

Premios Nobel en Física en el periodo 1973-2023:

Año	Galardonados	Logro científico
1973	Leo Esaki and Ivar Giaever	“for their experimental discoveries regarding tunneling phenomena in semiconductors and superconductors, respectively”
	Brian D. Josephson	“for his theoretical predictions of the properties of a supercurrent through a tunnel barrier, in particular those phenomena which are generally known as the Josephson effects”
1974	Martin Ryle and Antony Hewish	“for their pioneering research in radio astrophysics: Ryle for his observations and inventions, in particular of the aperture synthesis technique, and Hewish for his decisive role in the discovery of pulsars”
1975	Aage N. Bohr , Ben R. Mottelson and James Rainwater	“for the discovery of the connection between collective motion and particle motion in atomic nuclei and the development of the theory of the structure of the atomic nucleus based on this connection”
1976	Burton Richter and Samuel C.C. Ting	“for their pioneering work in the discovery of a heavy elementary particle of a new kind”
1977	Philip W. Anderson , Sir Nevill F. Mott and John H. Van Vleck	“for their fundamental theoretical investigations of the electronic structure of magnetic and disordered systems”
1978	Pyotr Kapitsa	“for his basic inventions and discoveries in the area of low-temperature physics”
	Arno Penzias and Robert Woodrow Wilson	“for their discovery of cosmic microwave background radiation”
1979	Sheldon Glashow , Abdus Salam and Steven Weinberg	“for their contributions to the theory of the unified weak and electromagnetic interaction between elementary particles, including, inter alia, the prediction of the weak neutral current”
1980	James Cronin and Val Fitch	“for the discovery of violations of fundamental symmetry principles in the decay of neutral K-mesons”

<u>1981</u>	Nicolaas Bloembergen and Arthur L. Schawlow	“for their contribution to the development of laser spectroscopy”
	Kai M. Siegbahn	“for his contribution to the development of high-resolution electron spectroscopy”
<u>1982</u>	Kenneth G. Wilson	“for his theory for critical phenomena in connection with phase transitions”
<u>1983</u>	Subrahmanyan Chandrasekhar	“for his theoretical studies of the physical processes of importance to the structure and evolution of the stars”
	William A. Fowler	“for his theoretical and experimental studies of the nuclear reactions of importance in the formation of the chemical elements in the universe”
<u>1984</u>	Carlo Rubbia and Simon van der Meer	“for their decisive contributions to the large project, which led to the discovery of the field particles W and Z, communicators of weak interaction”
<u>1985</u>	Klaus von Klitzing	“for the discovery of the quantized Hall effect”
<u>1986</u>	Ernst Ruska	“for his fundamental work in electron optics, and for the design of the first electron microscope”
	Gerd Binnig and Heinrich Rohrer	“for their design of the scanning tunneling microscope”
<u>1987</u>	J. Georg Bednorz and K. Alex Müller	“for their important break-through in the discovery of superconductivity in ceramic materials”
<u>1988</u>	Leon M. Lederman , Melvin Schwartz and Jack Steinberger	“for the neutrino beam method and the demonstration of the doublet structure of the leptons through the discovery of the muon neutrino”
<u>1989</u>	Norman F. Ramsey	“for the invention of the separated oscillatory fields method and its use in the hydrogen maser and other atomic clocks”
	Hans G. Dehmelt and Wolfgang Paul	“for the development of the ion trap technique”
<u>1990</u>	Jerome I. Friedman , Henry W. Kendall and Richard E. Taylor	“for their pioneering investigations concerning deep inelastic scattering of electrons on protons and bound neutrons, which have been of essential importance for the development of the quark model in particle physics”
<u>1991</u>	Pierre-Gilles de Gennes	“for discovering that methods developed for studying order phenomena in simple systems can be generalized to more complex forms of matter, in particular to liquid crystals and polymers”

