

A large orchestra is performing in a grand hall with a brick wall and a balcony. The stage is lit with blue light, and the audience is seated in the foreground. The text "THE NOBEL PRIZE" is at the top, and "ANNUAL REVIEW THE NOBEL FOUNDATION 2021" is at the bottom.

THE
NOBEL
PRIZE

ANNUAL REVIEW
THE NOBEL FOUNDATION
•
2021



Vidar Helgesen, Executive Director of the Nobel Foundation since 1 January 2021.

PHOTO: CLÉMENT MORIN

In his Nobel Prize lecture on 10 December last year, Russian peace prize laureate Dmitry Muratov spoke about the lack of democracy and freedom of expression in Russia, the threat to Ukraine and the risk of war. Less than three months later the war was a terrible fact, bringing immeasurable human suffering to a democratic country in the middle of Europe. Together with Philippine journalist Maria Ressa, Muratov was awarded for his “efforts to safeguard freedom of expression, which is a precondition for democracy and lasting peace.” With great courage, both laureates have fought to ensure that the truth will not become the first victim of the war.

This spring we have once again been reminded of the importance of role models, who give us hope and show the ability of humankind to cope with even the most difficult of adversities. Many Nobel Prize laureates have made their voices heard and have appealed for peaceful dialogue to end the war. Some of them have themselves participated – or are participating – in the struggle for freedom of expression, democracy and disarmament. But most are scientists, who also know how vital it is that we base our societies on truth, freedom, openness and diversity.

The achievements that were awarded Nobel Prizes last year also drew attention to other major challenges we face. They portrayed the painful fate of refugees, and they affirmed that climate change is not a matter of political opinions but of scientific facts.

There is a mistrust of facts and science, and even worse: a struggle against facts and science. Looking ahead, this will be one of humanity’s greatest challenges. It will require a mobilisation of our societies. We also need to become better at building trust in science and communicating it in a way that resonates with us humans, with all our fears and doubts. How can we get people to rely on scientific facts instead of unconfirmed information and downright conspiracy theories?

This is an important task for us if we are to successfully confront the challenges facing the planet and humanity. With the Nobel Prize as our platform, we will do everything we can to promote dialogue, the scientific method and critical thinking.

Riddle 102, a light installation in the Brunkeberg Tunnel, captured the dual nature of Alfred Nobel's character – on the one hand the technical approach that enabled him to create numerous inventions including dynamite (Patent 102), and on the other hand his artistic side in which he wrote poetry, including the famous poem *You say I am a riddle*. The installation was created by Rodrigo Muro and Foteini Kyriakidou at KTH Architectural Lighting Design Master Program during Nobel Week Lights 2021.



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The 2021 Nobel Prize laureates

The Nobel Prize awarding institutions selected Nobel Prize laureates in 2021 despite the challenges posed by the ongoing pandemic. Thanks to close collaboration with Swedish diplomatic missions abroad and a number of local scientific institutions, all laureates were able to receive their medals and diplomas in their countries of residence.

THE NOBEL PRIZE IN PHYSICS

with one half jointly to

SYUKURO MANABE
KLAUS HASSELMANN

“for the physical modelling of Earth’s climate, quantifying variability and reliably predicting global warming”

and the other half to

GIORGIO PARISI

“for the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales”

Three laureates shared the Nobel Prize in Physics 2021 for their studies of chaotic and apparently random phenomena. Syukuro Manabe and Klaus Hasselmann laid the foundation of our knowledge of the Earth’s climate and how humanity influences it. Giorgio Parisi was awarded for his revolutionary contributions to the theory of disordered materials and random processes.

PHOTO: RISDON PHOTOGRAPHY



Syukuro Manabe

PHOTO: BERNHARD LUDEWIG



Klaus Hasselmann

PHOTO: LAURA SBARROTTI



Giorgio Parisi

THE NOBEL PRIZE IN CHEMISTRY

BENJAMIN LIST
DAVID W.C. MACMILLAN

“for the development of asymmetric organocatalysis”

Building molecules is a difficult art. Benjamin List and David MacMillan were awarded the 2021 Nobel Prize in Chemistry for their development of a precise new tool for molecular construction: organocatalysis. This has had a great impact on pharmaceutical research and has also made chemistry greener.

PHOTO: BERNHARD LUDEWIG



Benjamin List

PHOTO: RISDON PHOTOGRAPHY



David W.C. MacMillan

THE NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE

DAVID JULIUS
ARDEM PATAPOUTIAN

“for their discoveries of receptors
for temperature and touch”

The ground-breaking discoveries of temperature- and pressure-sensitive ion channels by this year's laureates explain how heat, cold and mechanical stimuli are transformed into nerve impulses that allow us to perceive and adapt to the world around us. The TRP channels are central for our ability to perceive temperature. The Piezo channels provide the sense of touch and the ability to feel the position movement of our body parts and are also needed for other physiological processes such as blood pressure regulation, respiration and red blood cell volume.

PHOTO: RSDON PHOTOGRAPHY



David Julius

PHOTO: BERNHARD LUDWIG



Ardem Patapoutian

THE NOBEL PRIZE IN LITERATURE

ABDULRAZAK GURNAH

“for his uncompromising and compassionate penetration of the effects
of colonialism and the fate of the
refugee in the gulf between cultures
and continents”

Abdulrazak Gurnah was born and grew up on the island of Zanzibar in the Indian Ocean but arrived in England as a refugee in the late 1960s. Gurnah has published ten novels and a number of short stories. The theme of the refugee's disruption runs throughout his work. He began writing as a 21-year-old in English exile, and even though Swahili was his first language, English became his literary tool.

PHOTO: HUGH FOX



Abdulrazak Gurnah

THE NOBEL PEACE PRIZE

MARIA RESSA
DMITRY MURATOV

“for their efforts to safeguard freedom of expression, which is a precondition for democracy and lasting peace”

Maria Ressa and Dmitry Muratov received the Nobel Peace Prize for their courageous fight for freedom of expression in the Philippines and Russia. At the same time, they are representatives of all journalists who stand up for this ideal in a world in which democracy and freedom of the press face increasingly adverse conditions.



PHOTO: JO STRAUBE

Maria Ressa and Dmitry Muratov

THE SVERIGES RIKSBANK PRIZE IN ECONOMIC SCIENCES IN MEMORY OF ALFRED NOBEL

With one half to

DAVID CARD

“for his empirical contributions to labour economics”

and the other half jointly to

JOSHUA D. ANGRIST
GUIDO W. IMBENS

“for their methodological contributions to the analysis of causal relationships”

The 2021 laureates in economic sciences, David Card, Joshua Angrist and Guido Imbens, have provided us with new insights about the labour market and shown what conclusions about cause and effect can be drawn from natural experiments. Their approach has spread to other fields and revolutionised empirical research.



PHOTO: PAUL KENNEDY

David Card



PHOTO: RISDON PHOTOGRAPHY

Joshua D. Angrist



PHOTO: PAUL KENNEDY

Guido W. Imbens



The Nobel Prize in Physics 2021

“What is most urgently needed is some action against climate change. There are many things we can do to prevent climate change, and this is a question of whether people will realise that something that is going to happen in 20 or 30 years is something you have to respond to now. We’ve been warning about climate change for about 50 years.”

Klaus Hasselmann, 2021 physics laureate, in an interview with Adam Smith, Chief Scientific Officer of Nobel Prize Outreach, on the day of the prize announcement.





The Nobel Peace Prize 2021

"I stand before you, a representative of every journalist around the world who is forced to sacrifice so much to hold the line, to stay true to our values and mission: to bring you the truth and hold power to account... Democracy has become a woman-to-woman, man-to-man defence of our values. We're at a sliding door moment, where we can continue down the path we're on and descend further into fascism, or we can each choose to fight for a better world."

Nobel Peace Prize laureate Maria Ressa during her Nobel Prize lecture. In the photo, we see Maria Ressa together with Dmitry Muratov and David Beasley, Executive Director of the United Nations World Food Programme – awarded the 2020 Nobel Peace Prize – during the Nobel Peace Prize award ceremony on 10 December in Oslo.

