Henri Becquerel	France	Radioactivity
	Pierre Curie	France	Radioactivity
	Maria Sklodowska Curie	Poland	Radioactivity
1904	Lord Rayleigh	UK	Discovery of argon
1905	Philipp Anton Von Lenard	Austria	Work on cathode rays
1906	Joseph John Thomson	UK	Conduction of electricity through gases
1907	Albert Abraham Michelson	US	Spectroscopic investigations
1908	Gabriel Lippmann	France	Interference of light
1909	Guglielmo Marconi	Italy	Development of wireless telegraphy
	Karl Ferdinand Braun	Germany	Development of wireless telegraphy
1910	Johannes Van der Waals	Netherlands	Equation of state for gases and liquids
1911	Wilhelm Wien	Germany	Radiation of heat
1912	Nils Gustav Dalen	Sweden	Automatic valves used in lighthouses
1913	Heike Kamerlingh Onnes	Netherlands	Properties of matter at low temperatures
1914	Max von Laue	Germany	Diffraction of X rays by crystals
1915	William Henry Bragg	UK	Analysis of crystal structures by X rays
	William Lawrence Bragg	Australia	Analysis of crystal structures by X rays
1916	Not awarded		
1917	Charles Glover Barkla	UK	Development of X ray spectroscopy
1918	Max Planck	Germany	Discovery of energy quanta
1919	Johannes Stark	Germany	Splitting of spectral lines in electric fields
1920	Charles Edouard Guillaume	Switzerland	Discovery of anomalies in nickel-steel alloy
1921	Albert Einstein	Germany	Photoelectric effect and many more
1922	Niels Bohr	Denmark	Atomic structure
1923	Robert Andrews Millikan	UK	Elementary charge of electricity
1924	Manne Siegbahn	Sweden	X ray spectroscopy
1925	James Franck	Germany	Impact of electron on atom
	Gustav Hertz	Germany	Impact of electron on atom
1926	Jean Baptiste Perrin	France	Discovery of sedimentation equilibrium
1927	Arthur Holly Compton	US	Compton effect

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	Charles Thomson Rees Wilson	UK	Cloud chamber
1928	Owen Willans Richardson	UK	Thermionic phenomenon
1929	Louis Victor de Broglie	France	Wave nature of electrons
1930	Chandrasekhar Venkata Raman	India	Raman effect
1931	Not awarded		
1932	Werner Heisenberg	Germany	Quantum mechanics
1933	Erwin Schrodinger	Austria	Discovery of new forms of atomic theory
	Paul Dirac	UK	Discovery of new forms of atomic theory
1934	Not awarded		
1935	James Chadwick	UK	Discovery of neutron
1936	Victor Francis Hess	Austria	Discovery of cosmic radiation
	Carl David Anderson	US	Discovery of positron
1937	Clinton Joseph Davisson	US	Diffraction of electrons by crystals
	George Paget Thomson	UK	Diffraction of electrons by crystals
1938	Enrico Fermi	Italy	Nuclear reactions
1939	Ernest Lawrence	US	Invention of cyclotron
1940	Not awarded		
1941	Not awarded		
1942	Not awarded		
1943	Otto Stern	US	Discovery of magnetic moment of proton
1944	Isidor Isaac Rabi	US	Recording the magnetic properties of nuclei
1945	Wolfgang Pauli	Austria	Pauli's exclusion principle
1946	Percy Williams Bridgman	US	High pressure physics
1947	Edward Victor Appleton	UK	Study of physics of upper atmosphere
1948	Patrick Maynard Blackett	UK	Development of Wilson cloud chamber
1949	Hideki Yukawa	Japan	Study of nuclear forces and mesons
1950	Cecil Frank Powell	UK	Photographic method of studying nuclear processes
1951	John Douglas Cockroft	UK	Transmutation of nuclei by artificially accelerated atomic particles
	Ernest Thomas Walton	Ireland	
1952	Felix Bloch	Switzerland	Nuclear magnetic precision measurements
	Edward Mills Purcell	US	Nuclear magnetic precision measurements
1953	Frits Zernike	Netherlands	Invention of phase contrast microscope
1954	Max Born	Germany	Statistical interpretation of wave function
	Walther Bothe	Germany	Study of coincidence method

