

**PRESS RELEASE**

**European Inventor Award finalists 2015: inventors behind
15 ground-breaking innovations selected**

* **The European Patent Office honours inventors in the areas of biochemistry, civil engineering, energy, electronics, industrial chemistry, material science, medical technology, nutrition and physics, whose work has improved our everyday lives**
* **The tenth edition of the annual award ceremony will be held in Paris on 11 June**
* **The winner of the Popular Prize will be selected by the general public via
online voting**
* **EPO President Battistelli: “These ground-breaking inventions showcase Europe’s role as a prime technology region and a hub of innovation for inventors from all over the world.”**

**Munich, 21 April 2015 –** Their inventions make day-to-day life easier, create economic value and generate employment. They sometimes even save lives. The European Patent Office (EPO) today announced the 15 finalists for the European Inventor Award 2015. With this prestigious annual award, the EPO honours scientists and engineers in five categories whose inventions have been patented by the EPO and which contributed to technological progress, social development and economic growth. The 10th edition of the award will be held in Paris on 11 June, when the winners will be announced at a ceremony attended by prominent representatives of the worlds of politics, business, research and industry. Once again the public will select the winner of the Popular Prize, which will be decided by online voting in the run-up to
the ceremony.

More than 300 individuals and teams of inventors were proposed for this year’s award,
15 of whom have been selected as finalists by the independent international jury. The
2015 finalists are from 11 countries: Austria, Australia, China, France, Japan, Latvia, the Netherlands, Sweden, Switzerland, the UK and the US. Their inventions cover a wide range of technological fields including biochemistry, civil engineering, energy, electronics, industrial chemistry, material science, medical technology, nutrition and physics.

“These ground-breaking inventions showcase Europe’s role as a prime technology region and a hub of innovation for inventors from all over the world,” said EPO President [Benoît Battistelli](http://www.epo.org/news-issues/press/background/president.html). “The European patent system not only provides appropriate conditions to inventors from around the world for realising their creativity but also incentivises investors and entrepreneurs to strengthen their R&D activities and thus contribute to the economic prosperity of a region of 600 million people. These inventions once again show that the development of the European economy lies in its innovative capacity.”

**The 2015 finalists in the five categories are:**

**Industry**

**Jean-Christophe Giron (France):** Reduction of energy costs for building, heating and cooling systems of up to 20 percent thanks to “intelligent” window glass. Electrochrome glazing takes advantage of the power of the sun in winter in order to warm interiors and becomes darker in the summer in order to block heat radiation and protect interiors from overheating. Giron’s technological innovation controls solar irradiation without blinds or roller shutters that block views or cast shadows and is a milestone in ecological building construction. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/giron.html).

**Gunnar Asplund (Sweden):** Loss-free transmission of electricity over thousands of kilometres. Asplund invented a revolutionary technology with HVDC light, a method for high-voltage direct current transmission. The electricity is transported directly to the consumer via underground or undersea cable. The transmission itself is not only more efficient and less expensive; it is also more environmentally-friendly and does not require overhead power lines. With HVDC light, it is possible to integrate renewable energies into the power grid without any problems. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/asplund.html).

**Franz Amtmann, Philippe Maugars (Austria, France):** Easy connections, quick transactions and simple data sharing. Amtmann and Maugars and their teams developed NFC (Near Field Communication), a secure method of data transfer between mobile devices. The technology is based on encrypted radio transmission and is an advancement of previous RFID technology. From the Internet of Things to Industry 4.0, NFC makes it possible for people to interact with the world around them in new and exciting ways. Fast and easy payments, access to secure areas, warehouse logistics – the possibilities are almost endless. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/amtmann.html).

**Small and medium-sized enterprises (SMEs)**

**Laura Johanna an ’t Veer (Netherlands):** Her ground-breaking invention, a gene-based tissue test, provides women in the early stage of breast cancer with a reliable prognosis as to whether they have a high risk of a relapse or whether their recovery will continue to progress even without chemotherapy. Nowadays 20 to 30 percent fewer women have to undergo lengthy chemotherapy with all its side effects thanks to the invention of this targeted treatment option. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/vantveer.html).

**Michel Lescanne (France):** Peanut paste against famines. Worldwide there are 51 million children under five who suffer from acute malnutrition – roughly one million a year die as a consequence. In order to alleviate this situation, Lescanne developed the first ready-to-use therapeutic food (RUTF) based on oil: Plumpy̕Nut. The rich peanut paste can be eaten without mixing it with water and it has therefore significantly improved chances of survival of children in crisis regions. Plumpy’Nut has helped to save 25 million children. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/lescanne.html).

**John Elvesjö and Mårten Skogö (Sweden):** Controlling a computer with your eyes – the eye tracking system of Elvesjö and Skogö is revolutionising contact-free communication between user and computer. It makes that possible with the aid of an infrared sensor in the screen that registers eye movements and the viewing direction of the user. Eye tracking makes it possible for individuals with movement restrictions to communicate with their environment – as the example of physicist Stephen Hawking proves. Other potential applications include marketing, medicine, gaming or the automotive industry. Further information can be
found [here](http://www.epo.org/news-issues/press/european-inventor-award/elvesjo.html).

**Research**

**Luke Alphey (United Kingdom):** Dengue fever is spreading – according to the WHO almost half of the world’s population is at risk of contracting the potentially fatal virus. The invasive Aedes aegypti mosquito is the main cause of the spread of the disease. The British scientist Luke Alphey invented the basis for successfully combating the disease carrier with the aid of genetics – and entirely without the harmful side effects of insecticides. His method controls populations of the disease-transmitting mosquitoes by eliminating their fertility. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/alphey.html).