Celebrate and understand the year's Nobel Prizes

Nobel Calling Stockholm is a series of activities in early October each year that celebrate creativity and progress, with a focus on the achievements that have been awarded a Nobel Prize.

Playfulness, creativity, passion and perseverance are among the words that are used by Nobel Prize laureates around the world when they describe what motivates them. Nobel Calling Stockholm's open stages at Sergels torg unleashed creative forces, both planned and spontaneous, to celebrate human progress. This included dance, readings, theatre and music.

Inside Kulturhuset, members of the Nobel Committees gave a Crash Course on this year's three science prizes. At the Nobel Prize Museum, author Karin Bojs, film director Björn Runge and the museum's Olof Somell participated in a conversation about how the Nobel Prize inspires cultural expressions. The museum also organised a Peace Friday featuring foreign correspondent Cecilia Uddén, Fredrik Reinfeldt, Sweden's prime minister in 2006–2014, and Nobel Prize expert Gustav Källstrand. It was a panel discussion about what role the Nobel Peace Prize can play today – in a world of conflicts, climate threats and pandemics.

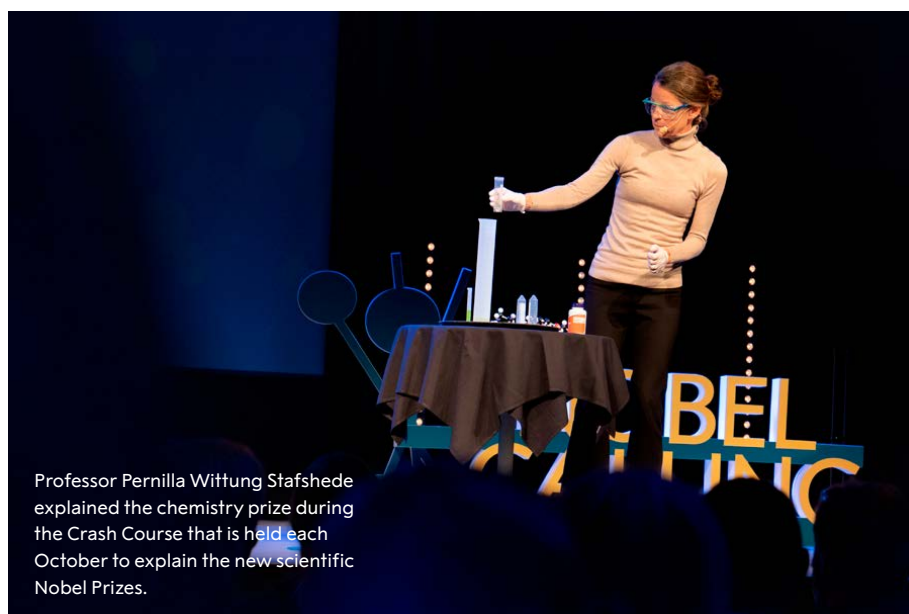
Other highlights during the Nobel Calling week were conversations about the 2021 literature prize at the Tranströmer Library and about the economic sciences prize at the Riksbank (Sweden's central bank). Under the heading *Can the Nobel Prize help us save the world?*, Beatrice Fihn, executive director of the International Campaign to Abolish Nuclear Weapons (ICAN) – which was awarded the 2017 Nobel Peace Prize – met with Gunnar von Heijne, professor of biochemistry at Stockholm University, to discuss how the Nobel Prize can contribute the new knowledge and solutions

needed to ensure the survival of humanity and the planet. An online international Nobel Prize Teacher Summit also took place on the theme *In the Flood of Facts*, discussing what teachers can do to prepare their students to distinguish facts from values and lies.

During Nobel Calling Stockholm, the audience has an opportunity to meet researchers, academy members and authors – both online and in person. The week's events are organised by the Nobel Prize Museum in collaboration with Karolinska Institutet, the Royal Institute of Technology, Kulturhuset Stadsteatern, the Red Cross University College, the City of Stockholm, the Stockholm City Archives, the Tranströmer Library, Stockholm University, Sveriges Riksbank and the Swedish Research Council.



The open stages at Sergels torg during a quiet moment in the evening.



Professor Pernilla Wittung Stafshede explained the chemistry prize during the Crash Course that is held each October to explain the new scientific Nobel Prizes.

PHOTO: CLÉMENT MORIN



PHOTO: CLÉMENT MORIN

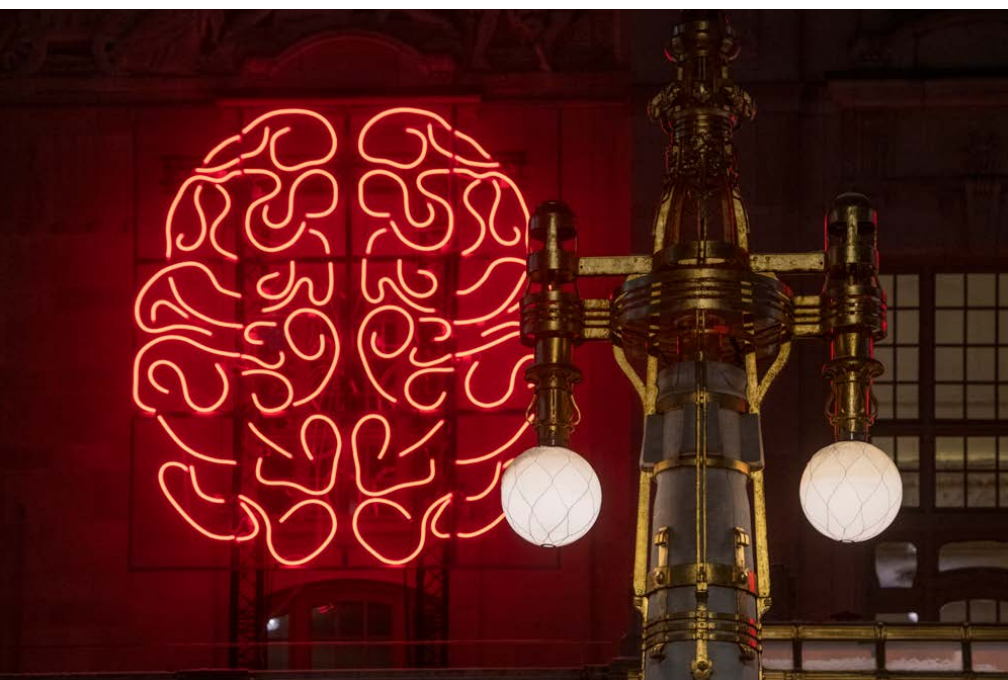


PHOTO: CLÉMENT MORIN

Participating in the conversation at the Tranströmer Library were Carin Klaesson of the Nobel Prize Museum as well as Anders Olsson and Ellen Mattson, both members of the Swedish Academy.



À Marie, on Västertbron, was a tribute to Nobel Prize laureate Marie Curie created by Emma Hjortenklew Wassberg. The illuminated arches of the bridge were lit up in green using a number of different methods.



Great Minds on the facade of the Royal Dramatic Theatre paid tribute to the birth of ideas and creativity. The light installation appeared in the form of two monumental brains in dialogue, performing dynamic, luminous brainstorming – the unavoidable phase of each creative process. The work was created by Aleksandra Stratimirovic.



On the facade of the Stockholm City Museum thousands of question marks appeared, like in a dance. The artist Eva Beierheimer focused on the simplicity of asking a question in her work.



Hexx Øne was an homage to Isamu Akasaki, Hiroshi Amano and Shuji Nakamura, who were awarded the 2014 Nobel Prize in Physics for their research about LED lights. Artist Calidos' installation was a 22 metres long structure including 7,200 RGB LED lights.

Artistic lights illuminated the Nobel Week

For the second straight year, Stockholm celebrated the Nobel Week with the artistic light installations of Nobel Week Lights. One innovation was that the bridge Västerbron displayed a light installation inspired by Nobel Prize laureate Marie Curie.



