Syensqo awards its €300k Ernest Solvay Prize to Omar Yaghi

Yaghi is a pioneer in new and revolutionary applications for reticular materials, such as clean energy technologies

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The Science for the Future Ernest Solvay Prize by Syensqo has been awarded to Omar Yaghi, the James and Neeltje Tretter Chair Professor of Chemistry, University of California, Berkeley, in recognition of his pioneering work in reticular chemistry, the science of building chemical structures from molecular building blocks. This is a field of chemistry with many promising applications for the future, such as CO2 capture and hydrogen storage, as well as water harvesting and gas purification.

“I am honored to receive this prize, and I see it as recognition of the incredible teamwork and dedication of everyone who collaborated on our journey in creating new materials for the future. I am passionate about exploring the limits of science to serve pressing challenges in energy, the environment, and beyond. Being recognized for it is an honor,” said Professor Omar Yaghi.

“I’m proud to award Omar Yaghi this prize in the very promising field of reticular chemistry, with applications across various scientific and industrial domains – it could even make clean water accessible to everyone. Omar Yaghi is a true explorer and his work is likely to have a tremendous impact in advancing humanity. Awarding the Science for the Future prize to a scientist like him is a perfect illustration of our purpose: being explorers that address critical needs by pushing the limits of what can be realized,” said Dr. Ilham Kadri, CEO of Syensqo.

Syensqo, born from the demerger of Solvay in December 2023, builds on the legacy of the 1911 Solvay Conference, by providing innovative solutions that help prepare for the future. The Science for the Future Ernest Solvay Prize by Syensqo – previously known as the Solvay

Prize – reflects this spirit, by honoring one of the world's foremost explorers in the field of chemistry. Since 2013, the prize has recognized major scientific discoveries that have the potential to shape the chemistry of tomorrow and promote human progress. Previous prize laureates include Pr. B. Feringa, Pr. C. Bertozzi and Dr. K. Karikó, who have all gone on to receive Nobel Prizes after being awarded the Solvay Prize.

The laureate of this sixth edition was selected by an independent jury of renowned scientists, which also include two Nobel Prize laureates:

- **Sven Lidin**, president of the Ernest Solvay Prize by Syensqo jury, professor of inorganic chemistry at Lund University;
- **Steven Chu**, recipient of the 1997 Nobel Prize in Physics, former US secretary of energy and professor at Stanford University;
- **Ben Feringa**, recipient of the 2016 Nobel Prize for Chemistry, professor at the University of Groningen, recipient of the 2015 Solvay Prize;
- **Susumu Kitagawa**, winner of the 2017 Solvay Prize, professor at Kyoto University;
- **Dame Carol Vivien Robinson**, University Chair of Dr. Lee's Professor of Chemistry and first director of the Kavli Institute for Nanoscience Discovery at Oxford University.

The award ceremony will be held at the Palais des Académies in Brussels on March 19, 2024.

Related media

See available pictures on the website.

About Syensqo

Syensqo is a science company developing groundbreaking solutions that enhance the way we live, work, travel and play. Inspired by the scientific councils which Ernest Solvay initiated in 1911, we bring great minds together to push the limits of science and innovation for the benefit of our customers, with a diverse, global team of more than 13,000 associates in 30 countries.

Our solutions contribute to safer, cleaner, and more sustainable products found in homes, food and consumer goods, planes, cars, batteries, smart devices and health care applications. Our innovation power enables us to deliver on the ambition of a circular economy and explore breakthrough technologies that advance humanity.

Learn more at www.syensqo.com.

About the Science for the Future Ernest Solvay Prize by Syensqo

In 1911, Ernest Solvay brought 24 of the world's most brilliant minds together to advance scientific research at the first Solvay Conference – a tradition that continues to this day. This extraordinary convergence of scientific explorers is the foundation for Syensqo.

