

## The Nobel Foundation

2013 Annual Review





The Nobel Foundation

## The Nobel Foundation 2013 Annual Review

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#### FRONT COVER:

François Englert and James E. Rothman, photo: Alex Ljungdahl, Randy W. Schekman and Mario J Molina, photo: Niklas Elmehed, Nobel Week Dialogue sign, photo: Alexander Mahmoud, Toastmaster Emma Johansson, photo: Helena Paulin-Strömberg

Exhibitions, programmes and events can be subject to change during 2014. For enquiries, please contact: media@nobel.se

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## A word from the Executive Director



Lars Heikensten, Executive Director of the Nobel Foundation since 2011

A lfred Nobel's vision was to reward those who have conferred the greatest benefit to mankind. That vision guides both the work of the Nobel Prize awarding institutions in selecting Laureates and all of our efforts to spread knowledge about the Nobel Prize and to inspire learning and engagement.

The Nobel Prize's combination of disciplines – sciences, literature and peace – is entirely unique. It gives us the opportunity to touch on many of the major issues of our age and of the future. The fantastic discoveries, contributions and stories of the Nobel Laureates run like a red thread through the activities carried out within the framework of our public operations in Stockholm, Oslo and around the world.

During the winter of 2013, the Nobel Foundation initiated a process to examine the long-term, strategic focus of its operations. It is a matter of deciding which ambitions and what basic values will guide our future operations, but also how this work should be performed in more concrete terms. This is necessary both in order to coordinate our operations in an efficient manner and to meet the challenges that the Nobel sphere is facing.

Among the supporting documents for this project are an international branding study about the Nobel Prize and long-term financial assessments. The study clearly shows both how well known the Nobel Prize is and what an extremely strong position it has. At the same time, we see that there are differences in how the Nobel Prize is perceived in different parts of the world and in different age groups, something we both should reflect on and learn from.

As for its finances, one major question is what ambition the Nobel Foundation should have. Although the Nobel Prize, adjusted for inflation, has retained its value since 1901 it has fallen in comparison with an average professor's salary. Another issue is how expenses can be held down, while safeguarding and preferably strengthening the position of the Nobel Prize in an increasingly complex and integrated world.

Despite the long-term challenges, it may perhaps be appropriate to mention that 2013 was a good year for the Nobel Foundation from a financial perspective. This is gratifying, since the funds we manage go primarily to the prize sum and to the work of the Nobel Committees in selecting Laureates – the very core of our operations. As for our public entities, their funding comes from other sources and in these contexts our collaboration with external partners is crucial.

We are now looking forward to creating the Nobel Center on the Blasieholmen peninsula in central Stockholm. The center will be a platform for a variety of interdisciplinary meetings and activities with the Nobel Prize as their starting point. An international architectural competition is being decided in April 2014, and the winning proposal will provide the basis for a new local plan on which the City of Stockholm will hold consultations this coming autumn.

On International Women's Day – March 8, 2014 – at the Nobel Museum in Stockholm, we organised a public meeting with Nobel Peace Prize Laureate Tawakkol Karman. Before an enthusiastic audience, she delivered a speech about the situation of women around the world, with reference to the conflicts in Syria, Ukraine, Yemen and elsewhere. Making the point that "walking and talking" can lead to genuine change, she presented to the Museum's collections her megaphone and a pair of shoes, which she had worn out while marching through Yemen's capital Sana during the Arab Spring.

The Nobel Center will give us excellent opportunities to create more such meetings, to build up collections around the Laureates' stories and to address issues that are crucial to our world and our future. Here we will not only be able to invite more Nobel Laureates, but also to take advantage of the Nobel Prize's huge untapped potential ability to attract the world's foremost scientists and thinkers in various disciplines. Our ambition is that the Nobel Center shall be a unique place that offers broad public activities, scientific conferences, school programmes, meetings and events – a place that inspires, engages and encourages curiosity.

LARS HEIKENSTEN EXECUTIVE DIRECTOR

PHOTO: ALEXANDER MAHMOUD

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for the medicine prize was delivered by Juleen Zierath







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Artist: Susanne Jardeback Calligrapher: Annika Rücker, Book binder: Ingemar Dackéus

With this Annual Review we aim to provide a comprehensive picture of the Nobel Sphere as a whole. For additional information, please see the respective annual reports of the Nobel Foundation and related organisations.

THE NOBEL DIPLOMA, PHOTO: LOVISA ENGBLOM MARTIN KARPLUS, PHOTO: NIKLAS ELMEHED ROBERT J. SHILLER, PHOTO: VICTORIA HENRIKSSON © THE ROYAL SWEDISH ACADEMY OF SCIENCES OTHER PHOTOS: ALEX LJUNGDAHL AND ALEXANDER MAHMOUD











## The 2013 Nobel Laureates





THE NOBEL PRIZE IN PHYSICS

WAS AWARDED TO

#### François Englert and Peter W. Higgs

"for the theoretical discovery of a mechanism that contributes to our understanding of the origin of mass of subatomic particles, and which recently was confirmed through the discovery of the predicted fundamental particle, by the ATLAS and CMS experiments at CERN's Large Hadron Collider"

**PROFESSOR EMERITUS FRANÇOIS ENGLERT**, born 1932, Université Libre de Bruxelles, Belgium.

**PROFESSOR EMERITUS PETER W. HIGGS**, born 1929, University of Edinburgh, United Kingdom.

**ACCORDING TO MODERN** physics, matter consists of a set of particles that act as building blocks. Between these particles lie forces that are mediated by another set of particles. A fundamental property of the majority of particles is that they have a mass. Independently of one another, in 1964 both Peter Higgs and the team of François Englert and Robert Brout proposed a theory about the existence of a particle that explains why other particles have a mass. In 2012, two experiments conducted at the CERN laboratory confirmed the existence of the Higgs particle.







THE NOBEL PRIZE IN CHEMISTRY

WAS AWARDED TO

## Martin Karplus, Michael Levitt and Arieh Warshel

"for the development of multiscale models for complex chemical systems"

PROFESSOR EMERITUS MARTIN KARPLUS, born 1930, Université de Strasbourg, France and Harvard University, USA.

**PROFESSOR MICHAEL LEVITT**, born 1947, Stanford University School of Medicine, USA.

**PROFESSOR ARIEH WARSHEL**, born 1940, University of Southern California, Los Angeles, USA.

THE WORLD AROUND US is made up of atoms that are joined together to form molecules. During chemical reactions atoms change places and new molecules are formed. To accurately predict the course of the reactions at the sites where the reaction occurs advanced calculations based on quantum mechanics are required. For other parts of the molecules, it is possible to use the less complicated calculations of classical mechanics. In the 1970s, Martin Karplus, Michael Levitt and Arieh Warshel successfully developed methods that combined quantum and classical mechanics to calculate the courses of chemical reactions using computers.











THE NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE

WAS AWARDED TO

## James E. Rothman, Randy W. Schekman and Thomas C. Südhof

"for their discoveries of machinery regulating vesicle traffic, a major transport system in our cells"

**PROFESSOR JAMES E. ROTHMAN**, born 1950, Yale University, USA.

**PROFESSOR RANDY W. SCHEKMAN,** born 1948, University of California, USA and Howard Hughes Medical Institute, USA.

**PROFESSOR THOMAS C. SÜDHOF,** born 1955, Stanford University, USA and Howard Hughes Medical Institute, USA.

**THE CELLS INSIDE OUR BODIES** produce a host of different molecules that are sent to specific sites. During transport, many of these molecules are grouped together in tiny sac-like structures called vesicles. These vesicles help transport substances to different places inside the cell and send molecules from the cell's surface as signals to other cells in the body.

During the 1970s, Randy Schekman studied yeast cells with malfunctions in this transportation system. He demonstrated that that the malfunctions were due to genetic defects and explained how different genes regulate different aspects of the transports.

During the 1980s and 1990s, James Rothman showed how vesicles fuse with specific surfaces in the cell so that transports arrive at the correct destination.

By studying brain cells from mice, in the 1990s Thomas Südhof demonstrated how vesicles are held in place, ready to release signal-bearing molecules at the right moment.



After the Nobel Banquet, the Royal Family receives the Laureates at the Prince's Gallery



## THE NOBEL PRIZE IN LITERATURE

WAS AWARDED TO

#### Alice Munro

"master of the contemporary short story"

AUTHOR ALICE MUNRO, born 1931, Canada.

**ALICE MUNRO HAS DEDICATED** her literary career almost exclusively to the short story genre. She grew up in a small Canadian town; the kind of environment that often provides the backdrops for her stories. These often accommodate the entire epic complexity of the novel in just a few short pages. The underlying themes of her work are often relationship problems and moral conflicts. The relationship between memory and reality is another recurring theme she uses to create tension. With subtle means, she is able to demonstrate the impact that seemingly trivial events can have on a person's life.





Artist: John Stenborg, Calligrapher: Annika Rücker, Book binder: Ingemar Dackéus Photo: Lovisa Engblom



#### THE NOBEL PEACE PRIZE

WAS AWARDED TO THE

## Organisation for the Prohibition of Chemical Weapons (OPCW)

"for its extensive efforts to eliminate chemical weapons"

THE DEVELOPMENT AND USE of chemical weapons first began during World War I. Even though the use of chemical weapons were prohibited in 1925 chemical weapons have since been used a number of times by both nations and terrorists. An international convention that also prohibited the manufacture and storage of chemical weapons came into effect in 1997. That same year, the Organisation for the Prohibition of Chemical Weapons (OPCW) was formed for international cooperation to ensure that the convention is honored through inspections and the destruction of chemical weapons.