The twenty or so artistic light installations that were part of the 2021 festival were all inspired in one way or another by the Nobel Prize and prize-awarded achievements. The artists used unique ideas and technical expertise to create works that inspired viewers, encouraged reflection and provided new perspectives on the city and the urban environment. The installations were visited by 350,000 people, which was 150,000 more than in 2020.

The second edition of Nobel Week Lights featured new spinoff events such

as guided tours, a children's treasure hunt, a silent disco walk, a kayaking tour with a lighting theme and a photography contest that generated great engagement.

Nobel Week Lights was initiated and produced by Annika Levin, Alexandra Manson and Lara Szabo Greisman. It was implemented in collaboration with the Nobel Prize Museum and the City of Stockholm, with support from the Stockholm Chamber of Commerce, the Swedish National Space Agency as well as numerous other partners and artistic lighting companies.

Photo contest winner

Joanna Lasek was selected winner of the 2021 Nobel Week Lights photography contest, with her beautiful photo of Stockholm's City Hall. The artistic light installation at the City Hall, *Earth from Space*, was created by Andreas Skärberg (PXLFLD).



975

Nobel Prize laureates

Since 1901, the Nobel Prize and the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel have been awarded to 975 individuals and organisations.

- Laureates: 975
- Prize categories: 6
- Prize-awarded women: 58
- Prize-awarded organisations: 25
- Youngest laureate: 17 years
- Oldest laureate: 97 years

The Nobel Prize website and social media channels

- Nobelprize.org had 20.2 million visitors during 2021, an increase of 3% compared to 2020.
- The number of Instagram followers surpassed 1 million during 2021 – an increase of 34%.
- The number of YouTube followers reached 400,000 – an increase of 46% in 2021.
- During 2021, Nobel Prize digital channels surpassed 7.5 million followers.
- During the Nobel Prize announcement week in October, the Facebook account reached 5.8 million people per day. This was fewer than in 2020 but more than in 2019.
- The Nobel Prize's Twitter account averaged 13 million daily views, and YouTube averaged 240,000 views during the announcement week.
- The Nobel Week programmes in Stockholm and Oslo were made digitally available, reaching a daily average of more than 1 million views on Facebook and 1 million on Twitter.



PHOTO: JOHANNES GRANSFTH

Nobel Peace Prize exhibition about freedom of speech

Maria Ressa and Hannah Reyes Morales during the opening of the exhibition.

Each year, the Nobel Peace Center creates a new exhibition about the Nobel Peace Prize laureates. The 2021 exhibition showed new documentary photos of Maria Ressa and Dmitry Muratov in their courageous fight for freedom of expression. The photos were taken by award-winning German-Russian photographer Nanna Heitmann and Hannah Reyes Morales, a documentary photographer based in Manila. See the exhibition on nobelpeacecenter.org



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Nobel Prize lessons

Part of the lesson on the 2021 economic sciences prize.

Nobel Prize lessons are published just one day after each new Nobel Prize has been announced and enables teachers to teach their students about the awarded contributions. Also available online are a permanent lesson about the Nobel Prize and Alfred Nobel as well as lessons on other themes.

Nobel Creations celebrates its 10th anniversary

In the Nobel Creations project, which celebrated its 10th anniversary in 2021, students in the fashion programme at Beckmans College of Design in Stockholm create free interpretations of the year's Nobel Prizes. These creations explore what unites the Nobel Prize laureates, artists and creators: creativity.

The 2021 Nobel Prize in Physics was interpreted by Emma Carling and Tim Bunwassana. They wanted to protect humanity from natural disasters under an umbrella of fabric that symbolises the ozone layer. But under the umbrella is an opening, where the dress – which used to be all pink – was damaged by water from natural disasters. The dress is made of old curtains and dyed with black rice.



PHOTO: CARL BENGTSSON

PHOTO: DAN LEPP



The Nobel Prize in the world

During 2021 the Nobel Foundation and the Swedish Institute produced a toolkit containing information about the Nobel Prize that can be used by Swedish embassies and consulates around the world. For example, 50 "hubs" were arranged for teachers around the world who followed the broadcast of the Nobel Prize Teacher Summit on the theme *In the Flood of Facts*.



Nobel Prize diplomas and medals

Each Nobel Prize laureate receives a diploma and a Nobel Prize medal that is delivered in a hand-made case. The Nobel Prize diplomas and medal cases are made by Leonard Gustafssons Bokbinderi in Stockholm. Kristine Bekkevold /Julius & Ørenberg Bokbinderi in Oslo made the diplomas and medal cases for the Nobel Peace Prize.

The calligraphy in the diplomas for the physics, chemistry and economic sciences diplomas was created by Marianne Pettersson Söld and Marie A. Györi. The calligrapher for the physiology or medicine and literature diplomas was Susan Duvnäs. The calligrapher for the peace diplomas was Christopher Haanes.

Some of the diplomas include an original artwork. The artwork on the physics diplomas was created by Gunnel Moheim and the artwork on the chemistry diplomas by Anja Richardt Krabbe. The artist for the economic sciences diplomas was Stanislaw Zoladz and for the peace diplomas Håkon Bleken. The 2021 prize amount was SEK 10 million per prize.



Nobel Prize Museum exhibition at Liljevalchs in 2022

The exhibition *Life Eternal*, created by the Nobel Prize Museum, will open at the art gallery Liljevalchs in Stockholm on 30 September 2022. We have always asked questions about the nature of time and about the beginning and end of life. This exhibition wants to offer an adventure that touches on everything from black holes, genetics, cell formation and sustainability to eternal values and spirituality.



7,000

This photo of the new medicine laureate Ardem Patapoutian and his son Luca was liked by more than 7,000 Twitter viewers, who were happy to see a picture from behind the scenes during the 2021 Nobel Prize announcement week.



A historic tweet

This tweet about the 2021 Nobel Peace Prize recorded 19 million views and was retweeted by Barack Obama, with his own congratulations. This was the highest-ever number of Twitter views. Follow twitter.com/nobelprize.

The Nobel Center will be a new house for science, culture and dialogue at Slussen

The Nobel Center will be a place for telling the stories of persistent, courageous laureates who have contributed to the greatest benefit of humankind for more than a century – a place where we will spread hope and inspire people to tackle the challenges of the future and help create a better world.

Visitors to the future Nobel Center will encounter exhibitions, school programmes, lectures and conversations about the great issues of tomorrow based on the Nobel Prize laureates' contributions and their moving stories. According to plans, the Nobel Center at Slussen will open its doors to visitors in a few years.

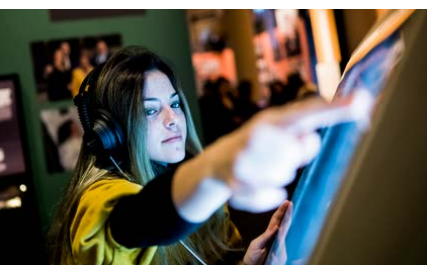


PHOTO: ALEXANDER MAHMOUD

The Pollen Hunt

The Pollen Hunt was the 2021 edition of *Help a Scientist*, a project in which the Nobel Prize Museum connects school classes from all over Sweden with researchers at Swedish universities.

The students' research generated important data about pollinators and pollen by examining bee pollen samples collected by beekeepers around the country. This was very helpful to the researchers at Umeå

University, who can then apply more advanced methods to understand how pollination varies in different parts of Sweden. To present their findings, the students also created scientific posters, which also served as their contributions to the competition.

The winning students in 2021 were from Casa Montessori in Partille, Fagrabäck School in Växjö och Tolvåker School in Löddeköpinge.



PHOTO: PRIVATE



PHOTO: RICHARD VON HOFSTEN

Donation of artefacts

Poland's Wisława Szymborska was awarded the 1996 Nobel Prize in Literature. In November 2021 the Nobel Prize Museum received three artefacts that provide a picture of the poet's work process and how she dealt with the attention that the Nobel Prize brought. A pair of glasses, a pen and a thank you card was selected by the by the Wisława Szymborska Foundation and donated to the museum by the Polish Institute.