1992	Georges Charpak	“for his invention and development of particle detectors, in particular the multiwire proportional chamber”
1993	Russell A. Hulse and Joseph H. Taylor Jr.	“for the discovery of a new type of pulsar, a discovery that has opened up new possibilities for the study of gravitation”
1994	Bertram N. Brockhouse	“for the development of neutron spectroscopy”
	Clifford G. Shull	“for the development of the neutron diffraction technique”
1995	Martin L. Perl	“for the discovery of the tau lepton”
	Frederick Reines	“for the detection of the neutrino”
1996	David M. Lee , Douglas D. Osheroff and Robert C. Richardson	“for their discovery of superfluidity in helium-3”
1997	Steven Chu , Claude Cohen-Tannoudji and William D. Phillips	“for development of methods to cool and trap atoms with laser light”
1998	Robert B. Laughlin , Horst L. Störmer and Daniel C. Tsui	“for their discovery of a new form of quantum fluid with fractionally charged excitations”
1999	Gerardus 't Hooft and Martinus J.G. Veltman	“for elucidating the quantum structure of electroweak interactions in physics”
2000	Zhores Alferov and Herbert Kroemer	“for developing semiconductor heterostructures used in high-speed- and opto-electronics”
	Jack Kilby	“for his part in the invention of the integrated circuit”
2001	Eric Cornell , Wolfgang Ketterle and Carl Wieman	“for the achievement of Bose-Einstein condensation in dilute gases of alkali atoms, and for early fundamental studies of the properties of the condensates”
2002	Raymond Davis Jr. and Masatoshi Koshiba	“for pioneering contributions to astrophysics, in particular for the detection of cosmic neutrinos”
	Riccardo Giacconi	“for pioneering contributions to astrophysics, which have led to the discovery of cosmic X-ray sources”

2003	Alexei Abrikosov , Vitaly L. Ginzburg and Anthony J. Leggett	“for pioneering contributions to the theory of superconductors and superfluids”
2004	David J. Gross , H. David Politzer and Frank Wilczek	“for the discovery of asymptotic freedom in the theory of the strong interaction”
2005	Roy J. Glauber	“for his contribution to the quantum theory of optical coherence”
	John L. Hall and Theodor W. Hänsch	“for their contributions to the development of laser-based precision spectroscopy, including the optical frequency comb technique”
2006	John C. Mather and George F. Smoot	“for their discovery of the blackbody form and anisotropy of the cosmic microwave background radiation”
2007	Albert Fert and Peter Grünberg	“for the discovery of Giant Magnetoresistance”
2008	Yoichiro Nambu	“for the discovery of the mechanism of spontaneous broken symmetry in subatomic physics”
	Makoto Kobayashi and Toshihide Maskawa	“for the discovery of the origin of the broken symmetry which predicts the existence of at least three families of quarks in nature”
2009	Charles K. Kao	“for groundbreaking achievements concerning the transmission of light in fibers for optical communication”
	Willard S. Boyle and George E. Smith	“for the invention of an imaging semiconductor circuit - the CCD sensor”
2010	Andre Geim and Konstantin Novoselov	“for groundbreaking experiments regarding the two-dimensional material graphene”
2011	Saul Perlmutter , Brian P. Schmidt and Adam G. Riess	“for the discovery of the accelerating expansion of the Universe through observations of distant supernovae”
2012	Serge Haroche and David J. Wineland	“for ground-breaking experimental methods that enable measuring and manipulation of individual quantum systems”
2013	François Englert and Peter Higgs	“for the theoretical discovery of a mechanism that contributes to our understanding of the origin of mass of subatomic particles, and which recently was confirmed through the discovery of the predicted fundamental particle, by the ATLAS and CMS experiments at CERN's Large Hadron Collider”

2014	Isamu Akasaki , Hiroshi Amano and Shuji Nakamura	“for the invention of efficient blue light-emitting diodes which has enabled bright and energy-saving white light sources”
2015	Takaaki Kajita and Arthur B. McDonald	“for the discovery of neutrino oscillations, which shows that neutrinos have mass”
2016	David J. Thouless , F. Duncan M. Haldane and J. Michael Kosterlitz	“for theoretical discoveries of topological phase transitions and topological phases of matter”
2017	Rainer Weiss , Barry C. Barish and Kip S. Thorne	“for decisive contributions to the LIGO detector and the observation of gravitational waves”
2018	Arthur Ashkin	“for groundbreaking inventions in the field of laser physics”
	Gérard Mourou and Donna Strickland	“for their method of generating high-intensity, ultra-short optical pulses”
2019	James Peebles	“for theoretical discoveries in physical cosmology”
	Michel Mayor and Didier Queloz	“for the discovery of an exoplanet orbiting a solar-type star”
2020	Roger Penrose	“for the discovery that black hole formation is a robust prediction of the general theory of relativity”
	Reinhard Genzel and Andrea Ghez	“for the discovery of a supermassive compact object at the centre of our galaxy”
2021	Syukuro Manabe and Klaus Hasselmann	“for the physical modelling of Earth’s climate, quantifying variability and reliably predicting global warming”
	Giorgio Parisi	“for the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales”
2022	Alain Aspect , John Clauser and Anton Zeilinger	“for experiments with entangled photons, establishing the violation of Bell inequalities and pioneering quantum information science”
2023	Pierre Agostini , Ferenc Krausz and Anne L’Huillier	“for experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter”