

EUROPEAN INVENTOR AWARD 2013

**NOMINATE
AN INVENTOR**

SUBMISSION DEADLINE: 11 OCTOBER 2012



MESSAGE FROM THE PRESIDENT

Innovation fuels the European economy. In a world of constant and rapid change, driven by the competition about the best answers to the global challenges mankind faces, innovation has become the dynamo of our economies. Inventors support not only technological progress but also job creation and wealth for millions of people. Inventions improve our daily lives, our environment and our living conditions. The European Patent Office's mission is to grant patents only when they are truly deserved, to uphold competitive markets for technology and to disseminate vast volumes of technical information through patent databases.

The European Inventor Award was initiated in 2006 to honour the most outstanding achievements of inventors from all over the globe. It has also become a showcase of the very best scientists and engineers who have solved technical problems with ingenious solutions. The Award is a rare chance to put the spotlight on the men and women who have radically changed our world for the better. I would like to invite you to use this unique opportunity to see your preferred invention among the short-listed innovations presented and honoured each year at the European Inventor Award event.

We all have a responsibility to secure a better future for ourselves and coming generations. Make a difference and submit your preferred nomination today.



Benoît Battistelli
President
European Patent Office

WHY A EUROPEAN AWARD FOR INVENTORS?

The European Inventor Award recognises outstanding inventors from all over the world, from all technical fields and backgrounds: large companies, small and medium-sized enterprises, as well as academic and non-profit sectors. The Award shows a human side to technological development. It tells stories about inventors' determination, their struggle to overcome problems in science and engineering, their courage to fail but ultimately their triumph against the odds. These inventors are heroes in the sense that they improved other peoples life and created many jobs. Their stories should both inspire others to undertake their own innovative journeys and demonstrate the benefits for society and the economy.

If you know of an outstanding invention, protected by a valid European patent, then we would like to hear from you. Perhaps you wish to nominate your own invention, or to nominate an invention which has changed your life - either way we would be pleased to receive an application.

This brochure contains all you need to know about the procedure for nomination and selection for the European Inventor Award. In the following pages you will find information on the different categories of prize, the criteria for entry, the Jury members and selection process, and finally some introductions to previous finalists and winners.

CATEGORIES

You can nominate your preferred inventor in the following five categories: industry, small and medium-sized enterprises (SMEs), research, lifetime achievement and non-European countries.

INDUSTRY

The Industry Award recognises the inventors of outstanding and commercially successful technologies patented by large European companies. The companies in question have more than 250 employees and annual revenues of more than EUR 50 million.

RESEARCH

The Research Award is awarded to people working in research institutes or at universities. It is intended to award the research work that often underpins inventions. Ideally, the research has led to an invention that has had commercial success and led to a benefit for society.

SMEs

The SME Award is presented to the people behind inventions at small and medium-sized enterprises (SMEs). Ideally, the invention has helped the company achieve commercial success and has proven to have a benefit to society. SMEs are companies that had fewer than 250 employees and annual revenues of less than EUR 50 million when the patents were granted for the invention.

LIFETIME ACHIEVEMENT

The Lifetime Achievement Award honours the long-term contributions of an individual European inventor. With their dedication and tireless efforts – and their patented landmark inventions – these inventors have had a major impact on their respective fields of technology and society at large. In this category, an inventor's entire body of work is relevant.

NON-EUROPEAN COUNTRIES

This category is open to all inventors who are not European nationals, regardless of the size or revenues of the company applying their patented invention. The invention or related products must be available and enjoy commercial success in Europe.

FINALISTS 2012



Hugo Katus and team, Industry



Jaap Haartsen, Industry



Søren Westermann, Jan Tøpholm, Svend V. Andersen, Industry



Jason Chin, Research



Gilles Gosselin and team, Research



Mark van Loosdrecht, Merle Krista de Kreuk and team, Research



Manfred Stefener and team, SMEs



Stefan Lehnert, SMEs



Farouk Tedjar and team, SMEs



Josef Theurer, Lifetime Achievement



Josef Bille, Lifetime Achievement



Mario Moretti Polegato, Lifetime Achievement



Stanford Ovshinsky, Non-European Countries



Federico Capasso, Non-European Countries



Terence Percival, John O' Sullivan and team, Non-European Countries

RULES AND CRITERIA FOR PARTICIPATION

The European Inventor Award was set up to reward the highest level of excellence and all entries must satisfy certain formal requirements. The closing date for submitting entries is **11 October 2012** (the electronic date of receipt shall apply).

CRITERIA

All inventions to be proposed for the European Inventor Award must possess at least one valid European patent granted by the European Patent Office. This competition is open to the general public, industry, research institutes, universities, associations or individual inventors – anyone can enter and submit a nomination for oneself or for someone else.

Any inventor and/or team of inventors of any nationality can be nominated. Inventors with European nationalities can be considered for the Industry, SMEs, Research and Lifetime Achievement categories even if they currently reside outside Europe. Nationals outside Europe can only be entered in the Non-European Countries category.

All areas of technology for which a European patent can be granted will be considered.

The nominated invention must clearly demonstrate the following criteria:

- high degree of inventiveness, with a clear description of the inventive factor
- the invention's practical application precisely defined
- demonstrable market success in Europe
- clearly recognisable benefits for the economy and society, improvements in the area of employment and quality of life, and/or protection of the environment

ENTRIES WILL NOT BE CONSIDERED IF:

- the patent has not yet been granted, or has been granted by a patent office other than the EPO
- the relevant patent is subject to pending opposition or appeal proceedings
- the relevant patent is within a nine-month notice of opposition period
- the patent has been revoked
- the proposed inventors have already been finalists or winners in previous European Inventor Award competitions (for the full list of past finalists and winners, please visit our website www.epo.org/european-inventor)

HOW TO SUBMIT A NOMINATION?

To enter the competition of the European Inventor Award, you need to fill out an entry form (online entry form or downloadable pdf) and submit it to the European Patent Office. The entry forms are available in English, French and German and are located at **www.epo.org/european-inventor**.

Your entry is complete once we have received the following documents in due time:

1. A completed entry form
2. A written statement (max. 500 words) explaining:
 - the invention clearly and concisely in terms understandable to non-experts
 - why the proposed invention is innovative and deserves the award
 - what the invention's practical applications are
 - what impact it has had on the economy and/or society
 - how it has improved quality of life and/or benefits the environment

When candidates enter themselves, please also submit the following:

- a current CV with their contact details
- references from persons/companies who can be considered capable of judging whether their invention has been a commercial success or benefits society or who helped them to achieve that success

Optional documents:

- media coverage of the inventor(s) and/or invention
- any other supporting material about the inventor(s) and/or the invention, its practical application and economic or social impact

All documents must be submitted by e-mail to european-inventor@epo.org or alternatively by post to the following address:

European Inventor Award
c/o European Patent Office
80298 Munich, Germany

THE SELECTION PROCESS

To ensure that the selection process of the European Inventor Award is transparent, the nominations undergo several qualification steps.

After admitting the entry to the competition, where all required criteria must be fulfilled, the entries are subject to careful procedural and legal checks by an EPO panel of experts to ensure that the proposed patents are still valid.

The societal, economical and technological impact of the remaining proposals are then checked and verified and the EPO panel prepares a final shortlist for submission with the independent jury.

The distinguished international jury consisting of renowned politicians, managers, scientists, industry experts at this stage assesses the submitted proposals and selects three finalists, among them a winner in each category.

Using a carefully devised points grading system, the entries are judged based on the following criteria:

- **benefit for society:** impact on health, environment and well being
- **economic success:** job creation, national and regional development within Europe
- **technological impact:** was the invention a breakthrough, has it generated other inventions or even laid the foundations for a new technology sector

After the jury's decision is known, all finalists will be asked to accept their nomination before officially announcing the finalists to the general public and international media.

The winners in each category of the 2013 European Inventor Award will be announced at an award ceremony in May 2013 where all finalists will be invited.

The final selection of entries for 2013 will be made by an independent jury currently being finalised.



Dietmar Schuster
Vizepräsident

Dr. Peter Mann
Vizepräsident

Peter Mann
Vizepräsident

THE 2012 JURY

Jerzy Buzek is a member of the European Parliament, and served as the Parliament's President from July 2009 until January 2012. He currently sits on the Parliament's Foreign Affairs Committee and is a substitute member of its Industry, Research and Energy Committee. Mr Buzek served as the Prime Minister of Poland from 1997 to 2001.

Wolfgang Heckl is the Director General of the Deutsches Museum and a professor of scientific communication in the School of Education at the Munich University of Technology. He is also the Managing Director of ENNaB: the Excellence Network NanoBio Technology in Munich.

Emma Marcegaglia is Managing Director of the steel manufacturing company Marcegaglia S.p.a. and its subsidiaries. She is also President of Confindustria, the leading organisation representing manufacturing and service companies in Italy.

Peter Marsh is manufacturing editor at the Financial Times. He received the UK Business Journalist of the Year award in the manufacturing category in 2002. He is the author of several books, including, most recently, *The New Industrial Revolution: Consumers, Globalization and the End of Mass Production* (Yale University Press, 2012).

Agnete Raaschou-Nielsen has a PhD in economics and has held senior-management level positions in companies such as Aalborg Portland, Coca-Cola and Carlsberg. She is also a former Managing Director of Zacco Denmark, an intellectual property consultancy. Currently she serves on the Board of Directors of several Danish companies.

Ernö Rubik is an architect, designer, university professor and inventor of the Rubik's Cube. He founded Rubik Studio Ltd. and acts as its Managing Director. He formerly served as President of the Hungarian Engineering Academy, which he helped to found.

Margarita Salas is the President of both the Royal Board of the National Library of Spain and the Institute of Predictive and Personalized Medicine of Cancer. She is Dr. ad honorem of the Spanish National Research Council as well as President of Fundación Severo Ochoa.

Thierry Sueur is the Vice President of Intellectual Property and of European and International Affairs at AIR LIQUIDE, an international producer and distributor of cryogenic liquids and gases. He also serves as Chairman of the Patent Working Group of Business Europe, as Vice-Chairman of the Board of the French Intellectual Property Office and as President of the French Group of AIPPI (International Association for the Protection of Intellectual Property).



Jerzy Buzek



Wolfgang Heckl



Peter Marsh



Emma Marcegaglia



Agnete Raaschou Nielsen



Ernő Rubik



Margarita Salas



Thierry Sueur

THE 2012 WINNERS' IMPRESSIONS OF THE AWARD

"I am extremely proud and deeply honoured. This is an inspiration to do even more in the future for the benefit of the hard of hearing."

JAN TØPHOLM
(WINNER, INDUSTRY
CATEGORY)



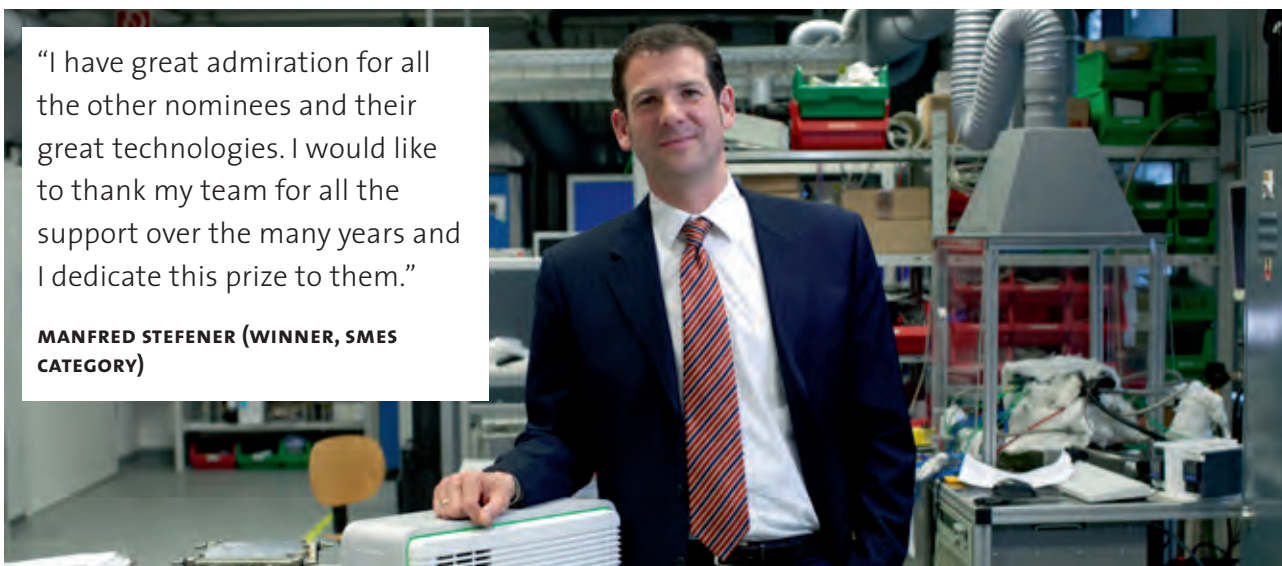
"This is a huge honour, particularly in the light of the achievements of the other nominees. We are very proud of our invention."

TERENCE PERCIVAL AND JOHN O'SULLIVAN
(WINNERS, NON-EUROPEAN COUNTRIES
CATEGORY)



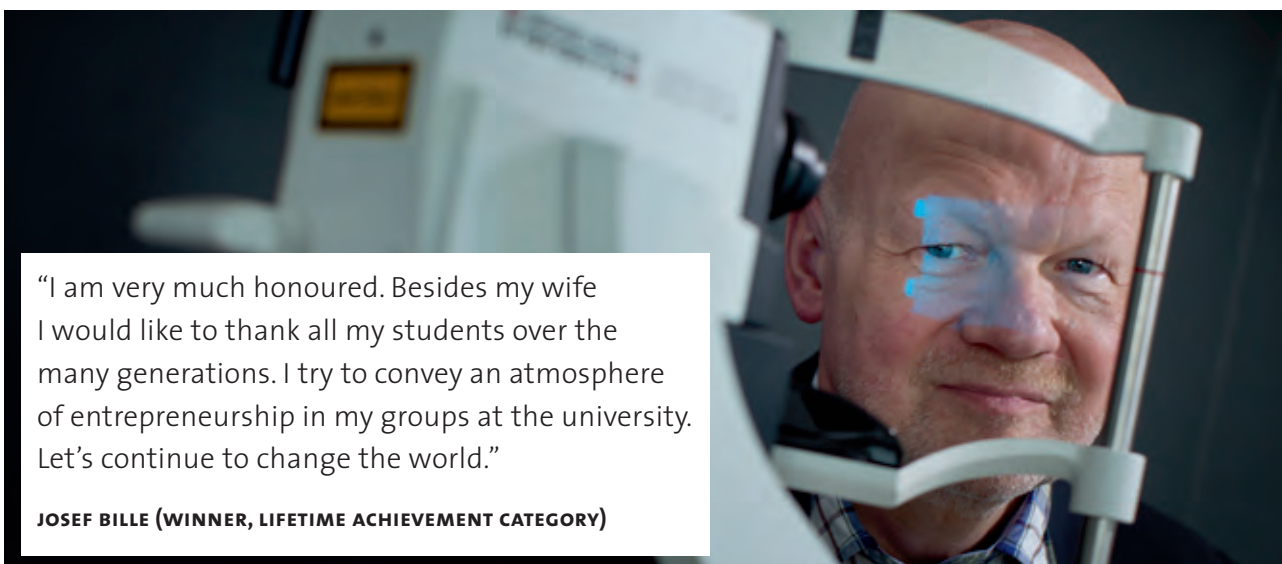
"I have great admiration for all the other nominees and their great technologies. I would like to thank my team for all the support over the many years and I dedicate this prize to them."

MANFRED STEFENER (WINNER, SMES CATEGORY)



"I am very much honoured. Besides my wife I would like to thank all my students over the many generations. I try to convey an atmosphere of entrepreneurship in my groups at the university. Let's continue to change the world."

JOSEF BILLE (WINNER, LIFETIME ACHIEVEMENT CATEGORY)



"Thank you EPO for this award. It was a great honour to be nominated and an even greater honour to be a winner. I dedicate this award to the teams of researchers and technicians and to all patients involved in the clinical research phases. Thanks, thanks, thanks."

GILLES GOSSELIN (WINNER, RESEARCH CATEGORY)



EUROPEAN INVENTOR AWARD CEREMONY 2012

The seventh European Inventor Award ceremony, which took place in the Royal Danish Playhouse in Copenhagen on 14 June 2012, attracted around 400 high-level international guests. The 2012 winners were awarded in the presence of Their Royal Highnesses Prince Frederik and Princess Mary of Denmark.