## THE SVERIGES RIKSBANK PRIZE IN ECONOMIC SCIENCES IN MEMORY OF ALFRED NOBFL

WAS AWARDED TO

#### Eugene F. Fama, Lars Peter Hansen and Robert J. Shiller

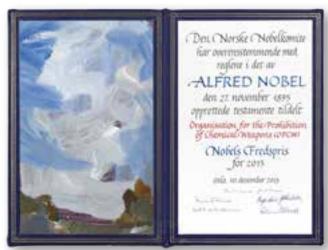
"for their empirical analysis of asset prices"

**PROFESSOR EUGENE F. FAMA**, born 1939, University of Chicago, USA.

**PROFESSOR LARS PETER HANSEN**, born 1952, University of Chicago, USA.

**PROFESSOR ROBERT J. SHILLER**, born 1946, Yale University, USA.

FOR MANY OF US, the rise and fall of stock prices symbolizes economic development. Eugene Fama demonstrated that stock price movements are impossible to predict in the short-term, while Robert Shiller discovered that stock prices can be predicted over a longer period. In 1982, Lars Peter Hansen developed a statistical method for testing this type of theory. Using this method, Hansen and other researchers have found that modifications of these theories go a long way toward explaining asset prices.



Artist: Jan Erik Willgohs, Calligrapher: Inger Magnus, Book binder: Julius Johansen, Photo: Thomas Widerberg



Lars Peter Hansen with family after the Nobel Prize Award Ceremony





The Nobel Prize has a unique international position and I plan to do my utmost to contribute to the Nobel Foundation's efforts to maintain its position and further develop its activities.

CARL-HENRIK HELDIN





## A Chairman rooted in the Research World

"The Nobel Prize has a unique international position and I plan to do my utmost to contribute to the Nobel Foundation's efforts to maintain its position and further develop its activities," Carl-Henrik Heldin explained when he assumed his position as chairman of the board of the Nobel Foundation in early 2013.

carl-Henrik Heldin is a professor of molecular cell biology and director of the Ludwig Institute for Cancer Research in Uppsala. Among other assignments, Heldin is vice-president of the European Research Council, a commission that will conclude during 2014, as well as a member of the Royal Swedish Academy of Sciences. Carl-Henrik Heldin is also chair of the expert committee that reviews grant applications for Ragnar Söderberg Fellows in Medicine, a programme that provides support for promising young researchers who are just beginning their careers.

Given his position as chairman of the Nobel Foundation and all his other obligations, one might wonder whether Heldin has any time for research. "Yes, it's very important for me to reserve time for research. If you're going to do competent work in evaluating other research and making decisions about grants and such, you have to have strong roots in the field," he says.

Heldin was asked to serve as chairman of the Nobel Foundation in March 2013. He accepted the position almost immediately because he considered the assignment to be both an honour and a challenge. "Friends and acquaintances thought I would be involved in selecting Nobel Laureates, which isn't the case. That process takes place at the prize-awarding institutions," explains Heldin, who is preceded by 12 previous chairmen, the first of whom was politician Gustaf Boström and the most recent, director Marcus Storch.

**THE ASSIGNMENT AS CHAIRMAN** primarily involves leading the work of the board. The board consists of seven members and two deputy members elected by the Foundation's

trustees. One of the Nobel Foundation's central tasks is managing Alfred Nobel's fortune. The Foundation is to manage Nobel's assets in such a manner that ensures a secure financial standing for the Nobel Prize in the long-term, as well as the independence of the prize-awarding institutions in their work of selecting Laureates. The Nobel Foundation also manages intellectual property assets.

Heldin assumed the role of chairman at an exciting time when there is much activity within the Nobel sphere, including plans for a Nobel Center in Stockholm that have progressed well and an architectural competition that will conclude in the spring of 2014. Additionally, informational activities connected to the Nobel Prize have been developed significantly in recent years and have resulted in the formation of new entities, since the Nobel Foundation's funds are primarily reserved for use in the Nobel Committees' work of selecting Laureates and as prize money.

THE NOBEL FOUNDATION'S CHAIRMAN also

delivers an opening address at the Nobel Prize Award Ceremony held in the Stockholm Concert Hall on 10 December. The 2013 address focused on the importance of basic research, an issue that Heldin feels strongly about: "(...) it is important to support basic research which has no other purpose than to answer questions, since experience has shown that such curiosity-driven research often leads to results that can be used within other, completely different and unexpected areas". Later that evening, the Nobel Foundation's chairman also serves as host of the Nobel Banquet, held at the Stockholm City Hall.

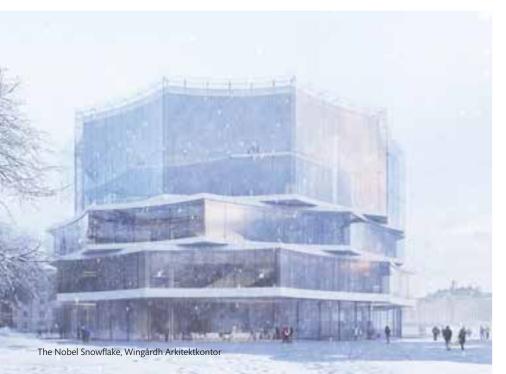
PORTRAIT CARL-HENRIK HELDIN, PHOTO: ALEXANDER MAHMOUD THE NOBEL FOUNDATION SIGN, PHOTO: ORASIS RECEPTION AT THE NORDISKA MUSEET, PHOTO: ALEX LJUNGDAHL ENTRY AT THE BULE HALL, PHOTO: HELENA PAULIN-STROMBERG













## Nobel Center Takes Shape

In June 2013 an international architectural competition was opened to design the building that will become the Nobel Center – the new home of the Nobel Prize in Stockholm. Initially, eleven prominent architects participated. Three were chosen to the final stage and their revised proposals are being evaluated during the spring of 2014.

NOBEL CENTER on Blasieholmen will be an engaging place that sparks curiosity. It will be a place that focuses on the Nobel Prize and stories of the Nobel Laureates. The ambition is for the Nobel Center to become one of Stockholm's most attractive destinations, with public spaces for exhibitions, activities and school programmes, events and scientific conferences. The building will also house a library, restaurant, café and shop.

An extensive architectural brief lays the groundwork for the international architectural competition for a Nobel Center on Blasieholmen. The competition is being conducted in two stages during 2013 and 2014. The jury's initial selection process placed great importance on harmony with the surrounding buildings and cultural environment at Blasieholmen and on that the external expression should correspond with the Nobel Prize and the identity of the operations of the Nobel sphere.

**THE JURY** judging the competition submissions consists of eleven people with expertise in architecture, museum operations, building and facility issues and the Nobel sphere's areas of operation. The jury's original task was to choose two to five submissions from the original eleven. These finalists moved on to the second stage of the competition. Three architects were chosen to further develop and refine their proposals.

The competitors in the second stage are David Chipperfield and Christoph Felger

from David Chipperfield Architects Berlin (Germany) with the submission *Nobelhuset*, Gert Wingårdh from Wingårdh Arkitektkontor (Sweden) with the submission *The Nobel Snowflake* and Johan Celsing from Johan Celsing Arkitektkontor (Sweden) with the submission *A Room and a Half*.

One of the revisions made to the competition programme prior to the second stage was a reduction of the programme area. This resulted in a size reduction to the proposed buildings. All three buildings are located in the site's north-western corner, toward the street Hovslagargatan and the other existing buildings on Blasieholmen, which gives the opportunity for an attractive open area in a sunny position with a vibrant harbour setting and plenty of space for a quay promenade along the waterfront. The architects also revised their proposals based on the jury's wishes for greater openness toward the surrounding public areas and walkways. In agreement with the competition brief, these proposals also include an auditorium where, among other events, the Nobel Prize Award Ceremony can take place.

**THE INTENTION IS** that the winning proposal, to be chosen in April 2014, will serve as the basis for a new local plan, which the City of Stockholm will hold consultations about during this autumn. The preliminary date for inauguration is December 2018.

#### **ABOUT THE ARCHITECTURAL COMPETITION**

A process was begun in the autumn of 2012 to choose the architects who would be invited to take part in the competition. There was an ambition to include a broad range of architects, with both recognised names and smaller firms. Through Swedish and international contacts, around 170 architects were proposed to have the experience needed to design the planned Nobel Center. The competition received 142 expressions of interest from architects from across 25 countries and four continents. Twenty architects were invited to

personally present themselves to the evaluation group before twelve architects were finally recommended as participants by the evaluation group. Eleven architects took part in a competition divided into two stages. The competition jury then chose three submissions that were refined in the competition's second stage. In connection with the second stage, the anonymous nature of the first stage ended and the jury could then begin a dialogue with the architects about their submissions and a communication with the general public.





We would like to thank the Laureates for their work and their sacrifice.

They have tried, and they have succeeded to make our destiny better in this world.

FROM RICCARDO MUTIS SPEECH TO THE 2013 NOBEL LAUREATES









# Legendary maestro conducted the 2013 Nobel Prize Concert

The annual Nobel Prize Concert is a project within the framework of Nobel Media's activities and a collaborative endeavor with the Stockholm Concert Hall and the Royal Stockholm Philharmonic Orchestra. Verdi and Respighi were two of the Italian composers whose works were performed during the 2013 concert under the direction of Riccardo Muti, one of the greatest conductors of our time.

