

Media information

10.11.2022

BMW iX Flow named to TIME's List of Best Inventions 2022.

Munich. Today, TIME reveals its annual list of the Best Inventions, which features 200 extraordinary innovations. To compile the list, TIME solicited nominations from TIME's editors and correspondents around the world, and through an online application process, paying special attention to growing fields—such as the electric vehicle industry, green energy, and the metaverse. TIME then evaluated each contender on a number of key factors, including originality, efficacy, ambition, and impact.

Of the new list, TIME's editors write: "The result is a list of 200 groundbreaking inventions (and 50 special mention inventions)—including life-mapping artificial intelligence, diamonds made from excess carbon in the air, and the most powerful telescope ever—that are changing how we live, work, play, and think about what's possible."

The full list is available here: time.com/best-inventions-2022

Colour change at the touch of a button.

The BMW iX Flow featuring E Ink is a unique vehicle capable of changing its entire body colour at the touch of a button and was first revealed at the Consumer Electronics Show 2022 in Las Vegas. By making it possible to alter the body colour and display different patterns, the BMW iX Flow opens up a whole new way of personalising the driving experience.

A variable exterior colour can also contribute to wellness in the interior and to the efficiency of the vehicle. This is done by taking account of the different abilities of light and dark colours when it comes to reflecting sunlight and the

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associated absorption of thermal energy. A white surface reflects a lot more sunlight than a black one. By implication, heating of the vehicle and passenger compartment as a result of strong sunlight and high outside temperatures can be reduced by changing the exterior to a light colour. In cooler weather, a dark outer skin will help the vehicle to absorb noticeably more warmth from the sun.

In both cases, selective colour changes can help to cut the amount of cooling and heating required from the vehicle's air conditioning. This reduces the amount of energy the vehicle electrical system needs and with it also the vehicle's fuel or electricity consumption. In an all-electric car, changing the colour in line with the weather can therefore also help to increase the range. In the interior, the technology could, for example, prevent the dashboard from heating up too much.

E Ink technology itself is extremely energy efficient. Unlike displays or projectors, the electrophoretic technology needs absolutely no energy to keep the chosen colour state constant. Current only flows during the short colour changing phase.

Millions of paint capsules in a custom wrap.

Electrophoretic colouring is based on a technology developed by E Ink that is most well-known from the displays used in eReaders. The surface coating of the BMW iX Flow featuring E Ink contains many millions of microcapsules, with a diameter equivalent to the thickness of a human hair. Each of these microcapsules contains negatively charged white pigments and positively charged black pigments. Depending on the chosen setting, stimulation by

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means of an electrical field causes either the white or the black pigments to collect at the surface of the microcapsule, giving the car body the desired shade.

In the event of enquiries please contact:

BMW Group Corporate Communications
Martin Tholund, Press Spokesperson Digital Car, Electronics and Digital Vehicle Features,
Digital Products and Services
Telephone: +49-151-601-77126
E-mail: Martin.Tholund@bmwgroup.com

Christophe Koenig, Team Leader BMW Group Digital Innovations, Spokesperson Digital
Innovations BMW & MINI
Telephone: +49-89-382-56097
E-mail: Christophe.Koenig@bmwgroup.com

Internet: www.press.bmwgroup.com/global
E-mail: presse@bmw.de

The BMW Group

With its four brands BMW, MINI, Rolls-Royce and BMW Motorrad, the BMW Group is the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. The BMW Group production network comprises over 30 production sites worldwide; the company has a global sales network in more than 140 countries.

In 2021, the BMW Group sold over 2.5 million passenger vehicles and more than 194,000 motorcycles worldwide. The profit before tax in the **financial year 2021 was € 16.1 billion** on revenues amounting to **€ 111.2 billion**. As of 31 December 2021, the BMW Group had a workforce of 118,909 employees.

The success of the BMW Group has always been based on long-term thinking and responsible action. The company set the course for the future at an early stage and consistently makes sustainability and efficient resource management central to its strategic direction, from the supply chain through production to the end of the use phase of all products.

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