PAST WINNERS 2011 - 2010

2011

Industry: Ann Lambrechts (Belgium) of Bekaert for her invention of a steel wire element to improve the strength and stability of reinforced concrete.

Research: Christine van Broeckhoven (Belgium) of the Flanders Interuniversity Institute for Biotechnology for her contributions to neuropathological medicine, particularly Alzheimer's.

SMEs: Jens Dall Bentzen (Denmark) of Dall Energy for developing a highly efficient biomass furnace with a wide range of usable fuels.

Lifetime Achievement: Per-Ingvar Brånemark (Sweden) for his invention and development of a titanium fixture and anchoring device for implants.

Non-European Countries: Ashok Gadgil (USA) from Lawrence Berkeley National Lab and Vikas Garud (India) from H2O Innovation for inventing a small and energy efficient UV water disinfection device at the Regents of the University of California.

2010

Industry: Albert Markendorf (Switzerland) and Raimund Loser (Germany) for the invention of powerful hand-held 3D scanning systems, an invention now successfully marketed worldwide by Leica Geosystems.

Research/SMEs: Jürgen Pfitzer and Helmut Nägele (Germany) at the Fraunhofer Institute for Chemical Technology (ICT) invented Arboform, a renewable plastic material made of "liquid wood" which is used in a range of applications – from car interiors to children's toys.

Lifetime Achievement: Wolfgang Krätschmer (Germany) for his groundbreaking research inventing a procedure that allowed for the production of research quantities of "fullerenes," a new group of carbons.

Non-European Countries: 1. Sanjai Kohli and Steven Chen (USA) for their invention of a GPS Spread spectrum receiver, which paved the way for GPS technology in everyday life. 2. Ben Wiens and Danny Epp (Canada) for their invention of an electrochemical fuel cell which led to the first commercially viable hydrogen fuel cell system.

PAST WINNERS 2009 - 2008

2009

Industry: Jürg Zimmermann (Switzerland) and Brian Druker (USA) for inventing Glivec, a drug to combat chronic myelogenous leukaemia with unprecedented rates of recovery. The drug is also a prime example of international research cooperation with groundbreaking results.

Research/SMEs: Joseph Le Mer (France) for his work on a heat exchanger that makes heating systems less expensive and more energy efficient. The invention has brought considerable commercial success to the inventor.

Lifetime Achievement: Adolf Goetzberger (Germany) for his pioneering work on solar energy, making solar cells a viable alternative to fossil fuels. Goetzberger also founded Europe's largest research institute for solar energy, the Freiburg-based Fraunhofer-Institut for Solar Energy Systems (ISE). His achievements as a whole have helped turn a fringe energy source into a multi-billion EUR industry.

Non-European Countries: Yiqing Zhou and his team (China) from the Institute of Microbiology and Epidemiology at the Academy of Military Medical Sciences in Beijing for developing an anti-malarial drug based on a traditional Chinese remedy. The drug has already cured millions of patients in malaria problem zones.

2008

Industry: Norbert Enning, Heinrich Timm, Ulrich Klages, Gundolf Kreis, Alois Feldschmid, Christian Dornberg and Karl Reiter of Audi (Germany) for revolutionising automotive manufacturing by making car frames lighter and safer through the use of aluminium.

Research/SMEs: Douglas Anderson, Robert Henderson and Roger Lucas of Optos (United Kingdom) for developing a new laser scanning technology for the eye which allows powerful but pain-free examination of the retina.

Lifetime Achievement: Erik De Clercq (Belgium) for landmark contributions to antiviral treatment, including the development of the drug cocktail for AIDS which has become the gold standard of our day.

Non-European Countries: Philip S. Green of SRI International (USA) for developing a robotic surgical system that has helped to improve surgery in Europe by allowing surgeons to perform complex procedures with the highest precision.

PAST WINNERS 2007 - 2006

2007

Industry: Franz Lärmer and Andrea Urban, of Bosch (Germany) for their Bosch Process, which revolutionised sensor technology and made possible – among other things – the life-saving airbag.

Research/SMEs: Catia Bastioli and her team at Novamont (Italy) for inventing biodegradable plastics from starch, a renewable raw material used, for instance, in eco-friendly refuse bags.