**Hendrik Marius Jonkers (Netherlands):** 70 percent of Europe’s infrastructure is made of concrete. The biological concrete of the future will repair stress-related cracks within the material by itself. It contains bacteria that can survive for up to 200 years within a concrete structure. In case of damage, they “wake up” and produce limestone with “curative” properties. Self-healing concrete reduces the cost of producing and maintaining concrete as well as resulting emissions of carbon dioxide. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/jonkers.html).

**Ludwik Leibler (France):** Less plastic waste: this physicist developed vitrimers, the first environmentally-friendly class of plastics. The new material combines the robustness of thermosetting plastics with the thermoformability of heated glass. Leibler has made a break-through in the area of polymer research. Numerous branches of industry are interested: the new glass-like plastic can be repaired easily using heat, and is recyclable. Vitrimers can also be welded by heating just like metals, which makes it possible to create complex shapes that would be impossible or too expensive to produce using mould technology. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/leibler.html).

**Non-European countries**

**Ian Frazer, Jian Zhou (Australia, China):** An effective vaccine against cervical cancer. This dangerous disease affecting women can be avoided thanks to the world’s first vaccination against the HPV (Papilloma) virus. The vaccine has already saved the lives of large numbers of women, particularly in developing countries that do not have preventive healthcare measures. In the meantime, the vaccination has become standard for young women between the ages of nine and 25 in western countries. Further information can be
found here. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/frazer.html).

**Sumio Iijima, Akira Koshio, Masako Yudasaka (Japan):** They make computers faster, solar modules more efficient and aircraft parts more stable: carbon nanotubes have tremendous industrial potential. Technical application of the miniscule particles is still in its infancy. The Japanese team of researchers working with Iijima, who discovered this previously unknown structural form of carbon, has developed a manufacturing process that makes it possible to use the nanoparticles even for bio-medicine. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/iijima.html).

**Elizabeth Holmes (USA):** Simplified blood-testing: a simple finger prick is sufficient to produce enough blood for extensive testing. A wide range of analyses can then be performed with this tiny quantity of blood – in just a few hours. It is virtually painless and costs much less than conventional methods. In the meantime, Holmes has made the method suitable for the mass market via her company Theranos. The 31-year-old inventor dropped out of university at the age of 19 in order to devote herself to her invention completely. With success: according to Forbes, Holmes is the youngest billionaire in the US. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/holmes.html).

**Lifetime achievement**

**Ivars Kalvins (Latvia):** With roughly 260 inventions and over 900 patents and patent applications, Ivars Kalvins is one of the most successful scientists and inventors in the area of medical biochemistry. Convinced of the idea that tiny organic molecules play a decisive role in preventing and curing diseases, Kalvins developed a new generation of active components based on natural organic compounds that can be used successfully to treat cancer, heart disease, stroke, tinnitus, Alzheimer’s, as well as inflammation and chronic pain. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/kalvins.html).

**Kornelis A. Schouhamer Immink (Netherlands):** The key to the digital revolution – Kornelis “Kees” Schouhamer Immink is regarded as the father of the CD, DVD and Blu-ray Disc, for which he developed the coding standard that is still used today. Thanks to him, compact discs store considerably larger quantities of data and achieve better sound quality, durability and user friendliness in comparison with conventional records. Over 1 000 patents in this field can be attributed to Immink. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/immink.html).

**Andreas Manz (Switzerland):** An entire laboratory on a microchip. Andreas Manz is a pioneer in research on microfluidics and the spiritual father of lab-on-a-chip technology, which makes it possible to realise laboratory processes in miniature on a tiny carrier in such a way that they deliver results within seconds. Today the subsequent developments of the technology, for which Manz created the foundations, are used throughout the world – whether in research facilities where they are widely used in genetic and cell analysis or in modern glucose measurement units that make day-to-day life easier for diabetics. Utilisation of the technology for rapid testing via USB stick in order to prevent hereditary diseases has had an impact that is just as ground-breaking. Further information can be found [here](http://www.epo.org/news-issues/press/european-inventor-award/manz.html).

**About the European Inventor Award**

The European Inventor Award is one of Europe’s most prestigious innovation prizes. This year marks the 10th edition of the annual award. Launched by the EPO in 2006, it honours individual inventors and teams of inventors whose pioneering inventions provide answers to some of the biggest challenges of our times. The winners are selected by an independent jury consisting of international authorities in the fields of business, science, academia and research, who examine the proposals in terms of their contribution towards technical progress, social development, wealth and job creation in Europe. The 2015 award ceremony will take place on 11 June in Paris. The general public is also invited to take part in conferring the award: the winner of the [Popular Prize](http://www.epo.org/learning-events/european-inventor/popular-prize.html) is chosen from among the 15 finalists by online voting in the run-up to the ceremony.

**About the EPO**

With more than 7 000 staff, the European Patent Office (EPO) is one of the largest public service institutions in Europe. Its headquarters are in Munich and it also has offices in Berlin, Brussels, The Hague and Vienna. The EPO was founded with the aim of strengthening co-operation on patents in Europe. Through the EPO's centralised patent granting procedure, inventors are able to obtain high-quality patent protection in the 38 member states of the European Patent Organisation. The EPO is also the world's leading authority in patent information and patent searching.

**Media resources**

Additional information, photos and videos about the European Inventor Award 2015 can be found in the [Media Centre](http://www.epo.org/news-issues/press/european-inventor-award.html). Smart TV users can watch the gala on 11 June 2015 live on [Innovation TV](https://www.youtube.com/watch?v=s2UCF39OnbU).

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