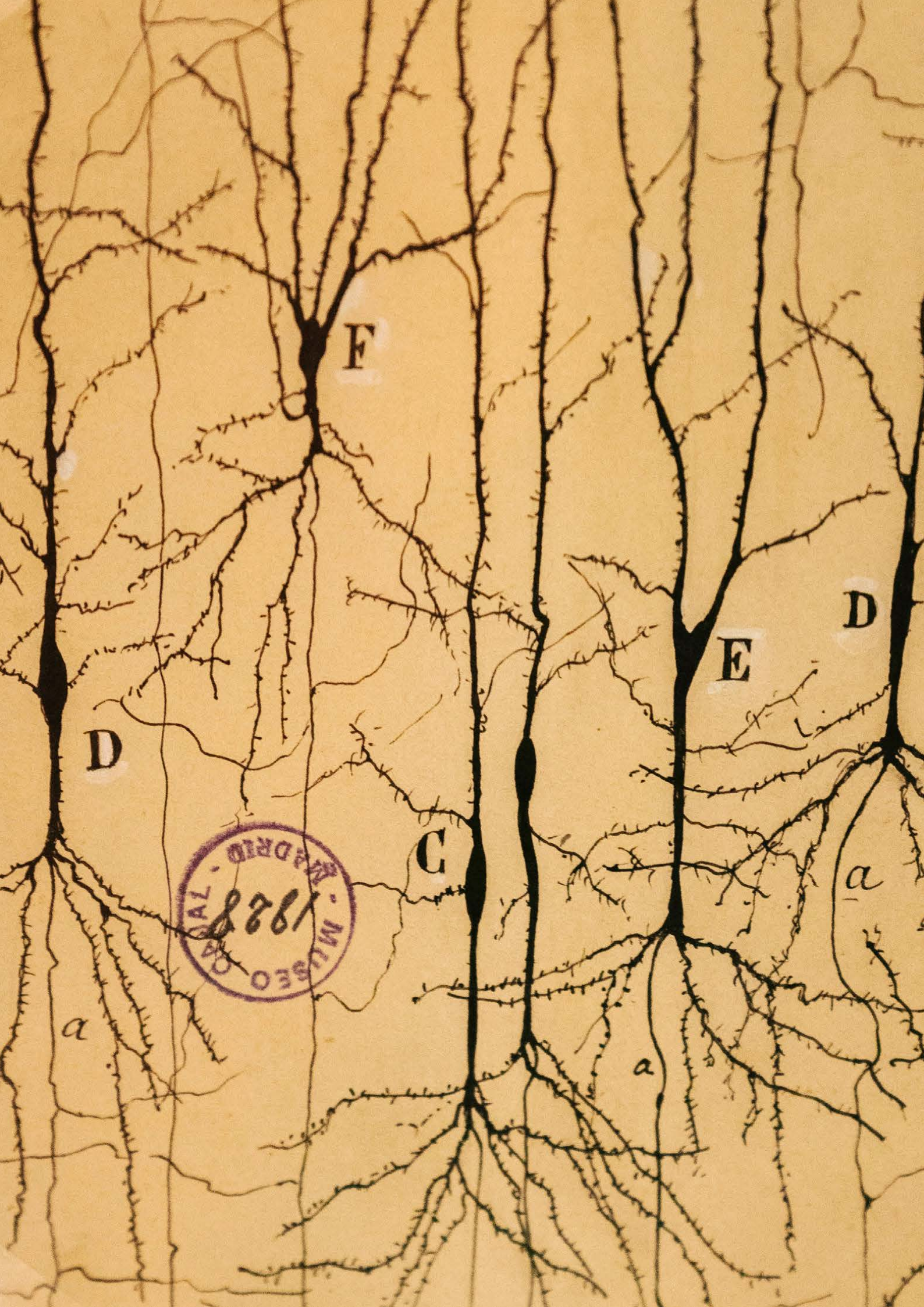
Szyborska did not use the glasses to read. Instead, she wore them to disguise herself when she went out. They became a good form of protection against autograph hunters and admirers. Szymborska used the ballpoint pen that was donated to make corrections in her manuscripts and she spent a lot of time sending out thank you cards to everyone who congratulated her on the Nobel Prize.



PHOTO: UNIVERSEUM

On tour

Erika Lanner, CEO of the Nobel Prize Museum, and Carina Halvord, CEO of Universeum, a science centre in Gothenburg, during a September teacher summit on the theme *Changing the code of life and understanding the secrets of the universe* which is part of the Nobel Prize Museum on Tour concept. The aim of this new concept is to give people in different parts of Sweden access to the Nobel Prize and the discoveries and achievements that have been awarded over the years. Universeum was the first of four stops.



Art and science

In late November, the Nobel Prize Museum was visited by the heads of the Spanish and Swedish royal families. They received a guided tour of a special exhibition that displayed the drawings of Nobel Prize laureate Santiago Ramón y Cajal.

In the late 19th and early 20th century, scientists took decisive steps towards a deeper knowledge of how the human brain and the nervous system function. Perhaps the most important of these pioneers of neuroscience was Santiago Ramón y Cajal of Spain, who received the Nobel Prize in Physiology or Medicine in 1906 for his research about the nervous system. With the aid of methods for colouring cells so they could be studied under a microscope, Cajal successfully mapped different types of nerve cells in the brain. Cajal was also a highly talented artist. His drawings of what he saw under the microscope showed the nervous system with marvellous clarity.

“Cajal’s gift to posterity consists not only of his pioneering scientific achievements. He also gave us his artistry, and works that enabled the convoluted

patterns of human nerve cells to be visualised and made comprehensible. His drawings are a fine example of how art and science can be woven together,” says Erika Lanner, Director of the Nobel Prize Museum.

Their Majesties King Felipe VI and Queen Letizia of Spain, together with Their Majesties King Carl XVI Gustav and Queen Silvia of Sweden, received a guided tour of the exhibition entitled *Synapses: Science and art in Spain from Ramón y Cajal to the 21st century*. In addition to Cajal’s drawings, the exhibition featured works by a number of people who had contact with him, including poet Federico García Lorca and artist Salvador Dalí. It also displayed works by five contemporary visual artists who have been strongly influenced by Cajal.

PHOTO: CLÉMENT MORIN (BOTH PHOTOS)



On 24 November the heads of the Spanish and Swedish royal families visited the museum for a tour of a special exhibition of drawings by Nobel Prize laureate Santiago Ramón y Cajal of Spain.



The Norwegian Nobel Institute organised a Nobel Peace Prize Forum entitled *The Food Effect*. Among the speakers was Gunhild A. Stordalen, founder and Executive Director of the EAT Foundation.

Food for peace

The importance of food in promoting peace was on the Nobel Peace Center's agenda throughout 2021, culminating with a big outdoor food festival on Oslo's City Hall Square in September.

Can access to food help create peace? Can hunger lead to war and conflict? These questions became especially topical when the World Food Programme was awarded the Nobel Peace Prize in 2020. One important task of the Nobel Peace Center is to create public awareness of each year's Nobel Peace Prize. Food and food security were on the agenda in its exhibitions, programmes and digital channels throughout 2021. In close collaboration with the World Food Programme, the Nobel Peace Center also organised a number of digital seminars.

In September, when Norway began to ease its pandemic-related restrictions, two large physical events took place in Oslo. Under the heading *Fix the Food*, the Nobel Peace Center organised an

international conference on food security and a food festival on Oslo's City Hall Square (Rådhusplassen). The conference brought together 17 speakers, including four peace prize laureates. More than 6,000 viewers participated in the conference digitally, while the audience in the hall itself was limited to 60 invited guests.

On the nearby City Hall Square, food stalls, exhibition tents and a festival stage attracted up to 70,000 people. Festival visitors could taste food from around the world, plant seeds with the World Food Programme and listen to lectures on sustainable food.

In December the Norwegian Nobel Institute organised a Nobel Peace Prize Forum entitled *The Food Effect* at Oslo University.



Fix the Food Festival attracted thousands of visitors to the City Hall Square in September.



