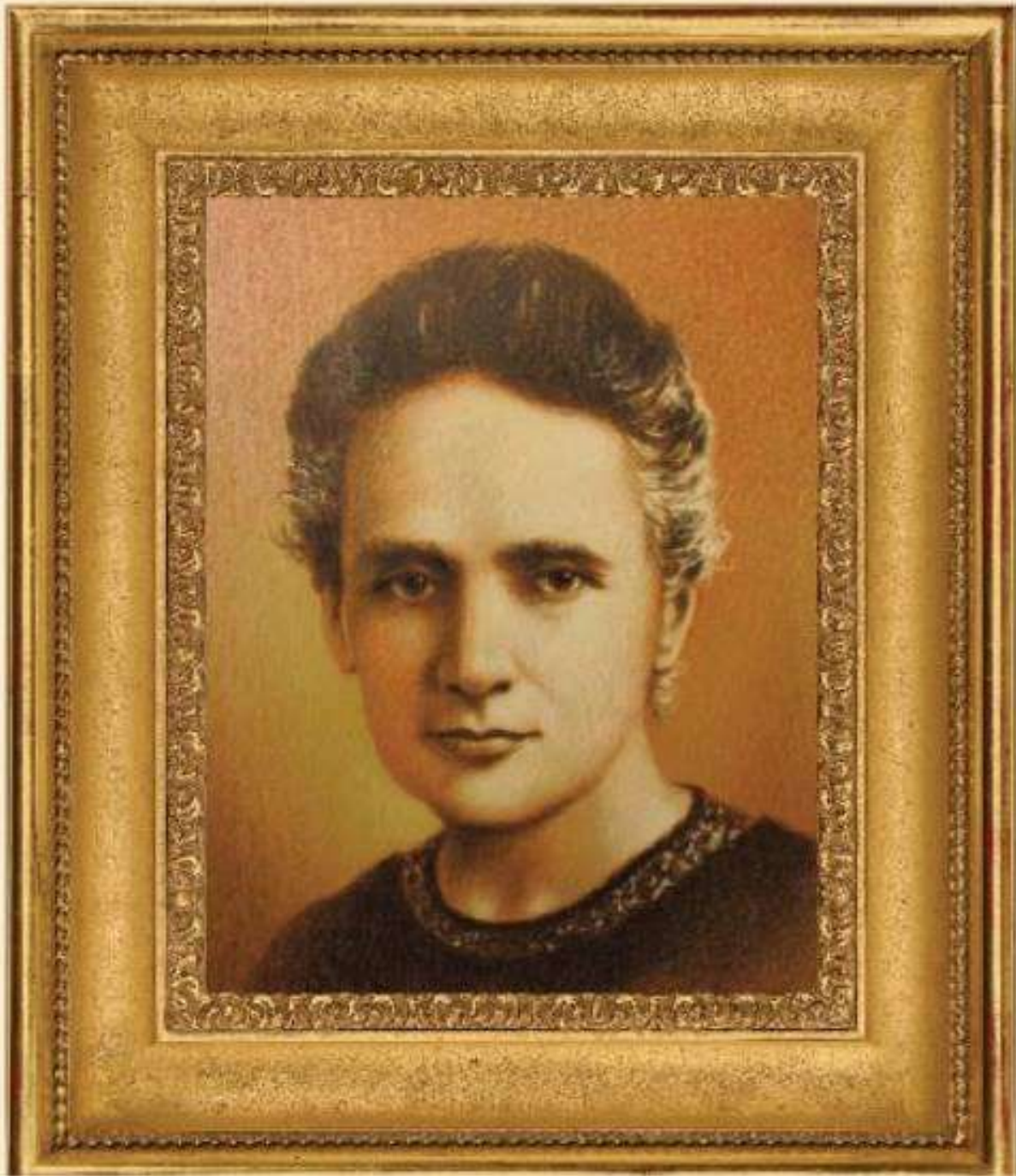


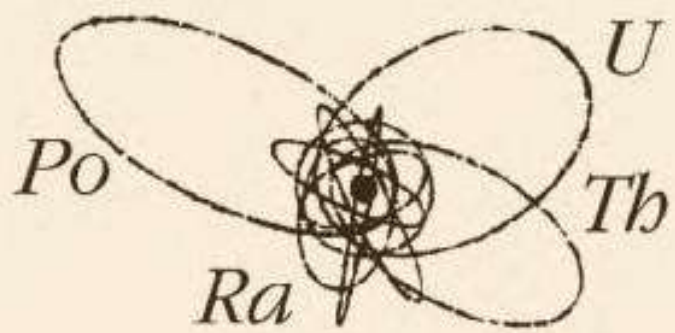
# Maria Skłodowska-Curie



(1867 - 1934)