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1955	Willis Eugene Lamb	US	Fine structure of hydrogen spectrum
	Polykarp Kusch	US	Determination of magnetic moment of electron
1956	John Bardeen	US	Discovery of transistor
	Walter Houser Brattain	US	Discovery of transistor
	William Bradford Shockley	US	Discovery of transistor
1957	Tsung Dao Lee	US/China	Investigations of parity laws
	Chen Ning Yang	US/China	Investigations of parity laws
1958	Pavel Alekseyevich Cherenkov	Soviet Union	Cherenkov effect
	Ilya Frank	Soviet Union	Cherenkov effect
	Igor Yevgenyevich Tamm	Soviet Union	Cherenkov effect
1959	Emilio Gino Segre	Italy	Discovery of antiproton
	Owen Chamberlain	US	Discovery of antiproton
1960	Donald Arthur Glaser	US	Invention of bubble chamber
1961	Robert Hofstadter	US	Structure of nucleons
	Rudolf Ludwig Mossbauer	Germany	Resonance absorption of gamma radiation
1962	Lev Davidovich Landau	Soviet Union	Condensed matter and liquid helium
1963	Eugene Paul Wigner	Hungary	Theory of atomic nucleus
	Maria Geoppert Mayer	US	Nuclear shell structure
	H Hans D Jensen	Germany	Nuclear shell structure
1964	Nicolay Gennadiyevich Basov	Soviet Union	Quantum electronics
	Alexander Prokhorov	Soviet Union	Quantum electronics
	Charles Hard Townes	US	Quantum electronics
1965	Richard Phillips Feynman	US	Quantum electrodynamics
	Julian Schwinger	US	Quantum electrodynamics
	Sin Itiro Tomonaga	Japan	Quantum electrodynamics
1966	Alfred Kastler	France	Optical methods of studying Hertzian resonances in atoms
1967	Hans Albrecht Bethe	US	Theory of nuclear reactions
1968	Luis Walter Alvarez	US	Elementary particle physics
1969	Murray Gell Mann	US	Classification of elementary particles
1970	Hannes Olof Gosta Alfven	Sweden	Magneto hydrodynamics
	Louis Neel	France	Antiferromagnetism and ferrimagnetism
1971	Dennis Gabor	Hungary	Holographic method
1972	John Bardeen	US	Superconductivity (BCS theory)
	Leon Neil Cooper	US	Superconductivity (BCS theory)
	John Robert Schrieffer	US	Superconductivity (BCS theory)

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1973	Leo Esaki	Japan	Tunneling in semiconductors
	Ivar Giaever	US	Tunneling in superconductors
	Brian David Josephson	UK	Josephson effect
1974	Martin Ryle	UK	Aperture synthesis technique
	Antony Hewish	UK	Discovery of pulsars
1975	Aage Bohr	Denmark	Development of theory of structure of nuclei
	Ben Roy Mottelson	Denmark	Development of theory of structure of nuclei
	Leo James Rainwater	US	Development of theory of structure of nuclei
1976	Burton Richter	US	Discovery of heavy elementary particles
	Samuel Chao Chung Ting	US	Discovery of heavy elementary particles
1977	Phillip Warren Anderson	US	Investigations of electronic structure of magnetic and disordered systems
	Nevill Francis Mott	UK	
	John Hasbrouck Van Vleck	US	magnetic and disordered systems
1978	Pyotr Leonidovich Kapitsa	Soviet Union	Low temperature physics
	Arno Allan Penzias	US	Cosmic microwave background radiation
	Robert Woodrow Wilson	US	Cosmic microwave background radiation
1979	Sheldon Lee Glashow	US	Unified weak and electromagnetic interaction between elementary particles
	Abdus Salam	Pakistan	
	Steven Weinberg	US	
1980	James Watson Cronin	US	Discovery of violations of fundamental symmetry principles in K meson decay
	Val Logsdon Fitch	US	
1981	Nicolaas Bloembergen	Netherlands	Laser spectroscopy
	Arthur Leonard Schawlow	US	Laser spectroscopy
	Kai Manne Borje Siegbahn	Sweden	High resolution electron spectroscopy
1982	Kenneth G Wilson	US	Critical phenomenon in phase transitions
1983	Subrahmanyan Chandrasekhar	India	Evolution of stars
	William Alfred Fowler	US	Formation of chemical elements in universe
1984	Carlo Rubbia	Italy	Discovery of field particles W and Z
	Simon Van der Meer	Netherlands	Discovery of field particles W and Z
1985	Klaus von Klitzing	Germany	Quantized Hall effect
1986	Ernst Ruska	Germany	Design of electron microscope
	Gerd Binnig	Germany	Design of scanning tunneling microscope
	Heinrich Rohrer	Switzerland	Design of scanning tunneling microscope
1987	Johannes Georg Bednorz	Germany	Superconductivity in ceramic materials
	Karl Alexander Muller	Switzerland	Superconductivity in ceramic materials