**THE ITALIAN REPERTOIRE** has been and remains central to Muti's career, with Verdi and his operas at its heart. When Muti conducted the Royal Stockholm Philharmonic Orchestra for the first time at the Nobel Prize Concert 2013, he did so in a programme comprising of Verdi's "Le Quattro stagioni" from Act III of *I vespri siciliani* (the Sicilian Vespers), Martucci's Notturno Op. 70:1 and Respighi's Pines of Rome. The encore was Verdi's Overture to Forces of Nature.

The Nobel Prize Concert was established as a part of the official Nobel Week Programme in 2005. The aim is to offer an international musical event of the highest quality and to create a TV-production that is suitable for international distribution.

**THE EVENT** is annually produced by Nobel Media and hosted by the Stockholm Concert Hall on December 8. Guests of honour are the current year's Nobel Laureates and their parties, guests of the Nobel Foundation and

members of the Swedish Royal Family. About half of the tickets are offered to the general public.

The event is a classical concert of the highest international standard. Soloists as well as conductors are chosen from the top strata of the world's most prominent performers. The Nobel Prize Concert has featured such stars as cellist Yo-Yo Ma, soprano Renée Fleming, violinist Joshua Bell, pianist Lang Lang together with conductor Vladimir Ashkenazy, Sir John Eliot Gardiner and the Monteverdi Choir, pianist Martha Argerich and conductor Yuri Temirkanov, tenor Joseph Calleja, as well as conductor Christoph Eschenbach.

The Nobel Prize Concert is usually broadcast on Swedish and international television, streamed live online and is currently available as video-on-demand at www.konserthusetplay.se.

**NOBEL PRIZE CONCERT** is externally financed via sponsors and collaboration partners. The main sponsor is DNB.





The Exhibition Nobel Prize: Ideas
Changing the World shows how
Nobel Prize-awarded work has
shaped our world and continues to
change it.







## Ideas Changing the World

In November 2013 the newly produced exhibition *The Nobel Prize: Ideas Changing the World* opened in São Paulo. In connection with the opening, the seminar *Nobel Prize Dialogue* and a lecture in the series *Nobel Prize Inspiration Initiative* were held. A dinner was also held with both Swedish and Brazilian guests in the presence of Sweden's King Carl XVI Gustaf.

the Nobel Museum and Nobel Media beginning cooperation in 2013 with five Swedish companies: Saab, Sandvik, Scania, Volvo and Ericsson. The project consists of an exhibition, a seminar and a lecture in São Paulo and Rio de Janeiro, respectively. In both cities, the exhibition and activities around it serve as a platform for the companies supporting the project. Their shared values concerning innovation, creativity and internationalism are present in both the exhibition and seminar. The project as a whole is aimed at a broad public including students at all levels.

THE EXHIBITION The Nobel Prize: Ideas Changing the World is a new, international travelling exhibition produced by the Nobel Museum. The exhibition focuses on Alfred Nobel, the Nobel Prize, Nobel Laureates and on how Nobel Prize-awarded work has shaped our world and continues to change it. The exhibition includes unique objects and documents, artistic interpretations and advanced exhibition technology. The exhibit clearly shows, like all Nobel Museum exhibitions, that ideas really can change the world. The exhibition consists of five pavilions with five different themes:

The Nobel Prize provides an introduction to the Nobel Prize and its categories. It showcases original objects that reflect the ground-breaking work done by Nobel Laureates.

Alfred Nobel introduces the entrepreneur Alfred Nobel, his inventions and industrial operations and the background to his famous will.

The Nobel Prize over the Decades provides an overview of the history of the Nobel Prize and of the Nobel Laureates and their work. It shows the Nobel Prize's interaction with world events, social development, economic cycles and currents of ideas.

The Nobel Prize in Our Daily Lives demonstrates the link between Nobel Prize-awarded efforts and our everyday lives within such fields as mobile telephony, vaccines and new materials.

The Nobel Prize and the Future invites visitors to discuss how Nobel Prize-awarded discoveries can influence the future and what kind of achievements future Nobel Prizes might recognise.

THE EXHIBITION WAS OPENED by Sweden's King Carl XVI Gustaf on 11 November 2013 at FIESP's (Federação das Indústrias do Estado) offices in São Paulo. Among the guests were delegates from IVA, representatives from Brazilian and Swedish industry and diplomats.

The opening of the exhibition was preceded by the seminar *Nobel Prize Dialogue – Exploring the Future of Energy* with Nobel Laureate and particle physicist David Gross. The seminar was organised by Nobel Media and examined future energy resources, a highly-relevant issue for the audience. The panel consisted of Nobel Laureate and professor David Gross (Physics, 2004), Sérgio Rezende (Brazilian Minister of Science and Technology, 2005-2010), Bernardo Gradin (CEO, GranBio Investimentos) and Professor Semida Silveira (KTH, Stockholm). Approximately 250 specially-invited guests took part.

On 12 November a lecture entitled *Nobel Prize Inspiration Initiative – the Frontiers of Fundamental Physics* was held at the University of São Paulo. About 150 students from various faculties attended the lecture, which was held by Nobel Laureate David Gross.

On 12 March 2014 the same touring exhibition was opened in Rio de Janeiro, at the Getúlio Vargas Foundation (FGV). A seminar and lecture programme was held with Economic Sciences Laureate Erik Maskin as the main guest.

PHOTO: MÁRIO HENRIQUE PINTO





Education is the most powerful weapon which you can use to change the world.

NELSON MANDELA







## The Power of Education

The Nobel Peace Center emphasises dialogue and interaction with young visitors participating in their educational programme. Questions that students find relevant and meaningful are used as a catalyst for a discussion about peace. Practical exercises also play a key role in the teaching which focuses particularly on the mechanisms that cause conflicts and how to resolve them.

CAN PEACE BE TAUGHT? The Nobel Peace Center's Educational Manager Toril Rokseth believes it can. She leads a team of three peace educators, in addition to herself. Three of them are qualified teachers, with a strong educational background, while one is a social worker, with international experience. The team is reinforced by some of the centre's guides, who have received special training to be able to participate in the educational programme. The objective of these educational visits is that the students should obtain some new ideas and new insights, not necessarily to get answers to complex questions. During 2013 alone, the team held sessions for 970 school groups.

**THE NOBEL PEACE CENTER** develops and customises two to three brand new educational programmes each year. The programmes are based on the exhibitions being staged at the centre, as well as on the Norwegian national curriculum.

"For many children and young people, peace and human rights is not something that affects them. War and human rights violations happen far away," says Toril Rokseth. "By focusing on the pupils' own experiences as our starting point, we illustrate the universality of the desire for peace, and create a safe environment necessary to give young people the courage to share their views and attitudes in interaction with each other".

**THE MAIN FOCUS** of the educational programme is to encourage the participants to become responsible, socially aware citizens by using the Nobel Peace Laureates' work as a starting point for an exploration of democracy and human rights. During the past year, many students participated in the programme called *Talk*, *don't shoot!* which was based around the exhibition presenting the 2012 Nobel Peace Prize Laureate the European Union.

The interest for the various educational programmes is growing even though marketing activities are modest, comprising no more than an electronic newsletter sent out to schools when a new programme has been developed. The success is depending on high quality programmes, focused communication and the word of mouth between teachers and school administrators who much appreciated their visit to the Nobel Peace Center and recommends other to do the same.

CHILDREN SITTING ON THE FLOOR, PHOTO: JOHANNES GRANSETH ©NOBEL PEACE CENTER

DALAI LAMA, PHOTO: HÅKON MOSVOLD LARSEN ©NOBEL PEACE CENTER

OTHER PHOTOS: SARA JOHANNESSEN ©NOBEL PEACE CENTER





If I have 300 ideas in a year and only one turns out to be of use, I'll be pleased.

ALFRED NOBEL





## Alfred Nobel

Alfred Nobel was an inventor and entrepreneur and also a very successful businessman, continually travelling between his factories. To many people's surprise, he left a large part of his fortune to the establishment of a prize that would reward outstanding efforts within the different fields that interested him most during his life.

ALFRED NOBEL WAS BORN in Stockholm in 1833. His father, Immanuel, was an inventor and engineer and his mother, Andriette, came from a wealthy family. When Immanuel's company went bankrupt, he moved to Russia and found success within the war industry. In 1842 the rest of the family followed and Alfred and his brothers received a first-class education there from private tutors. At 17 years of age, Alfred spoke five languages: Swedish, Russian, English, French and German.

At the time he was interested in poetry, and also wrote his own works. His father disliked Alfred's interest in literature and sent him abroad for studies focusing on the natural sciences.

ALFRED VISITED a number of countries and finally ended up in Paris, where he studied chemistry under Professor T. J. Pelouze. It was there that Alfred first came in contact with nitroglycerine, which was invented by the Italian Ascanio Sobrero. It was a highly explosive liquid that was considered too dangerous to use. Alfred Nobel returned to Sweden and soon began experimenting with nitroglycerine. These experiments were dangerous and led to several fatal accidents. In one of these, Alfred's younger brother Emil was killed. Nobel finally solved the problem of handling this highly volatile liquid by mixing it with a type of sand, kieselguhr. The result was a formable mass that was easy to package and that could be shipped and handled safely. The substance was patented in 1867 under the name dynamite. With the patenting of different forms of dynamite, together with the detonator that he had invented previously, Alfred Nobel achieved his major technical and industrial breakthrough.

**ALFRED NOBEL QUICKLY EXPLOITED** his inventions commercially 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, Nobel held a total of 355 patents and left behind an enormous fortune.