**The Greatest Female Scientist of All Time**



# MARIA SKŁODOWSKA-CURIE (1867-1934)



**Scenario:**  
Małgorzata  
Sobieszczak-Marciniak  
*Muzeum Marii Skłodowskiej-Curie w Warszawie*  
*Polskie Towarzystwo Chemiczne*



Hanna Krajewska  
*Archiwum Polskiej Akademii Nauk*

Printing and computer layout:

**DRUKWIELKOFORMATOWY**  
PAWEŁ CIEPIELEWSKI



# GENEALOGY OF THE SKŁODOWSKI AND CURIE FAMILIES

## Skłodowski family



Topór coat of arms



Dolega coat of arms



Mother



Father

## Curie family



Sophie-Claire Depouilly mother



Eugene Curie father



Maria 7 XI 1867



Pierre 15 V 1859



Jacques



Zofia



Bronisława Dłuska



Józef



Helena Szalay



Ewa Curie-Labouisse



Irena Joliot-Curie



Fryderyk Joliot-Curie



Helena Langevin



Pierre Joliot

Maria Skłodowska came from a family of chronicle-writers. The history of the family was put down by her father Władysław, brother Józef and sister Helene. Maria herself compiled a biography of Pierre Curie and her short autobiography. Both daughters had been writing about her mother. In 1937, Eve Curie wrote „Madame Curie”.

# SCHOOL YEARS OF MARIA SKŁODOWSKA



Maria and Helene Skłodowska in 1887



Gymnasium at Krakowskie Przedmieście.  
Here Maria had been learning in 1878-1883



The school Maria had been going to in 1877-1878,  
boarding-house of J. Sikorska



Freta Street XIX c.



Gymnasium graduation certificate



Maria aged 16

„Gymnasium, boarding school, day school ... the youth of Maria Skłodowska was completely obsessed by such words. M. Skłodowski taught in a gymnasium, Bronia had just left the Gymnasium, Maria was going to a gymnasium, Józef to the university, Hela to Mlle Sikorska's boarding school. Even their home was, in its way, a sort of school. Maria must have grown to imagine the universe as an immense school where there were only teachers and pupils and where only one ideal reigned: to learn.”

*Eve Curie, „Madame Curie”*

# YOUTH



House of the Żorawski's in Szczuki where Maria worked as governess in 1886-1889



Kazimierz Żorawski - Maria's early love



Page from the note-book, drawing of the family's pointer Lancel, made by Maria herself



Museum of Industry and Agriculture in Warsaw.



Annex which housed the chemical laboratory.

# STUDIES IN PARIS

The Sorbonne



Maria as a student aged 24



Maria's portrait drawn on a sheet of paper



Maria among Polish students



Licentiate in physics, 1893. In 1894 Maria received the licentiate in mathematics.

„Maria furnished this place with all the objects she possessed: an iron folding bed, the mattress she had brought from Poland, a stove, a white wooden table, a kitchen chair, a washbasin; a petroleum oil lamp, covered by a twopenny shade; a pitcher which she had to fill at the tap on the landing; an alcohol heater about as big as a saucer, which was to cook her meals for the next three years; two plates, a knife, a fork, a spoon, a cup, a stewpan; and finally a kettle and three glasses..”

*Eve Curie, „Madame Curie”*

# MARIA AND PIERRE



Maria and Pierre 1895



Shortly after their wedding, 1895



Maria and Pierre in Sceaux



Sceaux



Maria with family, Zakopane 1899

Spring 1894, Maria meets French physicist, 35-year old Pierre Curie

10 August 1894, Pierre's letter to Maria:  
 „It would be a beautiful thing, a thing I dare not hope, if we could spend our life near each other hypnotized by our dreams: your patriotic dream, our humanitarian dream and our scientific dream.”  
 (S. Quinn, „Marie Curie a Life”).

