**PRESS RELEASE**

**Turning fallen leaves into sustainably made paper: Ukrainian scientist selected as a finalist for the Young Inventors Prize 2024**

* **23-year-old Ukrainian inventor Valentyn Frechka developed a method for recycling leaf litter into sustainable paper**
* **Releaf Paper can produce one tonne of cellulose from 2.3 tonnes of fallen leaves, which would otherwise require cutting down 17 trees**
* **The Ukrainian inventor will compete for the Young Inventors Prize against a Dutch finalist and a Tunisian team on 9 July**

**Munich, 4 June 2024** – According to the [World Wildlife Fund (WWF)](https://www.worldwildlife.org/), the pulp and paper industry is one of the largest industrial sectors in the world and has an enormous influence on global forests. This sector accounts for 13–15% of total wood consumption and uses between 33–40% of all industrial wood traded globally. In search of more sustainable solutions for paper production, **23-year-old Ukrainian inventor Valentyn Frechka developed a method for recycling leaf litter into paper. Frechka is a finalist for the Young Inventors Prize of the European Inventor Award 2024**, in recognition of his promising work towards a circular economy and addressing one of the United Nations’ Sustainable Development Goals (SDGs). He was selected from over 550 candidates for this year’s edition.

**Using new technology to recycle fallen leaves into paper**

The global loss of trees is known to significantly exacerbate climate change, increasing air pollution levels, causing the loss of biodiversity, and disrupting the water cycle. Global warming also leads to issues such as soil erosion and reduced freshwater availability. It also increases costs for managing environmental problems such as flooding.

In 2021, Valentyn Frechka founded **Releaf Paper** to commercialise his process. The company **sources its leaves from city councils**and uses this would-be-waste to produce biodegradable and recyclable paper products. It presents a **convenient and cost-effective means of managing organic waste in urban areas**, preserving trees, avoiding greenhouse gas emissions generated during the decomposition of the leaves and offering eco-friendly packaging alternatives to reduce waste. Notably, Releaf Paper can produce **one tonne of cellulose from 2.3 tonnes of fallen leaves**, which is the same amount of cellulose that would otherwise require cutting down 17 trees.

Releaf Paper usesadvanced technology to process these fallen leaves into sustainable paper without sulphates, sulphites, or chlorine. **Leaves undergo thorough cleaning and chemical-mechanical treatment involving grinding and softening with high pressure and steam**. This process efficiently isolates fibres, yielding a pulp akin to wood pulp, which is then combined with bio-fillers to create paper rolls for various products like paper bags, cardboard, and corrugated boxes.

The company, with offices in Paris and Kyiv, also converts some waste into fertiliser and returns it to the cities. In the future, Frechka’s company aspires to work with fruit bio-waste such as tropical leaves, like pineapple, banana, and yucca leaves, as well as with agricultural bio-waste.

**Inspired by a desire to protect nature**

Born and raised in the rural village of Sokyrnytsia, where he was raised by his grandparents, **Frechka demonstrated a restless curiosity about nature and life.** At the age of 16, while hiking in the Carpathians, the idea emerged to tackling deforestation by repurposing dead leaves, making them a valuable resource in paper production while also reducing carbon emissions that occur during decomposition.He became a member of the Junior Academy of Sciences of Ukraine and that is where his journey for his own invention began**.**

“*Releaf is a great example of what happens when experience, inspiration, knowledge and the right moment in the right place meet*,” Frechka said. **“***Using leaves for paper production was an option which did not exist before, and it was our key to do something great, knowing that this technology can help future generations, while keeping the Ukrainian technology ecosystem alive”*, he added.

Releaf Paper received support from the WWF and Canopy Planet in 2021. After Russia’s invasion of Ukraine in 2022, **Frechka relocated to France and together with his partner found new strategy to expand the company’s opportunities**. Currently, the production of paper from leaves is outsourced from Ukraine, and Releaf sells its product in many European countries, having multiple renowned clients among international brands and consumer goods.

By using new technology to solve the problem of plant waste in cities and preventing deforestation, Releaf Paper contributes to both the United Nations’ Sustainable Development Goal (SDG) 9, industry, innovation and infrastructure, and 12, responsible consumption and production.

The Ukrainian behind the innovation has been named one of three finalists for the Young Inventors Prize for this year’s European Inventor Award, recognising outstanding inventors aged under 30**.** The other finalists are a team of Tunisian inventors, Khaoula Ben Ahmed, Ghofrane Ayari, Souleima Ben Temime, and Sirine Ayari, who have developed a smart wheelchair control solution so individuals with severe disabilities can navigate independently, and Dutch Rochelle Niemeijer, whose portable test kit for the rapid identification of bacterial infections could be crucial in the fight against antibiotic resistance. **The winners of the 2024 edition of the European Inventor Award and Young Inventors Prize will be announced** during a ceremony [livestreamed](https://www.epo.org/en/news-events/european-inventor-award/streaming?mtm_campaign=EIA2024&mtm_keyword=pressrelease&mtm_medium=press) from Malta on 9 July 2024.

Find more information about the invention’s impact, the technology and the inventor’s story [here](https://www.epo.org/en/news-events/european-inventor-award/meet-the-finalists/valentyn-frechka?mtm_campaign=EIA2024&mtm_keyword=pressrelease&mtm_medium=press).

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**About the Young Inventors Prize**

The European Patent Office established the Young Inventors Prize in 2021 to inspire the next generation of inventors. Aimed at innovators aged 30 or below from all around the world, it recognises initiatives that use technology to contribute toward the United Nation's Sustainable Development Goals. The winner will receive EUR 20 000, the second and third placed finalists will receive EUR 10 000 and EUR 5 000, respectively. An independent jury comprising former finalists of the European Inventor Award selects the finalists and winner. The EPO will confer the prize at the European Inventor Award 2024 hybrid ceremony on 9 July. Unlike the traditional Award categories, the Young Inventors Prize finalists do not need a granted European patent to be considered for the prize. [Read more](https://new.epo.org/en/news-events/european-inventor-award?mtm_campaign=EIA2023&mtm_keyword=EIA-pressrelease&mtm_medium=press&mtm_group=press) on the Young Inventors Prize eligibility and selection criteria.

**About the European Inventor Award**

The European Inventor Award is one of Europe's most prestigious innovation prizes. Launched by the EPO in 2006, the award honours individuals and teams, who have come up with solutions to some of the biggest challenges of our time. The finalists and winners are selected by an independent jury comprising former Award finalists. Together, they examine the proposals for their contribution towards technical progress, social and sustainable development, and economic prosperity. All inventors must have been granted a European patent for their invention. [Read more](https://www.epo.org/en/news-events/european-inventor-award?mtm_campaign=EIA2024&mtm_keyword=pressrelease&mtm_medium=press) on the various categories, prizes, selection criteria and livestream ceremony to be held on 9 July in Malta.

**About the EPO**

With 6,300 staff members, the [European Patent Office (EPO)](https://www.epo.org/?mtm_campaign=EIA2023&mtm_keyword=EIA-pressrelease&mtm_medium=press&mtm_group=press) is one of the largest public service institutions in Europe. Headquartered in Munich with 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 up to 44 countries, covering a market of some 700 million people. The EPO is also the world's leading authority in patent information and patent searching.