The food festival had focus on healthy food and sustainability and also offered food stalls, talks and activities.



Berlin-based musician Lambert, who always appears in a mask, enchanted his audience.

Nights at the Nobel Prize Museum

Friday nights at the museum offers a range of interesting events.

One of the most notable Friday evening programmes was a concert by Berlin-based composer, pianist and instrumental songwriter Lambert, who performed his music wearing a Sardinian bull mask.

Another success was an evening on the theme of “poetic defiance, obvious doubt and breath-taking amazement”; with a focus on Nobel Prize laureate Wisława Szymborska, author Agneta Pleijel and cultural writer Stefan Ingvarsson conversed with the museum’s Carin Klaesson. Their discussion was followed by a concert featuring Polish pianist and composer Hania Rani. Other musicians who performed at the museum during the autumn’s Friday programmes were the duo Ikiz/Rydh and composer-singer Anna Ihlis.

A programme series about what happens behind the scenes at the Nobel Prize banquet began with *Floral Magic*, where florist Per Benjamin showed how he ties bouquets and explained how the Stockholm City Hall is decorated for the banquet. During the autumn, the museum held a wine tasting with the Nobel Prize banquet’s sommelier Ulrika Karlsson and a dessert tasting with pastry chef Daniel Roos, who was in charge of the banquet dessert for six years.

On the Nobel Day, 10 December, a special festive dinner was served at the museum’s Bistro Nobel, featuring dishes prepared by chef Sebastian Gibrand, who was responsible for the first and main course at the 2019 Nobel Prize banquet.

During the year, a new membership was launched at the museum that provides free admission, discounts, special offers and priority for event tickets. Become a member and experience more!

PHOTO: CLÉMENT MORIN



Cellist Johanna Viktoria Sjunnesson played during the museum’s Nobel Day dinner party.



"The exhibition highlights the creative spirit that permeates the work of preparing the Nobel Prize banquet. There is incredible attention to detail and a strong desire to present an extraordinary tribute to the Nobel Prize laureates. This is true of everyone involved – chefs, florists and the people working with seating charts, table service and entertainment, and especially all the guests," says Clara Åhlvik, Director of Exhibitions of the Nobel Prize Museum.

The exhibition *The Nobel Prize banquet – behind the scenes*, will be on display at the museum throughout 2022.





The City of the Future meeting was held at Svenska Mässan in Gothenburg, and discussed issues that affect us all.



Nobel Prize laureates Elizabeth Blackburn, Saul Perlmutter, Bernard Feringa and Emmanuelle Charpentier participated digitally in the meeting *United by Science*.

Inspiring international meetings

The international meetings that we organised during 2021 were aimed at stimulating discussions at the highest level on a current science-related theme. Nobel Prize laureates, world-leading experts, researchers, students and the general public gathered online and at different venues.

Hybrid meetings – with participants engaging both online and on site – again dominated the agenda in 2021, since the world was still affected by the coronavirus pandemic. The three-day virtual Nobel Prize Summit *Our Planet, Our Future* took place in April in collaboration with the US National Academy of Sciences, the Potsdam Institute for Climate Impact Research and the Stockholm Resilience Center/Beijer Institute.

The meeting explored what can be done during this decade to achieve a more sustainable future for all people. Participants discussed solutions to some of humanity's greatest challenges, such as climate change and the loss of biodiversity, growing inequality and what role technological innovation can play in the future. Medicine laureate Peter Doherty, who spoke at the meeting, emphasised in an interview that it is the responsibility of all individuals to curb the climate crisis: "There are possibilities for change, but they are difficult and require behavioural change, not just technological solutions." The joint statement published after the meeting was signed by 126 Nobel Prize laureates.

In April, a Nobel Prize Dialogue entitled *The Value of Science* was organised in collaboration with the Brazilian Academy of Sciences in Brazil. Speakers included medicine laureate May-Britt Moser and physics laureate Serge Haroche. Their discussions were followed up later in the year when science students from all over Latin America and the Caribbean had the opportunity to join in a Nobel Prize Dialogue entitled

United by Science, where they could converse with five laureates representing different prize categories. Together they explored how science and scientists can most effectively make a positive impact on society.

A Nobel Prize Dialogue entitled *The Future of Work*, which was organised in collaboration with the University of Pretoria, South Africa, discussed such current topics as: What benefits does diversity bring to the workplace? How does an ageing global population change the labour market? And how is the Covid-19 pandemic changing the nature of work? Digital roundtable discussions were also organised between Nobel Prize

laureates and students in Malaysia, Germany, Poland and Spain.

The City of the Future and its challenges were the focus of the Nobel Week Dialogue held at Svenska Mässan in Gothenburg. The meeting was a hybrid event with a global digital audience online, as well as a limited audience present in Gothenburg. A number of speakers took part, including economic sciences laureate Paul Romer, who emphasised that equality will be one of the great challenges in the cities of the future and that we must "create the conditions where a large number of people can cooperate and all get the benefits from that."



The Crown Princess Victoria gave a speech at the meeting *Our Planet, Our Future*.

PHOTO: CLÉMENT MORIN



Benjamin List, 2021 chemistry laureate, was congratulated after the ceremonial presentation by his aunt, Christiane Nüsslein-Volhard, who received the 1995 medicine prize. Other Nobel Prize laureates belonging to the same family have included married couples Marie Curie and Pierre Curie (physics, 1903) as well as daughter Irène Joliot-Curie who was awarded the 1935 chemistry prize with her husband Frédéric Joliot, as well as Esther Duflo and Abhijit Banerjee (economic sciences, 2019) and brothers Jan Tinbergen (economic sciences, 1969) and Nikolaas Tinbergen (medicine, 1973).





Alfred Nobel

The inventor, entrepreneur and successful businessman Alfred Nobel built up an enormous fortune that he chose in his will to dedicate to those who had contributed to the greatest benefit to humankind. The prize would reward outstanding efforts within the different fields that he was most involved in during his lifetime.

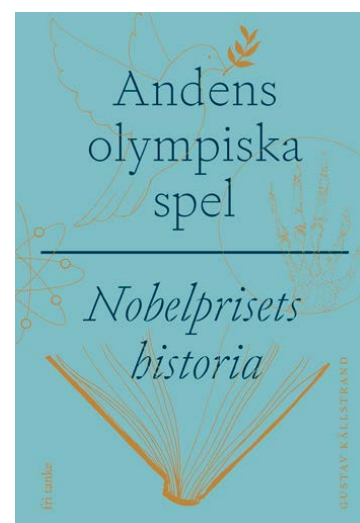
Alfred Nobel was born in Stockholm in 1833. His father, Immanuel, was an inventor and engineer. His mother, Andriette, was described as energetic and intelligent, and when Immanuel went to Russia after a bankruptcy, she was forced to support the family. The Nobel brothers were given a first class education by private tutors and at the age of 17 Alfred spoke five languages: Swedish, Russian, English, French and German.

Alfred ended up in Paris, where he studied chemistry under Professor T. J. Pelouze. It was there that Alfred first came into contact with nitroglycerine, which was invented by the Italian Ascanio Sobrero. Nitroglycerine was a highly explosive liquid considered too dangerous to be useful. Alfred Nobel returned to Sweden and soon began experimenting with nitroglycerine, both in its production and in making the substance reliable enough to use in industry. The work was dangerous and an accident killed several people, including his younger brother Emil. Alfred Nobel was finally able to solve the problem of the substance's volatility by mixing nitroglycerine with a type of sand, kiselguhr. The result was a mouldable mass that was easy to package and that could be shipped and handled safely. It was patented in 1867 under the name dynamite.

With the patenting of different forms of dynamite together with detonators, which he had invented previously, Alfred Nobel achieved his major technical and industrial breakthroughs. Alfred Nobel led the rapid exploitation of his inventions and built factories and laboratories around the world – Vinterviken in Sweden, Krümmel in Germany and Ardeer in Scotland were some of the first. He eventually built just over 90 factories in 20 countries. At his death, he had 355 patents and left behind an enormous fortune.