26 July 1895, Sceaux near Paris, where the civil marriage took place.

12 September 1897, The older daughter, Irene, is born.

6 December 1904, The second daughter is born - Eve.



The Rysy peak



# DISCOVERY OF RADIUM AND POLONIUM



Henri Becquerel (Paris 1858 - La Coisie 1908). Professor of Physics at the French Natural History Museum in Paris and at the Ecole Polytechnique. He was a specialist in phenomena relating to polarisation.



Laboratory - inside the shed, 1897



Together in the laboratory, 1898



Notes of Maria and Pierre, 1898



News in Polish press

„We suspect that the light we separated from uranium black blende contains a so far unknown metal, with physical properties similar to those of bismuth. If the existence of this metal were to be confirmed, we propose to name it polonium, after the motherland of one of us.”

*M.P. Curie - 18 August 1898, discovery of polonium*

„The aforementioned facts make us believe that this new radioactive compound contains a new element which we propose to call radium. Although we are positive that this new compound has a very high barium content, it is still very radioactive. Therefore, radium must be immensely radioactive.”

*M.P. Curie - 26 December 1898, discovery of radium*

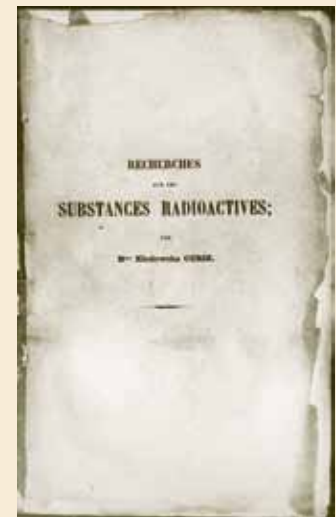
# SCIENTIFIC WORK AND PRIZE



Title page of the doctor's thesis in Polish



Marie after receiving the doctor's degree



Title page of the doctor's thesis in French



Nobel prize 1911 - diploma



Nobel prize 1911 - medal

Receiving the Nobel prize in Stockholm in 1911, Pierre said:

„that in criminal hands radium could become very dangerous and here one can ask if humanity is at an advantage in knowing nature's secrets, if it is mature enough to make use of them or if this knowledge might not be harmful to it. The example of the discoveries of Nobel is a case in point; powerful explosives have allowed men to do admirable work. They are also a terrible means of destruction in the hands of great criminals who lead people into war. I am among those who think with Nobel that humanity will derive more good than bad from new discoveries.”

S. Quinn, „Marie Curie a Life”

# LONELINESS

On 19 April, 1906, Pierre dies in a street accident. Maria writes in her journal:

„I enter the room. Someone says: ‘He is dead’. Can one comprehend such words? Pierre is dead, he who I have seen leave looking fine this morning, he who I expected to press in my arms this evening, I will only see him dead and it’s over forever. I repeat your name again and always ‘Pierre, Pierre, Pierre, my Pierre’, alas that doesn’t make him come back, he is gone forever, leaving me nothing but desolation and despair.”

*S. Quinn, „Marie Curie a Life”*



Irene

Maria with her daughters, 1906



Eve riding a horse

1911 - Nobel prize for Maria Skłodowska-Curie in chemistry for separation of pure radium salts.

From Maria’s journal:

„They have offered that I should take your place, my Pierre ... I accepted, I don’t know if it is good or bad. You often said to me that you would have liked for me to teach a course at the Sorbonne”.

*S. Quinn, „Marie Curie a Life”*



Maria Curie



Nobel prize in 1911 - diploma

# AID FOR POLAND AND FRANCE, 1914-1918



Marie in the Renault laboratory car



Marie and Irene



Title page of The Radiology and war



Marie's postcard to Irene written at Verdun, 1918



Picture with American soldiers taken in the Radium Institute, 1918

During World War I Poland became the scene of war between Russia and Germany. Marie wrote:

„In our time, when the feelings of nationalities are particularly intense ... one can only hope for a reconciliation and durable peace between the Poles, who number 25 million, and Russia, on the basis of absolute respect for the rights of nationalities.”

„All the Poles for whom France is, as it is for me, an adopted country to which they are joined by profound ties of affection and gratitude, wish for the union of their compatriots so that they can join forces with France against Germany.”