Alfred 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 interwove his religious doubt with a belief in the natural sciences; he was a true optimist about technology and an entrepreneur who actively took part in the industrialisation process.

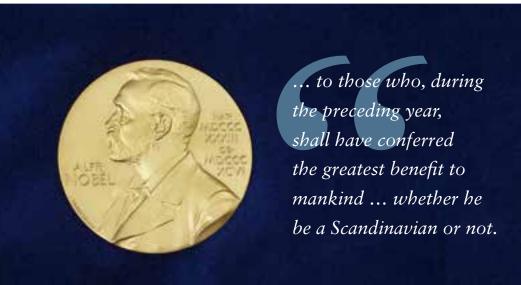
ALFRED NOBEL DIED on 10 December 1896 in his home in San Remo, Italy, and his will attracted significant attention when it was published. He had left most of his fortune for the use of awarding outstanding efforts within physics, chemistry, physiology or medicine, literature and peace. His will was challenged by relatives, authorities in several countries and by Sweden's King Oscar II.

Subsequently, a long process to realise Alfred Nobel's vision began. After a few years of complicated processes led by the executors of the will, Ragnar Sohlman and Rudolf Lilljequist, the Nobel Foundation was formed in 1900 and the first Nobel Prizes were awarded the following year.

Alfred Nobel is buried at Norra Begravningsplatsen, just outside of Stockholm.

PHOTO OF ALFRED NOBEL BUST: HANS MEHLIN











## The Nobel Prize

When Alfred Nobel's will was read, it caused something of a sensation and was widely reported on in international media and debated extensively. It stated that his fortune was to be used as an endowment, the interest on which would be awarded "... to those who, during the preceding year, shall have conferred the greatest benefit to mankind ... whether he be a Scandinavian or not".

**IN ACCORDANCE** with Alfred Nobel's wishes, five Nobel Prizes were established: in physics, chemistry, physiology or medicine, literature and peace. These five categories are a unique mix of disciplines. They make the Nobel Prize an interdisciplinary prize and reflect both Alfred Nobel as a person and the interests and activities that engaged him during his lifetime.

His will clearly stated that no regard should be given to the recipient's nationality, a condition that was widely debated in Sweden, which at the time was strongly marked by nationalist sentiment. Nobel's will also specified the prize-awarding institutions: the Royal Academy of Sciences would select the Laureates in Physics and Chemistry, Karolinska Institutet would be responsible for the prize in Physiology or Medicine, the Swedish Academy would oversee the prize in Literature and a committee selected by the Norwegian Parliament (Storting) in Oslo would select Peace Prize Laureates.

THE SVERIGES RIKSBANK PRIZE in Economic Sciences in Memory of Alfred Nobel was established in 1968, on the occasion of the Riksbank's (Sweden's central bank) 300th anniversary. The first prize was awarded the following year. The Royal Academy of Sciences is responsible for selecting Economic Sciences Laureates according to the same principle as the prize in Physics and Chemistry. The prize in Economic Sciences differs from the other prizes mainly in the sense that it is financed by Riksbanken.

**THE REASON WHY** Alfred Nobel decided that the Peace Prize should be awarded in Norway and that the committee should be elected by the Norwegian Parliament (Storting) is not specified in his will, nor is it mentioned in any other

document. Nobel may have taken into consideration the fact that Sweden was unified with Norway at the time and that one of the prize-awarding institutions should therefore be based there. He may also have believed that Norway was better positioned to nominate Nobel Laureates. Norway did not have their own foreign policy, nor the same military traditions and strong links to the Royal Court as Sweden. And at the close of the 19th century, the Norwegian Parliament (Storting) was also strongly committed to the Inter-parliamentary Union and its work in support of conflict resolution.

**OVER THE YEARS**, the Nobel Prize has acquired a unique standing for a number of reasons. One is that it is considered to be the first ever international prize, in as much as Nobel's will directs that no regard be given to nationality in the selection of Laureates. Another is that the prize money awarded has often been substantial. But most important is probably the prize-awarding institutions' independent work of selecting Laureates – a task which isperformed with the highest level of expertise and integrity.

At most, three Laureates may share any one Nobel Prize and each receives their share of the prize money, a diploma and a medal. The Nobel Prize Medals for physics, chemistry, physiology or medicine and literature were created by engraver Erik Lindberg. Norwegian sculptor Gustav Vigeland fashioned the Peace Prize Medal, while the Economics Prize Medal was designed by Gunvor Svensson-Lundqvist.

**ALL LAUREATES** are invited to Stockholm or Oslo, to give a Nobel Lecture and to receive the prize. Since 1901, 876 Laureates have been selected, of which 847 are individuals and 22 are organisations.

THE NOBEL PEACE PRIZE CEREMONY, PHOTO: KEN OPPRANN THE NOBEL PRIZE AWARD CEREMONY, PHOTO: ALEX LJUNGDAHL ARIEH WARSHEL, PHOTO: ALEXANDER MAHMOUD NOBEL PRIZE MEDAL<sup>®</sup>

## THE ORGANISATION SURROUNDING THE NOBEL PRIZE

The Nobel Prize is surrounded by several organisations and institutions with different tasks related to the prize. Over the past decade, the organisational structure has grown, particularly in areas aimed at spreading information and knowledge about the Nobel Prize.

#### WHO FINANCES THE NOBEL PRI7F?

The Nobel Prize is financed by the **NOBEL FOUNDATION**, a private institution established in 1900 based on the will of Alfred Nobel.

The main task of the Nobel Foundation is to manage the assets made available through the will and the intellectual property related to the Nobel Prize that has developed over the years. The Foundation finances both the work of the prize-awarding institutions in selecting the Nobel Laureates and the prize money. The Nobel Foundation is not involved in the nomination or selection of the Nobel Laureates

#### WHO SELECTS THE NOBEL I AURFATES?

The process of independently and expertly selecting the Nobel Laureates, in accordance with Alfred Nobel's intentions, is exclusively handled by the Nobel Prize-awarding institutions named in

#### THE ROYAL SWEDISH ACADEMY OF

**SCIENCES** – the Nobel Prizes in Physics and Chemistry and Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel

THE NOBEL ASSEMBLY AT KAROLINSKA **INSTITUTET** – the Nobel Prize in Physiology or Medicine

THE SWEDISH ACADEMY - the Nobel Prize in Literature

#### THE NORWEGIAN NOBEL COMMITTEE

- a committee of five persons appointed by the Norwegian Parliament (Storting) the Nobel Peace Prize

Read more about the prize-awarding institutions and how they select Nobel Laureates on page 24.

#### INFORMATIONAL ACTIVITIES **RELATED TO THE NOBEL PRIZE**

The Nobel sphere also includes a number of externally financed entities with the primary task of disseminating information about the Nobel Prize and inspiring people around the world through the stories of the Nobel Laureates. The non-profit Nobel Foundation Rights Association serves as an umbrella organisation for the following six entities:

NOBEL GROUP INTERESTS AB, Stockholm

NOBEL MEDIA AB, Stockholm

NOBEL MUSEUM AB, Stockholm

NOBELHUSET AB, Stockholm

**NOBEL PEACE PRIZE RESEARCH & INFORMATION AS.** Oslo

#### NOBEL PEACE CENTER FOUNDATION, Oslo

The above entities are all externally financed, e.g. through contributions from state or local authorities, educational organisations or philanthropic organisations or through collaborations with companies.

The companies within the Nobel sphere have no influence over or access to the nomination or selection procedures of the Nobel Prize. Only after the public announcement of the Nobel Laureates can these organisations begin spreading information about each year's Laureates.

#### ORGANISATIONAL STRUCTURE, MARCH 2014

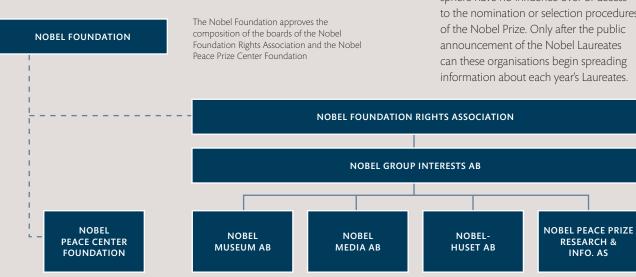


Photo: Orașis >





## INSTITUTIONS SELECTING THE NOBEL LAUREATES

IN HIS WILL, Alfred Nobel stipulated which institutions should select Nobel Laureates in each prize category. He probably chose the academic institutions that he considered to be best suited to the task. Alfred Nobel was less specific regarding the organization that was to manage his assets. What would eventually become the Nobel Foundation was only mentioned in his will as "a fund".

The Nobel Prize's unique international standing depends largely on the century-long, independent work of the prize-awarding institutions in selecting Nobel Laureates. The fact that these organisations have engaged 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 Laureates in Physics and Chemistry. The Royal

Swedish Academy of Sciences also selects the recipient(s) 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 approximately 440 Swedish and 175 foreign members.

The Nobel Assembly at Karolinska Institutet selects the Nobel Laureates in

Physiology or Medicine. The Assembly has 50 members.

The Swedish Academy selects Nobel 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 elected for a term of three years and may sit for a maximum of three consecutive terms. The Nobel Committees evaluate nominations for the respective Nobel Prizes and conduct extensive evaluations concern-

ing a selection of these nominees.

The Nobel Committees subsequently present their proposals for Nobel Laureates to their respective prize-awarding institutions. As such, the actual decision as to who will be awarded a Nobel Prize is not made by the respective Nobel Committee, but by all members of the prize-awarding institution.