Nobel was a man of his time, embodying many of the Enlightenment's central ideas, both in his practical work and in his philosophy. He combined his religious doubt with a belief in the natural sciences and was a true optimist about technology and an entrepreneur who actively took part in industrialisation.

Alfred Nobel died on 10 December 1896 in his home in San Remo, Italy, and his will attracted significant attention when it was published. He had allocated most of his fortune to rewarding outstanding efforts within physics, chemistry, physiology or medicine, literature and peace. The will was challenged by relatives, authorities in several countries and by Sweden's King Oscar II. Thus began a long process on the road to realising Alfred Nobel's vision. After a few years of complicated legal processes led by the executors of the will, Ragnar Sohlman and Rudolf Lilljequist, the Nobel Foundation was established in 1900 and the first Nobel Prizes were awarded the following year.



Gustav Källstrand's book, published by Fri Tanke.

A new book about the Nobel Prize.

Andens olympiska spel (The Olympic Games of the Mind) by Gustav Källstrand of the Nobel Prize Museum was published during 2021. The Swedish popular science magazine *Forskning och framsteg* asked Gustav to describe the book: "The title comes from an 1897 article in the newspaper Svenska Dagbladet, which wrote that the Nobel Prize would become an equivalent of the Olympic Games. The first modern Olympics had taken place in 1896. The book covers the first 30 years of the prize and is about its creation – how the regulations governing laureates, funds and management were established."

The Nobel Prize awarding institutions

In his will, Alfred Nobel stipulated which institutions should select Nobel Prize laureates in each prize category. Presumably, he chose the academic institutions that he considered to be best suited to the task. Nobel was less specific regarding the organisation that was to manage his assets. What would later become the Nobel Foundation was only mentioned in his will as a fund.

The Nobel Prize's internationally unique position is largely due to the century-long independence of the Nobel Prize awarding institutions in selecting Nobel Prize laureates. The fact that these institutions have engaged exceptionally knowledgeable individuals within their own organisations as well as extensive international expertise has played a vital role in achieving this standing.

The Royal Swedish Academy of Sciences selects the Nobel Prize laureates in physics and chemistry. It also selects the recipients of the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, established in 1968 on the occasion of the Riksbank's (Sweden's central bank) 300th anniversary. The Academy has about 450 Swedish and about 175 foreign members. The Nobel Assembly at Karolinska Institutet selects the Nobel Prize laureates in physiology or medicine. The Assembly has 50 members. The Swedish Academy selects the Nobel Prize laureates in literature. The Academy has 18 members. All of these institutions appoint special Nobel Committees of three to five members, a secretary and, in some cases, also deputies.

Members are, in general, elected for a term of three years and may serve for a maximum of three consecutive terms. The Nobel Committees evaluate nomina-

tions for the respective Nobel Prizes and extensively examine a selection of the nominees. They subsequently present their proposals for Nobel Prize laureates to the prize-awarding institutions. The actual decision as to who will be awarded Nobel Prizes is made not by the respective Nobel Committees, but by all members of Nobel Prize awarding institution.

For the Nobel Peace Prize, Alfred Nobel referred to the Storting (national parliament) in Norway in his will. The Storting appoints the five members of the Norwegian Nobel Committee. The Norwegian Nobel Committee differs from the other Nobel Prize awarding institutions in the sense that it is responsible both for evaluating the nominees and selecting the recipient.

In September of each year the respective Nobel Committees send out individual invitations to thousands of members of academies, university professors and other scientists in numerous countries, previous laureates, members of parliamentary assemblies and others. The invitation recipients are chosen so to ensure that as many countries and universities as possible are represented over time. A much broader group can make nominations for the Nobel Peace Prize without receiving an invitation from the Norwegian Nobel Committee compared to the other prizes. This nomination procedure for the Nobel Prize differs from many other prizes in that it is the responsible committee which appoints both the nominees and the recipients. Those who have been invited are able to nominate candidates for the coming year. Nominations, which are confidential, must be received by the committees no later than 31 January of the year in which the prize will be awarded. The procedures may vary

somewhat between the Nobel Committees, but the selection process is largely the same across all prize categories. The committees first confirm that the nominations were submitted by individuals who have the right to nominate. Since a nomination is only valid for the current year, it is common for some candidates to be nominated several times. Some candidates may also be nominated by more than one nominator in the same year. Nominations are recorded and compiled in a list. The list is processed in a series of phases during the spring. Initially, it consists of a large selection of names, which is then narrowed down to a smaller number of candidates. Remaining candidates are then evaluated in depth with the assistance of domestic and foreign experts. During the summer the Nobel Committee members produce a comprehensive report detailing the candidate or candidates proposed as the recipient(s) of the year's Nobel Prize. The proposal is presented to the members of the Nobel Prize awarding institution in September. The final selection of Nobel Prize laureates takes place by a vote. The decisions are announced by the respective Nobel Prize awarded institutions immediately after the vote, usually during the first half of October. All documents related to the nomination process and evaluations remain confidential for 50 years.

More information about the prize-awarding institutions is available on their respective websites:
www.kva.se
www.nobelprizemedicine.org
www.svenskaakademien.se
www.nobelpeaceprize.org



Dmitry Muratov when visiting the Norwegian Nobel Institute.

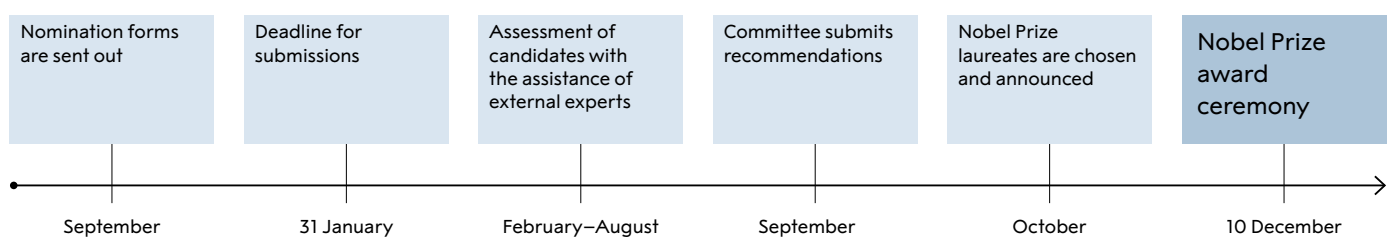
PHOTO: GEIR ANDERS RYBAKKEN ØRSLIEN



Author Ellen Mattson presented the Nobel Prize in Literature at the Nobel Prize award ceremony in Stockholm.

PHOTO: DAN LEPP

Selecting Nobel Prize laureates





ABDULRAZAK
GURNAH
THE NOBEL PRIZE
IN LITERATURE
2021



The Nobel Foundation

The Nobel Foundation is a private foundation established in 1900 on the basis of the will of Alfred Nobel and the founding statutes promulgated in connection with the will. Its primary purpose is to ensure that the intentions of the will of Alfred Nobel are fulfilled. The foundation is responsible for managing Alfred Nobel's fortune in a manner that ensures a secure financial base for the Nobel Prize over the long term and that the Nobel Prize awarding institutions are guaranteed independence in their work of selecting recipients. The foundation is also tasked with strengthening the Nobel Prize's position by administering and developing the brands and intangible assets that have been built up during the Nobel Prize's history, which spans more than 100 years.

The Nobel Foundation has overall responsibility for the Nobel Week that takes place in Stockholm in December. This week includes an extensive programme for the Nobel Prize laureates, culminating in the Nobel Prize award ceremony and the Nobel Prize banquet held on 10 December. Both of these events are planned and run by the foundation. The Norwegian Nobel Institute was established in 1904 and acts as the Norwegian Nobel Committee's secretariat. The institute administers the activities connected with the awarding of the Nobel Peace Prize, including press conferences, the award ceremony and the banquet.

