

EPS Condensed Matter Division Europhysics Prize

Award recipients

The EPS CMD Europhysics Prize is one of Europe's most prestigious prizes in the field of condensed matter physics. It is awarded every 2 years in recognition of recent work by one or more individuals for scientific excellence in the area of condensed matter physics.

- 2016 **Peter Böni, Aleksandr N. Bogdanov, Christian Pfleiderer, Achim Rosch, Ashvin Vishwanath**
For the theoretical prediction, the experimental discovery and the theoretical analysis of a magnetic skyrmion phase in MnSi, a new state of matter.
- 2014 **Harold Y. Hwang, Jochen Mannhart, Jean-Marc Triscone**
For the discovery and investigation of electron liquids at oxide interfaces.
- 2012 **Steven Bramwell, Claudio Castelnovo, Santiago Grigera, Roderich Moessner, Shivaji Sondhi, Alan Tennant**
For the prediction and experimental observation of magnetic monopoles in spin ice.
- 2010 **Hartmut Buhmann, Charles Kane, Eugene Mele, Laurens W. Molenkamp and Shoucheng Zhang**
For the theoretical prediction and the experimental observation of the quantum spin Hall effect and topological insulators.
- 2008 **Andre Geim and Kostya Novoselov**
For discovering and isolating a single free-standing atomic layer of carbon (graphene) and elucidating its remarkable electronic properties.
- 2006 **Antoine Georges, Gabriel Kotliar, Walter Metzner, Dieter Vollhardt**
For the development and application of the dynamical mean field theory.
- 2005 **David Awschalom, Tomasz Dietl, Hideo Ohno**
For their work on ferromagnetic semiconductors and spintronics.
- 2004 **Michel Devoret, Daniel Esteve, Johan Mooij, Yasunobu Nakamura**
For the realisation and demonstration of the quantum bit concept based on superconducting circuits.
- 2003 **Heino Finkelmann, Mark Warner**
For the discovery of a new class of materials called liquid crystal elastomers.
- 2002 **Bernard Barbara, Jonathan Friedman, Dante Gatteschi, Roberta Sessoli, Wolfgang Wernsdorfer**
For the development of the field of quantum dynamics of nanomagnets, including the discovery of quantum tunnelling and interference in dynamics of magnetization.



- 2001 **Sumio Iijima, Cees Dekker, Thomas W. Ebbesen, Paul L. McEuen**
Discovery of multi- and single-walled carbon nanotubes and pioneering studies of their fundamental mechanical and electronic properties.
- 2000 **Paolo Carra, Gerrit van der Laan, Gisela Schütz-Gmeineder**
Pioneering work in establishing the field of magnetic x-ray dichroism.
- 1999 **Christian Glattli, Michael Reznikov**
For developing novel techniques for noise measurements in solids leading to experimental observation of carriers with a fractional charge.
- 1998 **T. Maurice Rice**
For original contributions to the theory of strongly correlated electron systems.
- 1997 **Albert Fert, Peter Gruenberg, Stuart S. P. Parkin**
For the discovery and contribution to the understanding of the giant magneto-resistance effect in transition-metal multilayers and demonstrations of its potential for technological applications.
- 1996 **R.H. Friend**
For pioneering work on semiconducting organic polymer materials and demonstration of an organic light emitting diodes.
- 1995 **Yakir Aharonov, Michael V. Berry**
For the introduction of fundamental concepts in physics that have profound impact on condensed matter science.
- 1994 **Donald R. Huffman, Wolfgang Krätschmer, Harold W. Kroto, Richard E. Smalley**
For new molecular forms of carbon and their production in the solid state.
- 1993 **Boris L. Altshuler, Arkady Girshevich Aronov, David E. Khmel'nitskii, Anatoly I. Larkin, Boris Spivak**
For theoretical work on coherent phenomena in disordered conductors.
- 1992 **Gerhard Ertl, Harald Ibach, J. Peter Toennies**
For pioneering studies of surface structures, dynamics and reactions through the development of novel experimental methods.
- 1991 **Klaus Bechgaard, Denis Jérôme**
For synthesis of a new class of organic metals and the discovery of their superconductivity and novel magnetic properties.
- 1990 **Roberto Car, Michele Parrinello**
For a novel and powerful method for the ab-initio calculation of molecular dynamics
- 1989 **Frank Steglich, Hans-Rudi Ott, Gil G. Lonzarich**
For pioneering investigations of heavy-fermion metals
- 1988 **J. Georg Bednorz, Karl Alex Müller**
For the discovery of high-temperature superconductivity.
- 1987 **Igor K. Yanson**
For point-contact spectroscopy in metals.
- 1986 **Ferenc Mezei**
For neutron spin echo spectroscopy.



- 1985 **Jens Als-Nielsen, Michael Pepper**
For the experimental study of low dimensional physics.
- 1984 **Gerd K. Binnig, Heinrich Rohrer**
For the scanning tunnelling microscope.
- 1983 **A.F. Silvera**
For atomic and solid hydrogen.
- 1982 **Klaus von Klitzing**
For experimental demonstration of the quantized Hall resistance.
- 1980 **Ole Krog Andersen, Andries R. Miedema**
For original methods for the calculation of the electronic properties of materials.
- 1979 **E.A. Ash, J.H. Collins, Y.V. Gulaev, K.A. Ingebrigtsen, E.G.S. Paige**
For the physical principles of surface acoustic wave devices.
- 1978 **Zhores Ivanovich Alferov**
For heterojunctions.
- 1977 **Walter Eric Spear**
For amorphous silicon devices.
- 1976 **Wolfgang Helfrich**
For contributions to the physics of liquid crystal.
- 1975 **V.S. Bagaev, Leonid Vemiaminovich Keldysh, J.E. Pokrovsky, M. Voos**
For the condensation of excitons.