Concerning the Peace Prize,
Alfred Nobel assigned the Storting
(national parliament) in Norway as the
prize-awarding institution. The Storting
appoints the five members of the Norwegian Nobel Committee. The Norwegian
Nobel Committee differs from the other
prize-awarding institutions in as much
as it is responsible both for assessing
the nominees and selecting the final
recipient(s).

**IN SEPTEMBER OF EACH YEAR** the respective Nobel Committees send out individual invitations to thousands of



#### SELECTING NOBEL LAUREATES



members of academies, university professors and other scientists in numerous countries, previous Laureates, members of parliamentary assemblies and others. The recipients are chosen in such a way so as to ensure that as many countries and universities as possible are represented over time. Those who receive an invitation have the opportunity to nominate Nobel Prize 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 similar for all prize categories. The Committees first confirm that the nominations have been 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 person in the same year. Nominations are recorded and compiled in a list. This list is processed in a series of phases during the spring. Initially, it consists of a large selection of names, which is then gradually narrowed down to a smaller number of candidates. These 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 Laureates for the year's Nobel Prizes. Proposals are presented to the members of the prize-awarding institutions in September.

The final selection of Nobel Laureates is conducted by a vote. The final decisions are announced by the respective prize-awarding institutions immediately after voting, usually during the first half of October. According to the Nobel Foundation's statutes, prizes can be equally shared between two works, though by no more than three individuals. All documents related to the nomination process and evaluations are kept 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

GÖRAN K HANSSON, PHOTO: JINGCHENG ZHAO, ©MEDICOR PRESS CONFERENCE AT THE ROYAL SWEDISH ACADEMY OF SCIENCES, PHOTO: VICTORIA HENRIKSSON, © THE ROYAL SWEDISH ACADEMY OF SCIENCES

### THE NOBEL FOUNDATION

THE NOBEL FOUNDATION is a private institution established in 1900 based on the will of Alfred Nobel and the founding statutes promulgated in connection with the will. One central task of the Foundation is to protect the common interests of the prize-awarding institutions and represent all the Nobel institutions externally. This includes, for instance, broad informational activities aimed at disseminating knowledge about the Nobel Prize and preserving the trademarks that have been established during more than a century in conjunction with the awarding of the Nobel Prize.

The Foundation also manages the assets made available for awarding the Nobel Prizes in such a way as to safeguard the economic base and guarantee the independence of the Nobel Prize-awarding institutions in their work of selecting Laureates.

The Nobel Foundation's work intensifies during the autumn in connection with the Nobel Week that takes place in Stockholm in December. This is a week that includes a busy schedule for Nobel Laureates and that culminates in the Nobel Prize Award Ceremony and the Nobel Banquet held on December 10. Both of these events are planned and organized by the Foundation.

The Nobel Foundation is also responsible for the publication of the Nobel Lectures on Nobelprize.org, the official website of the Nobel Prize, and administering and funding the Nobel Symposia within each prize category. In 2013 one Nobel Symposium was held,

Large Hadron Collider, NS 154, which was organised by Professor Tord Ekelöf.

**THE NORWEGIAN NOBEL INSTITUTE** was established in 1904 and serves as the Norwegian Nobel Committee's Secretariat and the Nobel Foundation's representative in Oslo. The institute administers the activities related to the awarding of the Nobel Peace Prize, such as the prize ceremony and the banquet.

**THE MARKET VALUE** of the Nobel Foundation's invested capital amounted to SEK 3.437 billion at the end of 2013. Investment capital is distributed as 56 per cent equities, 15 per cent fixed-income assets and 29 per cent alternative assets. This year, returns on invested capital were 16.4%.

The overall sum of all Nobel Prizes and operating expenses was SEK 99.6 million. This was divided among three main categories: the prizes and compensation to the prize-awarding institutions (SEK 66 million); the Nobel Week in Stockholm and Oslo (SEK 16.4 million); and administration, the Nobel Symposia, etc. (SEK 17.2 million). Additional information on the Nobel Foundation's financial management is available in the Foundation's annual report for 2013, which is available at Nobelprize.org.

**THE NOBEL PRIZE** awarding institutions elect, for two calendar years, fifteen trustees to the Nobel Foundation. Six representatives are chosen by the Academy of Sciences and the other three by each of the other prize-awarding institutions.

The Academy of Sciences also appoints four deputies and the other institutions two deputies each. The trustees elect a Chairman from their own number. The trustees' most important task is to appoint the Nobel Foundation's Board and to audit the Nobel Foundation's accounts. At its annual meeting, held in late April, the trustees approve the previous year's accounts and discharge the Nobel Foundation's Board of Directors from personal liability.

The Nobel Foundation's administration and its accounts are audited annually by six auditors, who work together in the so-called "auditing team". The trustees elect one of the Foundation's auditors, who must be an authorised public accountant. Other auditors are elected by the prize-awarding institutions, except for the chairman, who is appointed by the government. All auditors are elected for a term of one year.

#### THE NOBEL FOUNDATION'S BOARD IS

based in Stockholm and consists of seven members and two deputy members elected by the Trustees of the Nobel Foundation. Board members and deputies are appointed for a term of two years each. From among its own members, the Board chooses a Chairman, a Vice Chairman and an Executive Director.

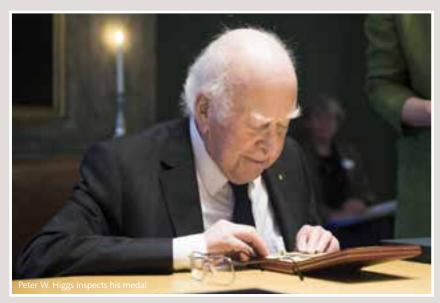
Mr Marcus Storch, MD h.c., regular member of the Nobel Foundation's Board since 1996 and Chairman since 2005, resigned on 1 May 2013 as his term expired upon turning 70. Professor Carl-Henrik Heldin was elected as the new Chairman from 1 May, 2013.

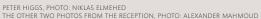














#### NOBELSTIFTELSEN

The Nobel Foundation

No. of employees: 11

**Executive Director:** Lars Heikensten

Established: 1900

Corporate ID: 802002-4462 Address: Sturegatan 14, Stockholm,

Sweden

**Contact:** media@nobel.se,; +46 (0)8-663

09 20

**Website:** www.nobelprize.org/nobel\_organizations/nobelfoundation/

#### BOARD OF DIRECTORS 2013

Marcus Storch, MD h.c., Chairman (until 30 April 2013)

Carl-Henrik Heldin, Professor, Chairman (from 1 May 2013)

**Göran K. Hansson,** Professor, Vice Chairman, Secretary of the Nobel Committee for Physiology or Medicine

Lars Heikensten, Dr, Executive Director of the Nobel Foundation

Peter Englund, Professor, Permanent Secretary of the Swedish Academy

Tomas Nicolin, MSc

Kaci Kullmann Five, Adviser, Deputy Chair of the Norwegian Nobel Committee

**Staffan Normark,** Professor, Permanent Secretary of the Royal Swedish Academy of Sciences

Lars Bergström, Professor, Secretary of the Nobel Committee for Physics, Deputy Member

**Astrid Gräslund,** Professor, Secretary of the Nobel Committee for Chemistry, Deputy Member

### NOBEL MEDIA AB

REPLATE TASK OF NOBEL MEDIA is to spread knowledge about Nobel Prize-awarded achievements and to stimulate interest in science, literature and peace in line with Alfred Nobel's vision and legacy. To safeguard the long-term position of the Nobel Prize, the company develops a range of media rights and productions: Nobelprize.org, the Nobel Prize Concert, and a series of international lecture events and conferences. The company also manages a portfolio of publishing licenses, footage sales, and live broadcast rights to the Nobel Prize Award Ceremonies.

NOBELPRIZE.ORG is the official website of the Nobel Prize. In 2013, the site recorded 23 million visitors and underwent a major redesign to improve accessibility, navigation and responsiveness to smartphones and tablet browsers. A greater focus on social media has furthermore yielded up to a 500% increase in the number of followers.

The website presents all Nobel Prizes since 1901. Visitors can explore the Laureates' achievements and life stories through a collection of Nobel Lectures, biographies, interviews, photographs, articles and video clips. Each year, Nobelprize.org features live streams from the prize announcements in October and the award ceremonies in Stockholm and Oslo on December 10. The site also serves as a platform for Nobel-related news. The educational section includes

some 50 interactive knowledge-based games, primarily aimed at secondary school students.

As part of Nobel Media's ambition to make its content widely accessible across a range of digital platforms, a brand new podcast series entitled *Nobel Prize Talks* was launched in late 2013. The interviews provide the listener with a unique insight into the Nobel Laureates' drive and creativity. The episodes, freely available on Nobelprize.org and iTunes, have since reached the top ten charts under the category of Science and Medicine in the iTunes Stores of Canada, Japan, Portugal, USA and the UK.

TO PRODUCE THE ANNUAL live broadcasts from the Nobel Prize ceremonies in Stockholm and Oslo. Nobel Media commissioned the Swedish public broadcaster Sveriges Television (SVT) and the Norwegian Broadcasting Corporation (NRK). Copyright and international distribution rights to these programmes are managed by Nobel Media and made accessible to global broadcasters via international news agencies and the European Broadcasting Union. For the ninth consecutive year, Nobel Media also organised the Nobel Prize Concert, to which a special section of this review is devoted (pages 12-13).