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1988	Leon Max Lederman	US	Doublet structure of the leptons
	Melvin Schwartz	US	Doublet structure of the leptons
	Jack Steinberger	US	Doublet structure of the leptons
1989	Norman Foster Ramsey	US	Hydrogen maser and other atomic clocks
	Hans Gerog Dehmelt	US	Development of ion trap technique
	Wolfgang Paul	Germany	Development of ion trap technique
1990	Jerome I Friedman	US	Deep inelastic scattering of electrons and protons and bound neutrons
	Henry Way Kendall	US	
	Richard E Taylor	Canada	
1991	Pierre Gilles de Gennes	France	Studying order phenomena in liquid crystals
1992	Georges Charpak	France	Invention of Multiwire proportional chamber
1993	Russell Alan Hulse	US	Discovery of a new type of pulsar
	Joseph Hooton Taylor Jr.	US	Discovery of a new type of pulsar
1994	Bertram Brockhouse	Canada	Neutron scattering techniques for studies of condensed matter
	Clifford Glenwood Shull	US	
1995	Martin Lewis Perl	US	Discovery of tau lepton
	Frederick Reines	US	Detection of neutrino
1996	David Morris Lee	US	Super fluidity in helium-3
	Douglas D Osheroff	US	Super fluidity in helium-3
	Robert Coleman Richardson	US	Super fluidity in helium-3
1997	Steven Chu	US	Development of methods to cool and trap atoms with laser light
	Claude Cohen Tannoudji	France	
	William Daniel Phillips	US	
1998	Robert B Laughlin	US	Discovery of new form of quantum fluid with fractionally charged excitations
	Horst Ludwig Stormer	Germany	
	Danier Chee Tsul	China	
1999	Gerard 't Hooft	Netherlands	Quantum structure of electroweak interactions
	Martinus J G Veltman	Netherlands	Quantum structure of electroweak interactions
2000	Zhores Ivanovich Alferov	Russia	Development of semiconductor heterostructures used in optoelectronics
	Herbert Kroemer	Germany	
	Jack St Clair Kilby	US	
2001	Eric Allin Cornell	US	Achievement of Bose-Einstein condensation in dilute gases of alkali atoms
	Carl Edwin Wieman	US	
	Wolfgang Ketterie	Germany	

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2002	Raymond Davis Jr.	US	Detection of cosmic neutrinos
	Masatoshi Koshiba	Japan	Detection of cosmic neutrinos
	Riccardo Giacconi	Italy	Discovery of cosmic x ray sources
2003	Alexei Alexeyevich Abrikosov	Russia	Theory of superconductors and super fluids
	Vitaly Lazarevich Ginzburg	Russia	Theory of superconductors and super fluids
	Anthony James Leggett	UK	Theory of superconductors and super fluids
2004	David J Gross	US	Discovery of asymptotic freedom in the theory of strong interaction
	Hugh David Politzer	US	
	Frank Wilczek	US	
2005	Roy J Glauber	US	Quantum theory of optical coherence
	John L Hall	US	Laser based precision spectroscopy
	Theodor W Hansch	Germany	
2006	John C Mather	US	Discovery of blackbody form of the cosmic microwave background radiation
	George F Smoot	US	
2007	Albert Fert	France	Discovery of giant magnetoresistance
	Peter Grunberg	Germany	Discovery of giant magnetoresistance
2008	Makoto Kobayashi	Japan	Discovery of origin of broken symmetry
	Toshihide Maskawa	Japan	Discovery of origin of broken symmetry
	Yoichiro Nambu	Japan	Discovery of mechanism of spontaneous broken symmetry in subatomic physics
2009	Charles K Kao	UK	Transmission of light in fibers
	Willard S Boyle	Canada	Invention of the CCD sensor
	George E Smith	US	Invention of the CCD sensor
2010	Andre Geim	Netherlands	Experiments regarding 2D material graphene
	Konstantin Novoselov	Russia	
2011	Saul Perlmutter	US	Discovery of accelerating expansion of the universe through observations of distant supernova
	Brian P Schmidt	Australia	
	Adam G Riess	US	
2012	Serge Haroche	France	Measurement and manipulation of individual quantum systems
	David J Wineland	US	
2013	Francois Englert	Belgium	Studies of origin of mass of sub-atomic particles
	Peter Higgs	UK	
2014	Isamu Akasaki	Japan	Invention of blue LED

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	Hiroshi Amano	Japan	Invention of blue LED
	Shuji Nakamura	Japan	Invention of blue LED
2015	Takaaki Kajita	Japan	Discovery of neutrino oscillations
	Arthur B Mc Donald	Canada	Discovery of neutrino oscillations
2016	David J Thouless	UK	Discovery of topological phase transitions and topological phases of matter
	F Duncan M Haldane	UK	
	John M Kosterlitz	UK	
2017	Kip Thorne	US	Observation of gravitational waves
	Rainer Weiss	Germany	Observation of gravitational waves
	Barry Barish	US	Observation of gravitational waves
2018	Arthur Ashkin	US	Optical tweezers
	Gerard Mourou	France	High intensity ultra-short optical pulses
	Donna Stickland	Canada	High intensity ultra-short optical pulses