The operations of the Nobel Foundation are essentially financed by the fortune that Alfred Nobel left behind. The market value of the foundation's total invested capital amounted to SEK 6,103 m at the end of 2021. Investment capital exposure was 55 per cent equity funds, 8 per cent property funds, 16 per cent fixed income assets and cash, 24 per cent alternative assets and -2 per cent accrued currency hedging gains. The year's return on investment capital was +18.4 per cent. During 2021, the overall sum of all Nobel Prizes and operating expenses was SEK 103.5 m. This was divided among four main categories: the prizes, SEK 50 m; compensation to the Nobel Prize Committees, SEK 22.9 m; the Nobel Week in Stockholm and Oslo, SEK 10.5 m; plus administration etc., SEK 20.1 m.

Additional information about the Nobel Foundation's financial management is available

in the foundation's 2021 Annual Report, which is available on the website nobelprize.org.

The Nobel Prize awarding institutions – the Royal Swedish Academy of Sciences, the Nobel Assembly at Karolinska Institutet, the Swedish Academy and the Norwegian Nobel Committee – appoint 15 trustees to the Nobel Foundation, for two calendar years at a time. Of these, six representatives are appointed by the Academy of Sciences and the other Nobel Prize awarding institutions appoint three each. The Academy of Sciences also appoints four deputies and the other institutions appoint two deputies each. The most important task of the trustees is to appoint the Nobel Foundation's board and to audit the foundation's activities and accounts.

The Nobel Foundation's board, which is based in Stockholm, consists of seven members and two deputy members. Board members and deputies are appointed for a term of two years each. From among its own members, the board chooses a Chairperson, a Vice-Chairperson and an Executive Director.

To engage, inspire and spread knowledge

The Nobel Prize rewards science, humanism and peace efforts. This is one of the central concepts in the will of Alfred Nobel, and it also permeates the outreach activities that have been developed for the purpose of engaging, inspiring and spreading knowledge to a broad general public based on the Nobel Prize as well as the discoveries and achievements of the laureates.

BOARDS OF DIRECTORS, 2021

THE NOBEL FOUNDATION

The Nobel Foundation is a private foundation established in 1900 on the basis of the will of Alfred Nobel and the founding statutes promulgated in connection with the will. Its primary purpose is to ensure that the intentions of the will of Alfred Nobel are fulfilled.

- Carl-Henrik Heldin, Professor, Chairman
- Göran K. Hansson, Professor, Vice Chairman, Secretary General of the Royal Swedish Academy of Sciences
- Vidar Helgesen, LLM, Executive Director of the Nobel Foundation
- Mats Malm, Professor, Permanent Secretary of the Swedish Academy
- Tomas Nicolin, MSc
- Thomas Perlmann, Professor, Secretary General of the Nobel Assembly at Karolinska Institutet and the Nobel Committee for Physiology or Medicine
- Berit Reiss-Andersen, Attorney, Chair of the Norwegian Nobel Committee

Deputy members

- Peter Brzezinski, Professor, Secretary of the Nobel Committee for Chemistry
- Gunnar Ingelman, Professor, Secretary of the Nobel Committee for Physics

ALFRED NOBEL MEMORIAL FOUNDATION

The purpose of the Alfred Nobel Memorial Foundation is to promote education, culture, peace and scientific research, in part by financially or otherwise contributing to the activities and objectives of the Nobel Foundation.

- Carl-Henrik Heldin, Chairman
- Göran K. Hansson
- Vidar Helgesen
- Mats Malm
- Tomas Nicolin
- Thomas Perlmann
- Berit Reiss-Andersen

NOBEL GROUP INTERESTS AB

The aim of the company is to own and actively manage shares and participations within the sphere of interest of the Nobel organisations. Another task of the company is to facilitate financial and administrative coordination between the companies in the Nobel sphere.

- Carl-Henrik Heldin, Chairman
- Peter Brzezinski
- Göran K. Hansson
- Vidar Helgesen
- Gunnar Ingelman
- Mats Malm
- Tomas Nicolin
- Thomas Perlmann
- Berit Reiss-Andersen

NOBEL PRIZE OUTREACH AB

The company spreads knowledge about Nobel Prize-awarded achievements and stimulates interest in science, literature and peace efforts through digital channels and inspiring events. The company is also responsible for the Nobel sphere's international activities and partnerships.

- Vidar Helgesen, LLM, Executive Director of the Nobel Foundation, Chairman
- Peje Emilsson, Founder and Chairman of Kreab Worldwide
- Mia Horn af Rantzien, Dr, CEO of the Center for Business and Policy Studies (SNS)
- Anita Krishnamurthi, former Head of Education & Learning at Wellcome Trust
- Sara Mazur, Chair, Wallenberg Artificial Intelligence, Autonomous System, Software Program (WASP)
- Marie Nilsson, CEO of Mediavision
- Olav Njølstad, Professor, Director of the Norwegian Nobel Institute
- Karin Pettersson, Culture Editor, Aftonbladet
- Inge Thulin, former Chairman, President and CEO of 3M, board member of Merck
- Juleen Zierath, Professor, member of the Nobel Assembly at Karolinska Institutet and associate member of the Nobel Committee for Physiology or Medicine

NOBELHUSET AB

Nobelhuset AB is the company that has been entrusted with planning, building, owning, administering and developing a future Nobel Center in Stockholm.

- Vidar Helgesen, LLM, Executive Director of the Nobel Foundation, Chairman
- Olov Amelin, PhD, Director, Jamtli Foundation and Jämtland County Custodian of Antiquities
- Lars Anell, former Chairman of the Swedish Research Council
- Birgitta Ed, founding partner of Six Year Plan

- Gunnar von Heijne, Professor, member of the Royal Swedish Academy of Sciences.
- Erika Lanner, Lawyer and CEO, Nobel Prize Museum
- Stefan Ränk, CEO, Einar Mattsson, Vice Chairman
- Monica von Schmalensee, Architect
- Fredrik Wiridenius, Senior Advisory Consultant, Fredrik Wiridenius AB

NOBEL CENTER FOUNDATION

Responsible for public activities carried out on the basis of the Nobel Prize Museum.

- Vidar Helgesen, LLM, Executive Director of the Nobel Foundation, Chairman
- Mårten Castenfors, Museum Director, Liljevalchs konsthall
- Dilsa Demirbag-Sten, General Secretary, Berättarministeriet
- Bente Erichsen, film director, author
- Cecilia Gunne, Attorney, Lindskog Malmström Advokatbyrå KB
- Göran K. Hansson, Professor, Secretary General of the Royal Swedish Academy of Sciences
- Stein Olav Henriksen, Director of Munchmuseet, Oslo
- Lisa Månsson, PhD, Director General, Swedish Museum of Natural History
- Thomas Perlmann, Professor, Secretary of the Nobel Assembly at Karolinska Institutet and of the Nobel Committee for Physiology or Medicine

NOBEL PEACE CENTER FOUNDATION

The Nobel Peace Center in Oslo is a museum that showcases the Nobel Peace Prize laureates and their work, information about Alfred Nobel and exhibitions with a focus on documentary photography.