**IN 2013,** the official Nobel Week programme in Sweden was extended from Stockholm to Gothenburg where

Nobel Media held its second Nobel Week Dialogue. This free to attend, all day seminar seeks to give the wider public the chance to meet with scientists and engage in discussion of global issues that concern us all. The 2013 edition themed Exploring the Future of Energy featured a truly unique constellation of six Nobel Laureates, world-leading scientists, policy makers and thought leaders coming together with the interested general public to discuss global energy challenges. The event was live-streamed to global audiences via www.nobelweekdialogue.org.

OTHER ANNUAL lecture events include the Nobel Prize Inspiration Initiative, through which Nobel Laureates get to share their experiences and inspiring stories with students and fellow scientists. In 2013, three such events were held Russia, USA and Brazil. Nobel Media's presence in Brazil also included a specially produced Nobel Prize Dialogue seminar that preceded the opening of the Nobel Museum's travelling exhibition The Nobel Prize: Ideas Changing the World. You can read more about the Brazil events on pages 14–15.

NOBEL MEDIA'S main sponsors and partners are Akamai, AstraZeneca, Carl Bennet AB, the City of Gothenburg, DNB, Ericsson, Region Västra Gotaland, SAAB, Sandvik, the Stockholm Concert Hall Foundation and Volvo.











#### PROGRAM 2014

Editions of Nobel Prize Dialogue and Nobel Prize Inspiration Initiative are held in Rio de Janeiro, Brazil, with the participation of Economic Sciences Laureate Eric Maskin

#### OKTOBER

Nobelprize.org broadcasts the 2014 Nobel Prize Announcements live

Nobelprize.org interviews the 2014 **Nobel Laureates** 

Nobelprize.org broadcasts the Nobel Lectures live

#### 8 DECEMBER

Nobel Prize Concert at the Stockholm Concert Hall

#### 9 DECEMBER

The open science seminar Nobel Week Dialogue at the Stockholm City Conference Center

> The podcast Nobel Prize Talks

#### 10 DECEMBER

Live broadcasts from the Nobel Prize Award Ceremonies in Stockholm and Oslo

#### 11 DECEMBER

Taping of the discussion program Nobel Minds produced by the BBC

As part of the Nobel Prize Inspiration Initiative several Nobel Laureates participate in an international seminar programme at different universities and AstraZeneca research centers around the world. During 2014 several lecture series will take place in Brazil, Denmark, China, Great



### Nobelmedia

No. of Employees: 11 in Stockholm and 3 in London

Turnover: SEK 40,579K

**CEO:** Mattias Fyrenius (from February 2013)

Established: 2004

Corporate ID No.: 556667-5194

Address: Sturegatan 14, Stockholm, Sweden Contact: info@nobelmedia.se, +46 8 663 17 22

Website: www.nobelprize.org/nobel\_

organizations/nobelmedia

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Ove Joanson, CEO of Media Conglomerate

Lisa Lindström, CEO of Doberman

Geir Lundestad, Professor, Director of the Norwegian Nobel Institute

Marie Nilsson, CEO of Mediavision

Eva Swartz Grimaldi, Chairman of Norstedts Publishing Group (until April 2013)

Gunnar von Heijne, Professor, former Chairman of the Nobel Committee for Chemistry

Barbro Jonsson, Head of Administration, Nobel Foundation, Deputy Member

ANNA-KARIN HATT AND THE PANEL, PHOTO: ALEXANDER MAHMOUD ROBERT J. SHILLER, MARIO J. MOLINA AND NOBEL MINDS, PHOTO: NIKLAS ELMEHED

### NOBEL MUSEUM AB

THE MISSION OF THE NOBEL MUSEUM IS

to safeguard the Nobel Prize's standing in the long-term through museum, educational and research efforts related to the Nobel Prize. The museum aims to spread knowledge about the fields that Alfred Nobel mention in his will. The Museum is also intended to be a cultutal center and mulifaceted meeting place where visitors can attend lectures, family programmes and much more. The operations are currently run in temporary premises at the Old Stock Exchange at Gamla Stan in Stockholm.

ONE OF THE MUSEUM'S LARGEST events in 2013 was an exhibition about Tomas Tranströmer's works, To Go into Reality Itself, which was displayed between 16 February and 2 June. The exhibition, which was produced against the backdrop of the 2011 Nobel Prize in Literature, as awarded to the Swedish author, was developed through close collaboration with the Tranströmer family and with Tomas in particular. A large number of personal photos and objects never before shown to the public were displayed and these contributed to a unique, comprehensive presentation of Tranströmer's writing. Central to the exhibition were also one hundred bindings, beautifully bound by bookbinders from about 20 countries.

On 15 June the *Making Peace* exhibition was opened. This exhibition was produced in celebration of the 100th anniversary of the International Peace Bureau (1910 Nobel Peace Prize) and remained on display until 19 November. In connection with the exhibition, Jody Williams (1997 Nobel Peace Prize) gave

a talk at the museum about her work to combat landmines. The exhibition was also visited by Mairead Corrigan (1976 Nobel Peace Prize).

At the end of September, the Nobel Museum, together with the IPCC (2007 Nobel Peace Prize), organised a public programme on the new climate report that was presented in Stockholm. Because of great interest, the event was moved to Kulturhuset where a full auditorium, together with thousands of online viewers, was updated on the latest research. The Nobel Museum wants to serve as a platform for these types of activities, but this requires much larger facilities.

From 3 October the Nobel Museum exhibited the architectural proposals for the new Nobel Center at Blasieholmen. The drawings and models attracted a large number of visitors, both architects as well as the general public. The exhibition will continue until the competition is concluded.

FOR THE THIRD CONSECUTIVE YEAR, the Nobel Museum has collaborated with Beckmans College of Design in Fashion Innovation 3. The college's fashion students were invited to create items of clothing inspired by the 2013 Nobel Prize. The Nobel Museum also initiated a collaboration with students from the Royal College of Music, who composed music with the same theme.

There were also several small exhibitions opened during the year, including presentations of this year's Nobel Prize Diplomas, a photo exhibit with molecular structures, and others. Major investments have also been made to update the permanent exhibition.



**INTERNATIONALLY**, the museum has conducted several activities. The Sketches of Science exhibition has been shown in Germany, Singapore and Malaysia. In November, The Nobel Prize: Ideas Changing the World exhibition opened in São Paulo, Brazil. More about this on page 14. A number of talks and seminars were organised in China and in India, with a particular focus on Alfred Nobel and the Nobel Prize, but also on the creativity programme Spark of Creativity. In Stockholm about 60 programmes were organised for the general public in the form of Science Café, Literature Talks, Research in Focus, Afternoon Tea, film screenings, family days, theatre performances, tours for the visually impaired and more. The 183,000 visitors to the Nobel Museum in Stockholm during 2013 enjoyed a rich and multifaceted programme. This is the museum's highest annual number of visitors ever. Unfortunately, the museum must once again note that many school classes were unable to visit the museum due to lack of space.

THIS DYNAMIC RANGE of activities would not be possible without the support of the City of Stockholm and the ministries of culture and education. Handelsbanken and Samsung Electronics were the Nobel Museum's main sponsors during 2013. Akzo Nobel, Bonnier AB, Postkodlotteriet and Svenskt Näringsliv were project sponsors and the Swedish Research Council and the Swedish Foundation for Strategic Research also contributed funds to the museum's research efforts.









#### 2014 PROGRAMME & EXHIBITIONS

#### 18 FEBRUARY

Research in Focus - The discovery of the Higgs Particle

#### 8 MARCH

Full day in connection with the International Women's Day with talks by, among others, Tawakkol Karman (2011 Nobel Peace Prize), tours and discussions

#### 25 MARCH

#### Science Café

Creativity, a Path to Success?

#### 6 APRIL

#### Family Day about crystallography

The year of crystallography in focus with family activities

#### 9 MAY - NOVEMBER

#### Ideas Changing the World

An exhibition about the Nobel Prize in our everyday lives and in the future. Programme in connection to the exhibition

#### 15 MAY - 19 OCTOBER

#### Erik Axel Karlfeldt

Author Erik Axel Karlfeldt is presented is in a small exhibition on the occasion of the 150-year jubilee of his birth

#### 16 OCTOBER

Presentation of the 2014 Nobel Prizes

#### 21 OCTOBER

The birthday of Alfred Nobel in focus

#### 2 DECEMBER - MARCH 2015

Fashion Innovation – an exhibition in which Beckmans College of Design and the Royal College of Music will interpret the 2014 Nobel Prizes

#### 10 DECEMBER

#### Gold, Sparkles and Champagne Celebrate the Nobel Day at the Nobel Museum

Selection of events. For a complete calendar, visit www.nobelmuseum.se

### Nobel Museum

No. of employees: 41

Turnover: SEK 53,816 K

**Museum Director:** Olov Amelin, Ph.D. **Established:** 2004. Prior to this, activities were conducted within the Nobel Foundation Rights Association

**Corporate ID No.:** 556667-5210

Address: Stortorget 2, Stockholm, Sweden

**Contact:** info@nobelmuseum.se, +46(0)8-534 818 00

Website: www.nobelmuseum.se

#### **BOARD OF DIRECTORS 2013**

Lars Heikensten, Dr, Executive Director of the Nobel Foundation, Chairman

**Jim Bennett,** Professor and former Director of the Museum of the History of Science in Oxford

Peje Emilsson, Chairman, Kreab Gavin Anderson

Barbro Osher, Honorary Consul General of Sweden in

Nina Wormbs, Associate Professor, Royal Institute of Technology (KTH)

**Per Molander,** Director General, Swedish Social Insurance Inspectorate

Klas Kärre, Professor, Deputy Chairman for the Nobel Assembly at Karolinska Institutet

**Barbro Jonsson,** Head of Administration at the Nobel Foundation, Deputy Member

JODY WILLIAMS, PHOTO: NIKLAS ELMEHED, THE TRANSTRÖMER EXHIBITION, PHOTO: ÅKE E:SON LINDMAN EUGENE F. FAMA, PHOTO: JONAS EKSTRÖMER/TT, THE OTHER PHOTOS: HANS NILSSON

## NOBEL PEACE CENTER FOUNDATION

**EXHIBITIONS,** guided tours, events and family activities make the Nobel Peace Center an arena for learning, reflection and debate about war, peace and conflict resolution. The permanent exhibitions tell the story of Alfred Nobel, and present the Nobel Peace Laureates and their ground-breaking work. The temporary exhibitions showcase aspects of the Nobel Peace Laureates' lives and highlight topical issues of the day.