Previously known as the Solvay Prize, the Science for the Future Ernest Solvay Prize by Syensqo builds on our company's legacy, by honoring one of the world's foremost explorers in the field of chemistry.

Since 2013, the prize has recognized major scientific discoveries that have the potential to shape the chemistry of tomorrow and promote human progress. Every two years, the most prominent researcher is awarded a €300,000 prize.

Previous prize laureates include Professor Peter G. Schultz in 2013, Professor Ben Feringa in 2015, Professor Susumu Kitagawa in 2017, Professor Carolyn Bertozzi in 2020 and Professor Katalin Karikó in 2022. Pr. B Feringa, Pr. C. Bertozzi and Dr. K. Karikó have all gone on to receive Nobel Prizes, in 2016, 2022 and 2023 respectively.

At Syensqo, this legacy and spirit of innovation lives on. The new prize will recognize the essential role of science in helping to solve some of the world's most pressing challenges – with the first award taking place in 2024.

Learn more about the Science for the Future Ernest Solvay Prize by Syensqo.

About Omar Yaghi

Omar M. Yaghi received his Ph.D. in Chemistry from University of Illinois at Urbana-Champaign, and was an NSF Postdoctoral Fellow at Harvard University. He is the James and Neeltje Tretter Chair Professor of Chemistry at University of California, Berkeley. He is the Founding Director of the Berkeley Global Science Institute whose mission is to build centers of research in developing countries and provide opportunities for young scholars to discover and learn. He is also the Co-Director of the Kavli Energy NanoSciences Institute (Kavli ENSI) focusing on the basic science of energy transformation on the molecular level, the California Research Alliance by BASF (CARA) supporting joint academia-industry innovations, as well as the Bakar Institute of Digital Materials for the Planet (BIDMaP) which aims to develop cost-efficient, easily deployable versions of two classes of ultra porous materials – known as metal-organic frameworks (MOFs) and covalent organic frameworks (COFs) – to help limit and address the impacts of climate change.

His work encompasses the synthesis, structure and properties of inorganic and organic compounds and the design and construction of new crystalline materials. He is widely known for pioneering several extensive classes of new materials: Metal-Organic Frameworks (MOFs), Covalent Organic

Frameworks (COFs), and Zeolitic Imidazolate Frameworks (ZIFs). These materials have the highest surface areas known to date, making them useful for hydrogen and methane storage, carbon capture and conversion, water harvesting from desert air, and catalysis, to mention a few. The building block approach he developed has led to an exponential growth in the creation of new materials having a diversity and multiplicity previously unknown in chemistry. He termed this field 'Reticular Chemistry' and defines it as 'stitching molecular building blocks into extended structures by strong bonds'. His work on MOFs, COFs, and ZIFs led to over 300 published articles, which have received a total of more than 227,000 citations. He has an h-index of 183 and ranked as the second most impactful chemist worldwide (Top 100 Chemists, Thomson Reuters, 2011).

Yaghi is an elected member of the U.S. National Academy of Sciences (2019), American Academy of Arts and Sciences (2022), and the German National Academy of Sciences Leopoldina (2022). He has also been honored with many awards, including the Sacconi Medal of the Italian Chemical Society (2004), Materials Research Society Medal (2007), American Chemical Society Award in the Chemistry of Materials (2009), Royal Society of Chemistry Centenary Prize (2010), King Faisal International Prize in Science (2015), Albert Einstein World Award of Science (2017), BBVA Foundation Frontiers of Knowledge Award in Basic Sciences (2017), Wolf Prize in Chemistry (2018), Eni Award for Excellence in Energy (2018), Gregori Aminoff Prize by the Royal Swedish Academy of Sciences (2019), August-Wilhelm-von-Hofmann-Denkmünze of the German Chemical Society (2020), Royal Society of Chemistry Sustainable Water Award (2020), Belgium's International Solvay Chair in Chemistry (2021), VinFuture Prize for Emerging Science and Technology (2021), and the Wilhelm Exner Medal (2023).

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