*S. Quinn, „Marie Curie a Life”*

# VISITS TO POLAND



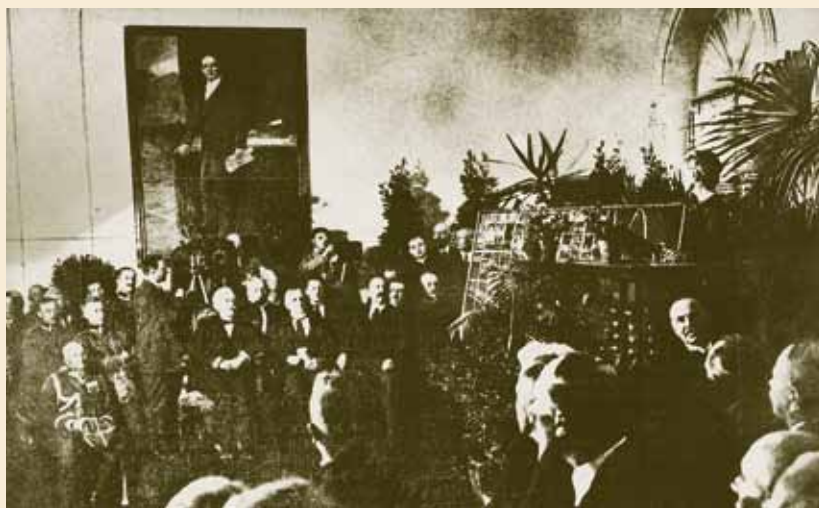
Sanatorium of Bronisława (Maria's sister) and Kazimierz Dłuski in Zakopane, which Maria helped construct



The scientist among Polish physicists and chemists, Warsaw 1925



Maria Skłodowska-Curie with Bronisława i Kazimierz Dłuscy, Józef Skłodowski , Tatra mountains 1911



Maria holds a lecture at the Warsaw University, 1925



Maria Curie with the President of the Republic of Poland, Stanisław Wojciechowski, Warsaw 1925

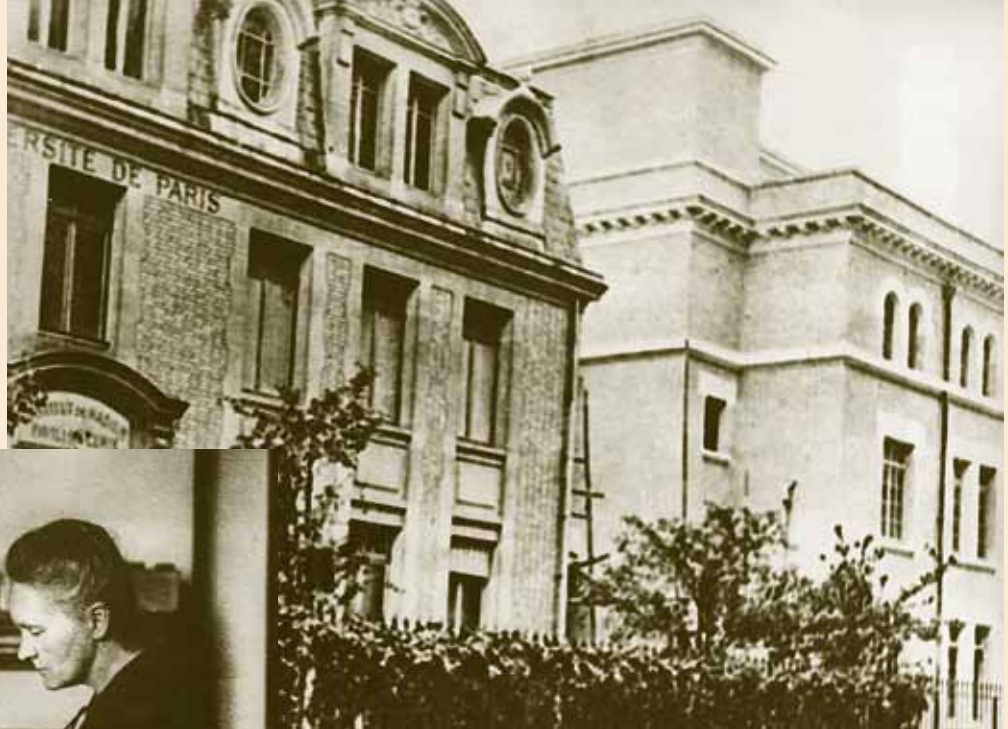


Maria Curie with the President of the Republic of Poland, Ignacy Mościcki, Warsaw 1932