For nine years the Nobel Peace Center has been an internationally renowned museum, and an important Norwegian tourist attraction. The center is a vibrant and active house, and provide a unique setting for a wide range of activities, like seminars, debates and children's activities.

**IN 2013** the Nobel Peace Center staged eight exhibitions, a number of individual events and an extensive educational programme. This resulted in a record 225,466 visitors. Most of the events were also streamed live online. Several of the Nobel Peace Center's exhibitions were also shown abroad. The exhibitions and events staged in 2013 were very well received in both the Norwegian and international media.

Until 17 February, the public were able to learn more about Mahatma Gandhi and his philosophy of non-violent activism in the exhibition *Eye on Gandhi*. The comprehensive exhibition

consisted of two parts: The self-produced ABC of Gandhi, on his life and work, and the photo series *In India* by legendary photographer Henri Cartier-Bresson. A number of activities were linked to this exhibition with a particular extensive programme during the opening weekend.

The exhibition *Cartoons in Conflict* took a different look at the Middle East conflict. The exhibition comprised 40 caricatures by 29 artists from 23 countries, and was a collaboration with The Parents Circle Families Forum. The 2012 Peace Prize Exhibition, entitled *Europe from War to Peace*, was also showed at the Center during 2013.

From 7 March until 15 September, visitors could explore 'European identity', through the camera lenses of 12 young European photographers in the exhibition European Photo Exhibition Award 01 – European Identities. The exhibition was also shown in Hamburg, Lucca, and Paris. The initiative for the exhibition came from four European charitable foundations, including Fritt Ord Foundation. A photo competition on Instagram for young people, called #hvemerjeg, was arranged in connection to the exhibition.

The photo exhibition What the World Eats opened On 27 September. In this exhibition visitors were invited into the kitchens of families from around the world, including Norway. Over a period of 13 years, photographer Peter Menzel and writer Faith D'Aluisio have travelled

the globe, taking portraits of ordinary families and making a photographic record of their weekly food consumption.

In connection with the death of Nelson Mandela on 5 December, the Nobel Peace Center created a memorial wall, and opened a digital book of condolence for those who wished to pay their last respects.

#### IN THE NOBEL PEACE PRIZE EXHIBITION

2013, Magnum photographer Paolo Pellegrin was commissioned to document the OPCW inspectors' work in Libya, Serbia and Belgium. The exhibition *Combating Chemical Weapons* was opened on 11 December by the Secretary General of the OPCW, Ambassador Ahmet Uzümcü. Together with the series of photographs, the Peace Center also show the equipment the inspectors use as they go about the difficult and dangerous task of finding and eliminating chemical weapons.

On the 100th anniversary of the birth of Willy Brandt, 18 December 2013, the Nobel Peace Center opened a small exhibition featuring documentary photos and caricatures to honour the Nobel Peace Laureate from 1971.

The Nobel Peace Center's main sponsors and partners are Hydro, Telenor Group, ABB and the Football Association of Norway.

#### PROGRAMME 2014

3 MARCH

The European Photo Exhibition Award 02 / The New Social – with *Eyes on Europe* twelve selected photographers interpret social, cultural and political changes in Europe

14 MAY

Be Democracy - An exhibition on how social media are affecting society and shifting the balance of power

4 JUNE

2010 Liu Xiaobo - a small exhibition on the 2010 Nobel Laureate

22 SEPTEMBER

Martin Luther King Jr. – a small exhibition on the 1964 Nobel Laureate

12 DECEMBER

The 2014 Nobel Peace Prize Exhibition Free entrance 12 - 30 December

FREE ENTRANCE DURING SEVERAL LOCAL EVENTS, INCLUDING

27 APRIL

Tourist in your own city

27 JUNE

Celebrating EuroPride Festival 17 AUGUST

Mela - World Performing Art Festival

12 SEPTEMBER
Oslo Culture Night

Programme selection, for the calender in full, please visit www.nobelpeacecenter.org











### **Nobel Peace Center**

No. of employees: 27,6 Turnover: NOK 50,800K **CEO:** Bente Erichsen Established: 2005

**Corporate ID No.:** 985226237

Adress: Brynjulf Bulls Plass 1, Rådhusplassen, Oslo, Norway Contact: post@nobelpeacecenter.org,

+47 48 30 10 00

Website: www.nobelpeacecenter.org

#### BOARD OF DIRECTORS 2013

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THE BUILDING AND THE OPCW/PHOTOGRAPHER PHOTO, FOTO: SARA JOHANNESSEN © NOBEL PEACE CENTER THE OTHER PHOTOS: JOHANNES GRANSETH © NOBEL PEACE CENTER

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# NOBEL PEACE PRIZE RESEARCH & INFORMATION AS

2013 WAS AN EVENTFUL YEAR for Nobel Peace Prize Research & Information. the research division of the Norwegian Nobel Institute. The company's work is financed through revenue from the Nobel Peace Prize Concert and through a licensing agreement with the Mint of Norway. Its activities revolve around research into peace and conflicts that complements the work of the Nobel Committee. In addition, the company also organises an annual visiting fellows programme, lectures and seminars. The unit also hosts the Nobel Institute's annual teachers' seminar, a tradition that dates back to 1949. At the 2013 teachers' seminar, 28 selected primary school teachers from throughout Norway participated in an intensive three-day seminar on a multipolar world, led by the country's most respected historians and political scientists.

#### THE VISITING FELLOWS PROGRAMME Was

revived in the early 1990s as an extension of the Institute's original ambition to be a meeting place in direct contact with the latest developments in international relations. The theme for the 2013 programme was A World Renewed: Examining the Post-Cold War Legacy. Its researchers focused on the legacy of the two decades that have passed since the fall of the Berlin Wall, which aspects of the international post-Cold War community have proved enduring and which philosophies and frameworks have proven less enduring. Twelve leading economists, political scientists, historians, policy makers and journalists from Asia, Europe and America were invited to discuss these issues and to conduct research at the Nobel Institute in Oslo. Their work culminated in a series of popular seminars held at the Institute in the spring of 2013. The seminars were open to the public.

ON 11 DECEMBER the organisation produced the Nobel Peace Prize Concert in co-operation with IMG at Oslo Spektrum arena; a musical tribute to this year's Nobel Peace Prize Laureate the Organisation for the Prohibition of Chemical Weapons (OPCW). The concert was co-hosted by actors Claire Danes and Aaron Eckhart and featured performers Mary J. Blige, James Blunt, Jake Bugg, Timbuktu, Morrissey, Omar Souleyman, Zara Larsson and Envy, among others. The concert's Global Sponsors were Thomas L. Pearson and the Pearson Family Members Fund.

#### PROGRAMME 2014

NOBEL SYMPOSIA 157

Does the rise and fall of great powers lead to conflict and war?

JUNE 19

Rise and fall of great powers – the liberal and realist case

Stephen Walt, Harvard University, and G. John Ikenberry, Princeton University

Rise and fall of great powers - the uses of history Geir Lundestad, the Norwegian Nobel Institute, Michael Cox, London School of Economics

The 'peaceful rise' of China and views from its neighbors

Jonathan Holslag, Vrije Universiteit Brussels, and Akihiko Tanaka, Japan International Cooperation Agency JUNE 20

What Role for China in the Global Order? David Shambaugh, George Washington University, Zhang Ruizhuang, Nankai University

US Foreign Policy: What role do the Americans and Europeans see for China? Aaron Friedberg, Princeton University, and Zaki Laidi, Sciences Po, Paris

How well can China and the United States cooperate on global issues?

Rosemary Foot, Oxford University, and Liselotte Odgaard, University of Copenhagen

JUNE 21

China's internal contradictions – bound for greatness?