- Olav Njølstad, Director of the Norwegian Nobel Institute, Chair
- Jessica Barlinhaug Angstreich, Board member elected by the employees

- Anne Enger, former Storting member, Minister of Culture and County Governor
- Siri Hatlen, business owner, Deputy Chair
- Nina Refseth, Director, Norwegian Museum of Cultural History
- Lotta Wristel, Head of Administration of the Nobel Foundation

COMPANY INFORMATION

THE NOBEL FOUNDATION

- Executive Director: Vidar Helgesen
- Established: 1900
- Address: Sturegatan 14, Stockholm, Sweden
- Website: nobelprize.org

NOBEL PRIZE OUTREACH AB

- CEO: Laura Sprechmann
- Established: 2004
- Address: Sturegatan 14, Stockholm, Sverige
- Website: nobelprize.org

NOBEL CENTER FOUNDATION

(Nobel Prize Museum)

- CEO: Erika Lanner
- The original Nobel Museum opened in 2001. Effective from 1 January 2019, the Nobel Center Foundation (Stiftelsen Nobel Center) acquired the operations carried out by the Nobel Prize Museum, formerly the Nobel Museum.
- Address: Stortorget 2, Stockholm, Sweden
- Website: nobelprizemuseum.se

NOBEL PEACE CENTER FOUNDATION

(Stiftelsen Nobels Fredssenter)

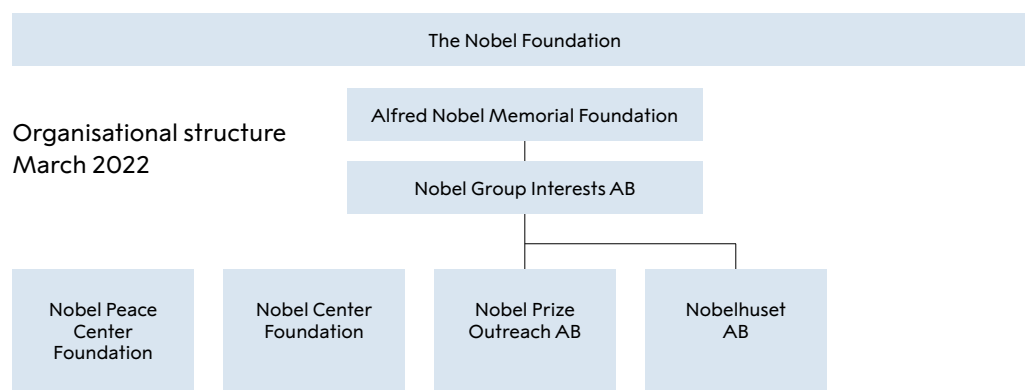
- CEO: Kjersti Fløgstad
- Established: 2005
- Address: Brynjulf Bulls Plass 1, Rådhusplassen, Oslo, Norway
- Website: nobelpeacecenter.org



FOTO: CLÉMENT MORIN

Vidar Helgesen,
Executive Director of
the Nobel Foundation

“The 2021 Nobel Prizes draw attention to many of the important issues that humanity is wrestling with, such as climate change, the struggle for freedom of expression and understanding the fate of refugees. The Nobel Week offers opportunities for people around the world to view lectures, award ceremonies, exhibitions and stimulating conversations in order to learn more about and gain inspiration from this year’s laureates and their contributions to the greatest benefit to humankind.”



Podcasts worth your ear

In three different podcast series based on the Nobel Prize, we meet inspiring people with thought-provoking stories. They offer engaging conversations about everything from gene splicing to the role of failure as a motivator.

In the mainly Swedish-language podcast series *Ideas changing the world*, Nobel Prize expert Gustav Källstrand meets with researchers, writers and other experts to discuss ideas related to science, literature and peace. One episode in which he spoke with former Swedish Prime Minister Fredrik Reinfeldt about peace prize laureate Barack Obama, was nominated for the 2021 Guldörat (Golden Ear) award in the *Interview of the Year* category. Other episodes included a conversation in English with chemistry laureate Jennifer Doudna about gene splicing, with Swedish Academy member Åsa Wikforss about democracy and knowledge, with medical journalist Amina Manzour about pandemics and infodemics, and about the road to peace

with Ellen Johnson Sirleaf, peace prize laureate.

In the podcast series *Nobel Prize Conversations*, we become acquainted with some of the people who have received the Nobel Prize – their lives and work, failures and successes. The conversations provide an in-depth look at how these individuals found their fields of interest, how they view collaboration, curiosity and what motivates them. The laureates also share what they have learned from their career and how they spend their leisure time: it can be anything from music to fly-fishing. Host Adam Smith lets the discussions flow freely, resulting in richly varied stories about subjects ranging from poverty prevention to the science of black holes and the importance of being a role model. Among the laureates who participated in the 2021 series were Donna Strickland (physics, 2018), Robert Lefkowitz (chemistry, 2012) and Kip Thorne (physics, 2017).

The Nobel Peace Center's podcast series discusses the peace prize from different standpoints, but also various aspects of the museum's activities, such as documentary photography. Every year the Nobel Peace Center engages a photographer to create portraits of the peace prize laureates. Since 2005 their work has been documented in exhibitions by such photographers as Jonas Bendiksen, Anton Corbijn, Paolo Pellegrin and Aïda Muluneh, making the Nobel Peace Center a recognised venue for documentary photography. Listen to these podcasts where others podcasts are available.





The conversation between Fredrik Reinfeldt and Gustav Källstrand on peace prize laureate Barack Obama was nominated for the Guldörat (Golden Ear) award in the *Interview of the Year* category.



Nobel Peace Prize laureate Leymah Gbowee joined the podcast *Nobel Prize Conversations* and shared her heart-breaking life story of growing up during the Liberian civil war.



One of the guests in the Nobel Prize Museum's podcast, Jennifer Doudna, who received the chemistry prize in 2020, talked about the challenges of doing research during the Covid-19 pandemic.

Highlights in December

The 2021 Nobel Prize award ceremony took place on 10 December in the Blue Hall at the Stockholm City Hall, with a limited audience present. Video clips from the earlier ceremonial presentations in the laureates' respective home countries were woven together with presentation speeches by members of the Nobel Committees. The Royal Stockholm Philharmonic Orchestra, conducted by Cathrine Winnes, provided the music. Performing as soloists were mezzo soprano Anne Sofie von Otter and jazz vocalist Kiralina Salandy (pictured). Bengt Åke "Bengan" Jansson performed on accordion and Karin Hammar played trombone. The programme was created by director Linus Fellbom along with Fredrik Andersson, programme director of the Royal Stockholm Philharmonic Orchestra. Actress Lena Olin served as master of ceremonies.

Nobel Peace Prize laureates Maria Ressa and Dmitry Muratov at the Norwegian Nobel Institute with Berit Reiss-Andersen, chair of the Norwegian Nobel Committee. On the wall behind them are framed pictures of previous peace prize laureates.

Thanks to close collaboration with Swedish diplomatic missions abroad and a number of local scientific institutions, all laureates were able to receive their medals and diplomas in their countries of residence.



PHOTO: DAN LEPF



PHOTO: GEIR ANDERS RYBAKKEN ØRSJØEN



Literature laureate Abdulrazak Gurnah received his diploma and medal from Ambassador Mikaela Kumlin Granit at her official residence in London on 6 December. Gurnah's Nobel Prize lecture was recorded in his home and broadcast on the Nobel Prize social media channels as well as on nobelprize.org. The recording was a collaboration with the Swedish Academy.

Acclaimed cellist Sol Gabetta shared the stage with conductor Ryan Bancroft and the Royal Stockholm Philharmonic Orchestra at the Nobel Prize Concert, performing Camille Saint-Saëns' Cello Concerto No. 1. The concert was broadcast on Swedish Television (SVT) and could also be viewed on the Nobel Prize YouTube channel and on nobelprize.org.

In 2021 the Nobel Peace Prize Concert was re-launched. In cooperation with the Oslo Philharmonic Orchestra and the Norwegian Broadcasting Corporation (NRK), the concert took place at the Oslo Concert Hall on 11 December.



Physics laureate Syukuro Manabe, chemistry laureate David W.C. MacMillan and economic sciences laureate Joshua D. Angrist received their medals and diplomas from Ambassador Karin Olofsdotter on 6 December. The ceremony took place at the National Academy of Sciences in Washington, D.C., USA.





In a session during the meeting *Our Planet, Our Future* a group of actors read scenes from Sophocles *Oedipus the King* as a catalyst to powerful, constructive and global talks on climate change, ecological disasters and environmental matters. Among the actors were Bill Murray and Frances McDormand. Two Nobel Prize laureates joined in as a choir, Elizabeth Blackburn and Harold Varmus.

PHOTO: GEORGES BIARD/CREATIVE COMMONS
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Cover: The 2021 Nobel Prize award
ceremony took place on 10 Decem-
ber in the Blue Hall at the Stockholm
City Hall, with a limited audience
present. The Royal Stockholm
Philharmonic Orchestra, conducted
by Cathrine Winnes, provided
the music. Karin Hammar played
trombone.
Photo: Dan Lepp

For questions regarding the
Annual Review, please contact:
media@nobelprize.org

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