# RADIUM INSTITUTES



The scientist with her daughter Irene in the laboratory of the Institute



Radium Institute in Paris



Marie Skłodowska-Curie in her office at the Radium Institute in Paris, 1925

„because of the appearance of this frail woman, all dressed in black, of such simplicity as to seem almost impoverished, made you feel pity and also her face was almost impassive, and her look abstracted to the point of total indifference”

*S. Quinn, „Marie Curie a Life”*



Marie Skłodowska-Curie plants a tree at Wawelska Street, 1932



Can with the charter of foundation of the Radium Institute in Warsaw



Radium Institute in Warsaw



The Institute was founded in 1932 from private donations - contribution stamps

*Mojam najważniejszą przyjemnością jest fundowanie  
Instytutu Radiowego w Warszawie.  
Mama Skłodowska Curie*

# VISIT TO AMERICA, 1921

In 1920, Maria was visited by the American journalist and editor-in-chief of the women's weekly „The Delineator“, William Brown Meloney.

„The door opened and I saw a pale, timid little woman in a black cotton dress, with the saddest face I had ever looked upon. Her kind, patient, beautiful face had the detached expression of a scholar. Suddenly I felt like an intruder.

My timidity exceeded her own. I had been a trained interrogator for twenty years, but I could not ask a single question of this gentle woman in a black cotton dress. I tried to explain that American women were interested in her great work, and found myself apologizing for intruding upon her precious time. To put me at my ease Mme Curie began to talk about America.

‘America’, she said, ‘has about fifty grams of radium. Four of these are in Baltimore, six in Denver, seven in New York.’ She went on, naming the location of every grain.

‘And in France?’ I asked.

‘My laboratory has hardly more than a gram.’

‘You have only a gram?’

‘I? Oh, I have none. It belongs to my laboratory.’”

At that time, one gram cost 100,000 dollars, i.e. 1 million francs.



Press conference on the Olympic board which Maria and her daughters came to the United States in 1921



The scientists visits the radium factory in Pittsburgh



Maria, Irene, Eve, W. Meloney having arrived in the Unites States, 1921



Maria Skłodowska-Curie with the President of the USA, Warren Harding, 1921



Maria Skłodowska-Curie in the White House, where she was given one gram of radium, 1921



Certificate



Golden key to the container with radium given to the scientist in the United States in, 1921



Letter of the Polish Women Union in America, which donated money for radium

# VISIT TO AMERICA 1929



Maria Skłodowska-Curie with the President, Herbert Hoover



The scientist plants a memorial tree at the St.Lawrence University



Maria lectures at the St.Lawrence University



The scientist and Mr Owen Young at the St.Lawrence University



Diploma of honoris causa



Contract of purchase of 1 gram of radium for Poland



Diploma of honoris causa





# SCIENTIFIC CONFERENCES

Solvay Conferences had been financed by Ernest Solvay, a Brussels businessman and chemist. They were held in Belgium as a regular meeting of physicists. The first conference in 1911 was attended by 21 scientists, including A. Einstein, Max Planck, E. Rutherford, J. Perrin, H. Poincare, P. Langevin, M. Curie.



I Solvay Conference, Belgium 1911



II Solvay Conference



III Solvay Conference



IV Solvay Conference



V Solvay Conference



VI Solvay Conference



VII Solvay Conference, 1933



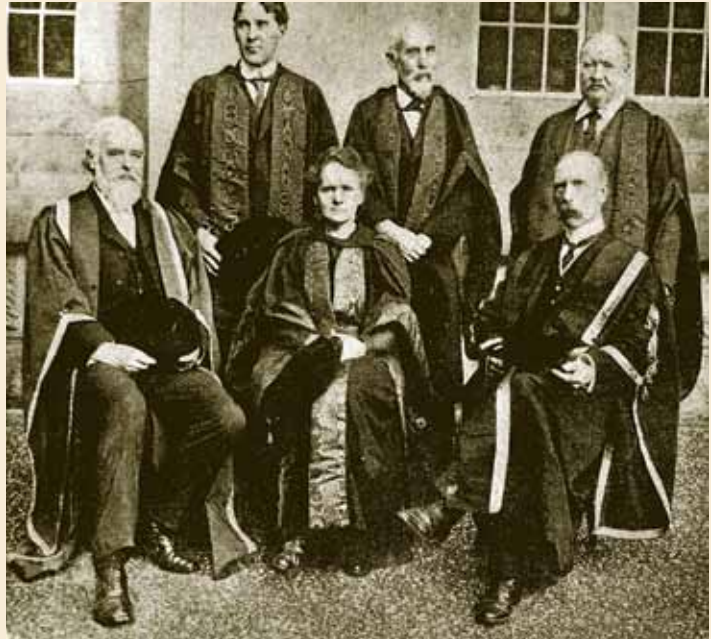
The Future of Culture Conference, Madrid, 1914