Johan Lagerkvist, utrikespolitiska institutet, Minxin Pei, Claremont McKenna College Norms and rules: dividing or unifying the established and emerging powers? William Wohlforth, Dartmouth College

William Wohlforth, Dartmouth College, Martha Finnemore, George Washington University

How to avoid the past? Patterns of conflict and cooperation in the 2000s

Odd Arne Westad, London School of Economics and Christopher Layne, Texas A&M

DECEMBER 11

The Nobel Peace Prize Concert at Oslo Spektrum Arena





The sold-out Oslo Spektrum celebrated OPCW at the Nobel Peace Prize Concert

"I image that many of you had not heard of the OPCW, very few people knew about us before"

OPCW DIRECTOR-GENERAL, AHMET ÜZÜMCÜ

## Nobel Peace Prize Research & Information

Number of employees: 1 Turnover: NOK 3,247K

**Established:** 2010 (formerly called Nobel Peace Prize Concert Limited Liability Company)

**Corporate ID no.:** 996179397

**Address:** Henrik Ibsens gate 51, Oslo, Norway **Contact:** +47 22 12 93 00, info@nppri.org

Website: www.nppri.org

#### BOARD OF DIRECTORS 2013

**Geir Lundestad,** Chairman, Director of the Norwegian Nobel Institute

Kaci Kullmann Five, Deputy Chair of the Norwegian Nobel Committee

Odd Arvid Strømstad, CEO of Eyeworks

Asle Toje, Political scientist, Research

**Annika Pontikis,** Public Relations Manager, Nobel Foundation

AHMET ÜZÜMCÜ, PHOTO: ALEXANDER MAHMOUD NOBEL PEACE PRIZE CONCERT, PHOTO: KEN OPPRANN

### NOBELHUSET AB

**SINCE ITS FOUNDING** in 1900 the Nobel Foundation has had plans to build a home for the Nobel Prize where Nobel Laureates and their efforts can be presented to the general public. In December 2011 an agreement was reached between the City of Stockholm and the Nobel Foundation to construct a Nobel Center on a plot owned by the City on the north side of the peninsula Blasieholmen. The construction project is being carried out by Nobelhuset AB, a company formed at the initiative of the Nobel Foundation. In February 2014 Susanne Lindh was appointed CEO. Nobelhuset AB's mission is to plan, construct, own and administer as well as develop the Nobel Center, a building designed for cultural and scientific activities on Blasieholmen in Stockholm, and to conduct related activities.

The building's design is being determined through an architectural competition in two stages. Its location at Blasieholmen requires careful consideration of, and sensitivity towards, surrounding institutions and the urban and marine setting. A prerequisite for the success of the project is that the buildings on the one hand, and the urban and marine setting on the other, work well together.

**ON THE BASIS** of Alfred Nobel's last will and testament, the Nobel Prize is awarded to those who, through their

discoveries and achievements, have conferred the greatest benefit to mankind. By encouraging creativity and innovation, the Nobel Center aims to work in the same spirit.

The Nobel Prize, the Nobel Laureates' works and their life stories are the rich source around which the Center will build its exhibitions, media productions and activities. With the Nobel Prize as its starting point, the Center will stimulate curiosity and learning among young people and complement primary, secondary and higher education. Some of its activities will be geared to suit the Swedish and international scientific communities, more specifically.

The new building will create opportunities to organise conferences and symposiums, whether independently or in collaboration with scientific institutions and organisations. The center's activities will also include research related to the Nobel Prize and its fields. In addition to space for exhibitions, scientific conferences, meetings and events, the building will also contain a library, restaurant, café and shop. The ambition is to make the Nobel Center one of Stockholm's première tourist attractions.

**AN EXTENSIVE COMPETITION** brief serves as the basis for the international architectural competition that is being conducted in two stages during 2013

and 2014. Read more about this on page 10. Once the winning proposal has been chosen and its costs have been specified, preparatory technical work will begin. The goal is to begin construction during 2015. Based on this preliminary schedule, the Nobel Center could be ready for inauguration in December 2018.

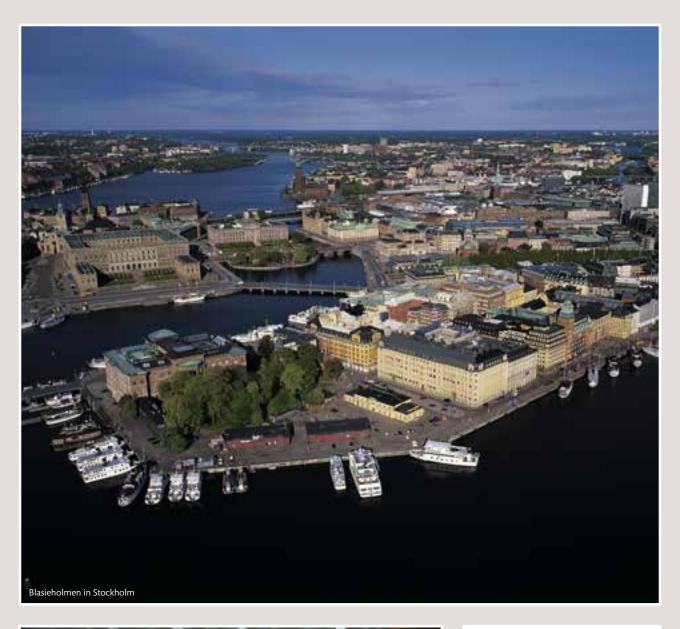
Since the start of the project in December 2011, the ambition has been to finance the new building for the Nobel Center through donations. The future operation of the center will be conducted with already confirmed long-term support from the Swedish state and the City of Stockholm. Since the Nobel Foundation's capital may not be used, the external financing of the building and its operations is a requirement.

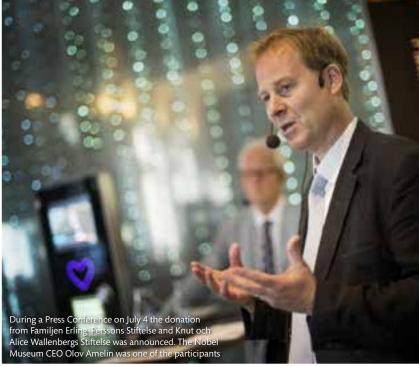
The cost for establishing the Nobel Center is estimated to total SEK 1.2 billion at 2012 prices. Thanks to generous donations by the Erling-Persson Family Foundation and the Knut and Alice Wallenberg Foundation in June 2013, the majority of financing for the Nobel Center has been secured. Together, these donors have contributed SEK 800 million, which makes this one of the larger private donations to this type of project in Sweden. Bernard and Barbro Osher have also donated USD 1.2 million to help in the completion of the project.



"Now more than ever we all need to come together and support the sciences so that we can improve the future and improve on the human condition going forward. We have a lot of work to do. This is such an important tribute that you pay to science and to the human spirit of discovery".

CRAIG C. MELLO (PHYSIOLOGY OR MEDICINE 2006)





BLASIEHOLMEN, PHOTO: JEPPE WIKSTRÖM OTHER PHOTOS: ALEXANDER MAHMOUD

#### NOBELHUSET AB

No. of employees: 2 Turnover: SEK 11,169K

**CEO:** Susanne Lindh (since February 2014)

Established: 2012

Corporate ID No.: 556884-6421 Address: Sturegatan 14, Stockholm,

Sweden

Contact: nobelcenter@nobel.se

#### STYRELSE

Lars Heikensten, Dr., Executive Director of the Nobel Foundation, Chairman

**Olov Amelin,** Dr, Museum Director, Nobel Museum

Lars Anell, Chairman of the Swedish Research Council

**Staffan Normark,** Professor, Permanent Secretary of the Royal Swedish Academy of Sciences

Anders Nylander, Former Managing Director, Atrium Ljungberg

Hans Dalborg, Dr, former Executive Director and Chairman of Nordea

**Barbro Jonsson,** Head of Administration at the Nobel Foundation, Deputy Member







AFTER THE NOBEL PRIZE AWARD CEREMONY at the Stockholm Concert Hall, the Nobel Banquet begins at the City Hall. It opens with the procession of royalty and other guests of honour into the Blue Hall. From the original 113 guests at the first banquet in the Hall of Mirrors at the Grand Hôtel in 1901, the 2013 Nobel Banquet hosted about 1,250 guests at Stockholm City Hall. The evening's dinner required 43 chefs and about 260 waiters and waitresses. The carefully laid tables with the Nobel tableware set needed 470 metres of linen tablecloths, 7,000 pieces of porcelain, 5,400 glasses and 10,000 pieces of cutlery.

The evening's entertainment was provided by Divine - The Opera Trio, who performed colourful divertissement including both old and newly-composed music. The three acts centred around Jenny Lind, Christina Nilsson and Signe Hebbe; three highly successful Swedish opera singers who performed around the world.

The Blue Hall was decorated with flower arrangements by Gunnar Kaj, who was responsible for designing the arrangements for the fourteenth consecutive year.

During the latter half of the dinner a Laureate from each prize category gave a banquet speech while students held aloft their student banners. After dinner, dancing commenced in the Golden Hall, where the Laureates' Nobel Prize Medals and Nobel Prize Diplomas were displayed for the evening.

FRANÇOIS ENGLERT AND H.M. QUEEN SILVIA AT THE TABLE OF HONOUR, PHOTO: ALEX LJUNGDAHL TABLE SETTING, PHOTO AND COPYRIGHT: CHARLOTTE GAWELL OTHER PHOTOS: HELENA PAULIN-STRÖMBERG





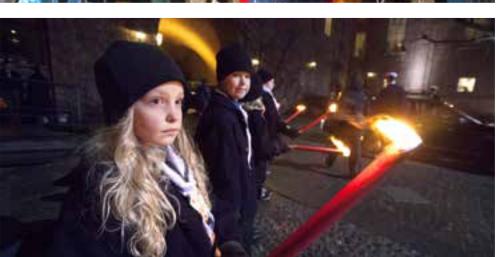












The power for change has pushed all science ahead. It propelled the field we pioneered to the point where it was recognized by the 2013 Chemistry Committee. I thank them, not for the obvious reason that they selected me and my fellow Laureates, Martin Karplus and Arieh Warshel. No, it is because they were brave and daring enough to recognize a new field.

MICHAEL LEVITT





#### NOBELSTIFTELSEN

The Nobel Foundation

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