

PRESS RELEASE

Fifteen pioneering inventors nominated for European Inventor Award

- **European Patent Office honours ground-breaking inventions in medical technology, pharmaceuticals, optics, steel production, electronics, computers and LCD technology**
- **EPO President Benoît Battistelli: "Europe continues to be a world leader in innovation"**
- **Five winners will be announced on 28 May in Amsterdam**
- **Public invited to cast its vote for a Popular Prize**

Munich, 10 April 2013 – Fifteen scientists and engineers have been nominated for the European Inventor Award 2013 for their contributions to technological, social and economic progress. The award is presented annually by the European Patent Office (EPO) to outstanding inventors in five categories. For the first time, the public are also invited to cast their vote to select the winner of the Popular Prize from among the 15 finalists. The 2013 winners in all categories will be announced at a ceremony in Amsterdam on 28 May in the presence of Her Royal Highness Princess Beatrix of the Netherlands.

This year's nominees cover the fields of medical technology, pharmaceuticals, optics, metallurgy, electronics, computers and LCD technology. They originate from nine European and two non-European countries. The 15 finalists were selected by a prominent international jury from 160 inventors and teams originally put forward.

"These cutting-edge inventions show that Europe continues to be a world leader in innovation in all areas of technology from engineering to medicine to computers," said EPO President Benoît Battistelli. "All of this year's nominated inventors have not only come up with major scientific and technological advances, but they have contributed to improving health and standard of living, and created jobs and economic wealth. All of the inventions are protected by a European patent, which has helped get many of them off the ground."

Nominees by category¹

Industry

Jose Luis López Gómez (Spain): The inventions of this Spanish railway engineer have made high-speed rail travel safer and more comfortable. He created a new method of ensuring a train's wheels stay safely on track and keep their optimal position on the rails at all times, especially in mountainous regions, and allows trains to travel 30% faster when going through curving stretches. His inventions propelled the company Patentes Talgo into one of the top spots among manufacturers of high-speed trains worldwide.

¹ The order of appearance of the nominees in this text does not indicate or suggest their final ranking.

Claus Hämmerle and Klaus Brüstle (Austria): These two inventors developed a damper system that facilitates the soft closing of furniture doors, drawers and wall cabinets. Derived from the suspension of an automobile and protected by numerous patents, 'Blumotion' is enjoying enormous market success worldwide and has become an industry standard in the field, with Austrian manufacturer Julius Blum exporting 96% of its products.

António Velez Marques, Helena Pereira, Rui Reis, Susana Silva (Portugal): This team of researchers at Amorim Group, the world's leading producer and distributor of cork products, has developed an efficient and environmentally-friendly method to maximise cork's volume in order to attain significantly greater yields from the harvested material. Using only microwaves and water, it is the first technique of its kind that doesn't require sophisticated machinery or use any harmful chemicals.

Research

Patrick Cuvreur, Barbara Stella, Véronique Rosilio, Luigi Cattel (France): Thanks to the invention of this Belgian-born nanotechnology pioneer and his team at Paris-Sud University, the dream of eliminating cancer cells without harming healthy tissue has become a reality. His nano-capsules – minuscule capsules 70 times smaller than red blood cells and shielded by a biodegradable coating – deliver potent anti-cancer drugs progressively and directly to tumour sites.

Jörg Horzel, Jozef Szlufcik, Mia Honore, Johan Nijs, (Belgium, Germany): German scientist Jörg Horzel and his team at IMEC, a micro-electronics and nanotechnology research centre based in Heverlee, Belgium, developed a process that contributes to the production of silicon-based solar cells, which were long too expensive for large, commercially viable production. There is now a more efficient path to solar power for the world's solar-cell producers..

Philipp Koehn, Daniel Marcu, Kevin Knight and William Wong (Germany, United Kingdom, USA): German computer scientist Koehn and his team at the University of Southern California invented phrase-based machine translation using a statistical approach. Koehn's revolutionary method is being used by the biggest names in machine translation. It is also used in the EPO's Patent Translate service for free machine translation of patents. An entire industry has emerged based on this invention.

Small and Medium-Sized Enterprises (SMEs)

Bruno Berge (France): The liquid lens, a revolutionary optical device invented and patented by French physicist-cum-entrepreneur Bruno Berge, is shaking up the market for optical instruments. Based on liquid changing its shape when current is applied, this innovative lens enables better, cheaper and smaller optical devices and is already used in a wide range of products, including ID readers (such as barcode or passport readers) and industrial cameras.