Lifetime Achievement: Marc Feldmann (United Kingdom) for identifying the role of cytokines in the treatment of autoimmune disorders, such as rheumatoid arthritis, and for finding a treatment that has helped millions of people around the globe.

Non-European Countries: Joseph P. Vacca, Bruce Dorsey and the team at Merck Research Laboratories (USA) for developing Crixivan, a protease inhibitor that has revolutionised HIV treatment, transforming the disease from a death sentence into a chronic condition.

2006

Industry: Zbigniew Janowicz and Cornelis Hollenberg of Rhein Biotech (Germany), who invented a method for making proteins in Hansenulayeast, which is used to produce an affordable vaccine against hepatitis B.

SMEs: Stephen P. A. Fodor, Michael C. Pirrung, J. Leighton Read and Lubert Stryer of the Affymax Research Institute (USA) for their invention of the DNA chip.

Universities and Research Institutes: Peter Grünberg from the Jülich Research Centre (Germany) for his discovery of the giant-magnetoresistance effect, or GMR.

New EU Member States: John Starrett, Joanne Bronson, John Martin, Muzammil Mansuri and David Tortolani, of the Institute of Organic Chemistry and Biochemistry of the Academy of Sciences in Prague (Czech Republic), whose work resulted in a breakthrough with chemical compounds, called prodrugs of phosphonates.

Lifetime Achievement: Federico Faggin (Italy), for inventing the microprocessor.

Non-European Countries: Larry Gold and Craig Tuerk from NeXstar Pharmaceuticals (USA), who found out that nucleic acids can bind a protein to potentially intercept other proteins that cause diseases like AMD.

AN AWARD WINNING CASE STUDY

German inventors Jürgen Pfitzer and Helmut Nägele were awarded the European Inventor Award in the SME category in 2010 for their invention of a biodegradable plastic material made of 'liquid wood' called Arboform. Their innovation not only won them the European Inventor Award; they also benefited from significant media coverage and a substantial increase in their business activities.



They developed a method to produce plastics from a material called lignin, a rigid component in wood that gets discarded as a by-product in the pulp and paper-making process. When combined with resins, flax and other natural fibres, lignin forms a bio plastic mass (Arboform) that can be processed like any other thermoplastic material, and more importantly consists of natural materials which are harmless to the environment. Arboform can be moulded via injection machines into a wide variety of shapes and is particularly suitable for applications in components for the automotive industry, children's toys, and musical instruments.

As a result of their ground-breaking invention, Pfitzer and Nägele formed their own spin-off company Tecnaro which today is working with companies such as Porsche, Daimler, Fischer Automotive, and Benetton to produce products as, for example, wood like moldings for car dashboards and clothing hangers.

"Amazingly since winning the European Inventor Award 2010, we have booked an increase in revenues by 150%", say Jürgen Pfitzer and Helmut Nägele. They further report, "as a result of the award, some of our clients now actively promote the Arboform product as an award winning material." Furthermore, following the award ceremony, the awareness about their product has increased tremendously due to the media impact they benefited from.

As the European Inventor Award trophy is made out of an innovative material each year, it was a natural fit to engage Tecnaro for 2011 to fashion the award from the renewable Arboform material.

PROJECT MILESTONES

Once you have submitted your nomination you can stay informed by visiting our website at **www.epo.org/european-inventor**.

All milestones in the European Inventor Award – including the publication of the names of the finalists, the date and location of the Award ceremony and the premiere of videos about the finalists and their inventions – will be announced on the website.

All participants will be informed about the status of their entries following the jury's decision.

Watch past finalists and winners on Youtube: **www.youtube.com/EPOfilms** or stay up to date by following us on Facebook: **www.facebook.com/Europeaninventoraward**

HELPFUL RESOURCES

The EPO's databases are extremely useful when it comes to finding the European patent (EP) numbers of an invention and checking the status and validity of a patent:

European Patent Register database: **<https://register.epo.org>**

Espacenet database: **<http://worldwide.espacenet.com>**

DATES AND DEADLINES

Nomination submissions: **11 October 2012**

Announcement of finalists: **Spring 2013**

Award ceremony in Amsterdam: **May 2013**