David Gow (United Kingdom): Scottish engineer David Gow is the inventor of the world's first bionic hand. His revolutionary prosthetic arm and hand with mechanically operable fingers allows the wearer to move individual fingers and perform complicated grips. In the three years since its release, the iLIMB Hand has been fitted to more than 1 400 patients worldwide, including war veterans and children with congenital limb defects.

Pål Nyrén (Sweden): Swedish researcher Pål Nyrén and his team invented pyrosequencing — a far faster, less complicated and cheaper method to sequence DNA strands. The combined advantages of lower costs and greater speeds has revolutionised the study of the building blocks of life, and is giving researchers new avenues for pursuing personalised treatments and cures for life-threatening diseases such as cancer.

Non-European countries

Ajay V. Bhatt, Bala Sudarshan Cadambi, Jeff Morriss, Shaun Knoll, Shelagh Callahan (USA): Intel computer expert Ajay Bhatt and his team created and developed Universal Serial Bus (USB) technology, one of the most important advances in computing since the silicon chip. An industry standard today, USB not only allows users to more easily connect devices to a computer, it also streamlines work for hardware and software developers. It is found in billions of electronic devices throughout the world, from webcams to cell phones and memory sticks.

Joseph M. Jacobson, Barrett Comiskey (USA): These two American researchers at the Massachusetts Institute of Technology created the electronic ink (e-ink) display, which has become the industry standard in electronic reader devices. Their lightweight, low-power technology, now incorporated into digital books, allows people access to thousands of e-books anytime, anywhere, at a lower cost, while being easier on the eyes and reducing the environmental footprint of the publishing industry.

Sanghoon Joo, Myoungkyun Shin (South Korea), Martin Schmidt (Austria), et al.: Working across two countries (for Korean steelmaker POSCO and Siemens VAI of Austria), this team jointly developed Finex, a cheaper, faster and cleaner way to produce steel. Using fluidized bed reactors and coal briquetters instead of sintering and coking, their method makes it possible to use low-grade raw materials with cost-effectiveness and eco-friendliness. This is important for an industry responsible for more than a quarter of the world's industrial CO₂ emissions".

Lifetime achievement

Yves Jongen (Belgium): An engineer at the Catholic University of Leuven and later entrepreneur, Yves Jongen can be credited with making proton therapy – which targets cancerous tumours more precisely and with less side effects than conventional X-rays – available to a growing number of patients around the world. The smaller and more affordable proton-generating device he invented (the “cyclotron”) has already helped about 100.000 patients and counting.

Martin Schadt (Switzerland): Working for Hoffmann-LaRoche, in 1970 Swiss physicist Martin Schadt created the world's first flat-panel liquid crystal display, better known as LCD. Schadt's technology has paved the way for a wave of low-energy mobile devices, such as tablet computers and mobile phones, now used by millions of consumers worldwide: In 2012 alone, electronic manufacturers produced more than 40 million LCD TVs using his technology

Sophie Wilson (United Kingdom): Without the processors built by Sophie Wilson in her career spanning 35 years, the development of affordable personal computers and mobile devices would be unthinkable. Her ARM processor drastically improved processing speed and slashed energy consumption. The descendants of her original chip now power 95% of the world's smartphones and a great number of other electronic devices.

About the European Inventor Award

Launched in 2006, the European Inventor Award is presented annually by the European Patent Office (EPO). The award honours inventive individuals and teams whose pioneering work provides answers to the challenges of our age and thereby contributes to social progress, economic growth and prosperity. Nomination proposals are submitted by the public, and by patent examiners at the EPO and Europe's national patent offices. The finalists and, subsequently, the winners are chosen from among the nominees by a high-profile international jury, which includes experts from the areas of business, politics, media, academia and research.

The 2013 award ceremony takes place on 28 May in Amsterdam and will be attended by Her Royal Highness Princess Beatrix of the Netherlands and a high-level audience. This year, for the first time ever, the general public is invited to cast its vote for the "Popular Prize".

About the EPO

With almost 7 000 employees, the European Patent Office (EPO) is one of the largest European public service institutions. 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.

For more details about the European Inventor Award 2013, including photographs and videos of the inventors, please visit www.epo-presschannel.com

For TV films and footage please visit www.hellosports.com

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