*Handwritten signatures and names:*  
 A. Einstein, P. Langevin, H. Poincaré, M. Curie, J. Perrin, E. Rutherford, Max Planck, and others.

# MARIA AND FAMOUS PEOPLE



Maria Skłodowska-Curie with Orso Mario Corbino in Rome, 1918



Maria Skłodowska-Curie with a group of scientists in Birmingham, 1913



The scientist with her daughters and nursemaid, Albert Einstein with his son on a trip in the Alps, 1913



Maria Skłodowska-Curie and Irene in Madrid with the Queen of Spain Christina

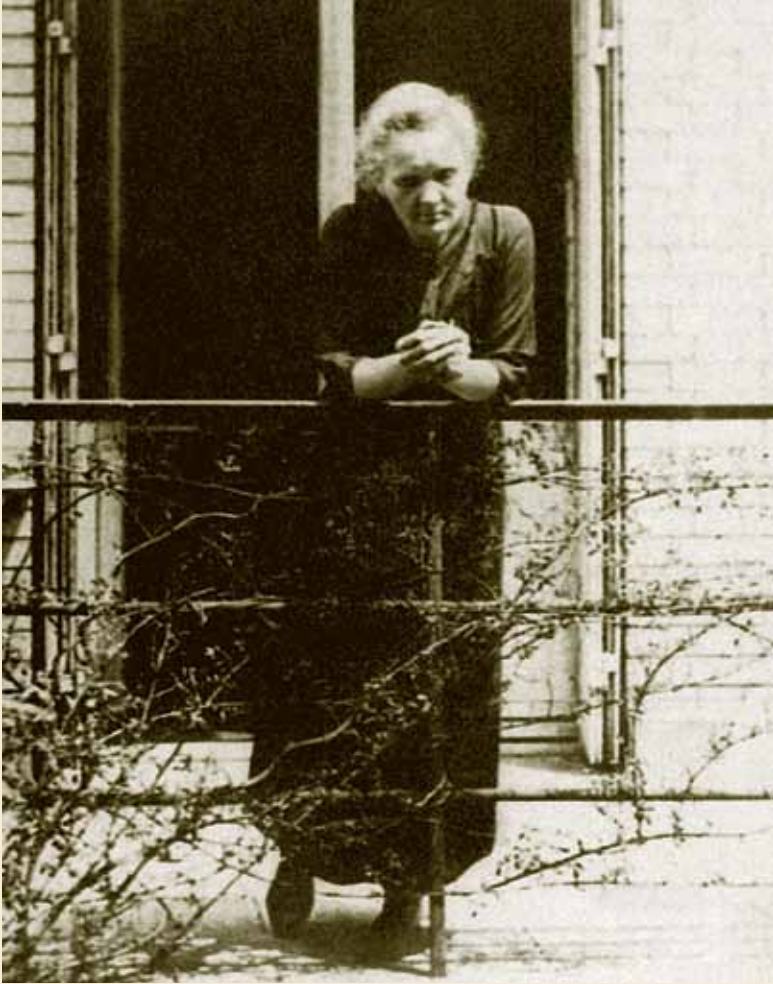


Maria Skłodowska-Curie and Albert Einstein, Switzerland 1925



Maria Skłodowska-Curie and Albert Einstein, Switzerland 1925

# LAST YEARS



One of the last pictures of Maria Skłodowska-Curie, on the balcony of the Radium Institute, 1934



Last picture of Maria



Maria with her daughter Irene, Frederic Joliot-Curie, grandchildren Helene and Pierre



One of the last pictures of Maria Skłodowska-Curie with the family and friends



Family grave of the Curie family in Sceaux near Paris. Here Maria was buried on July 6, 1934

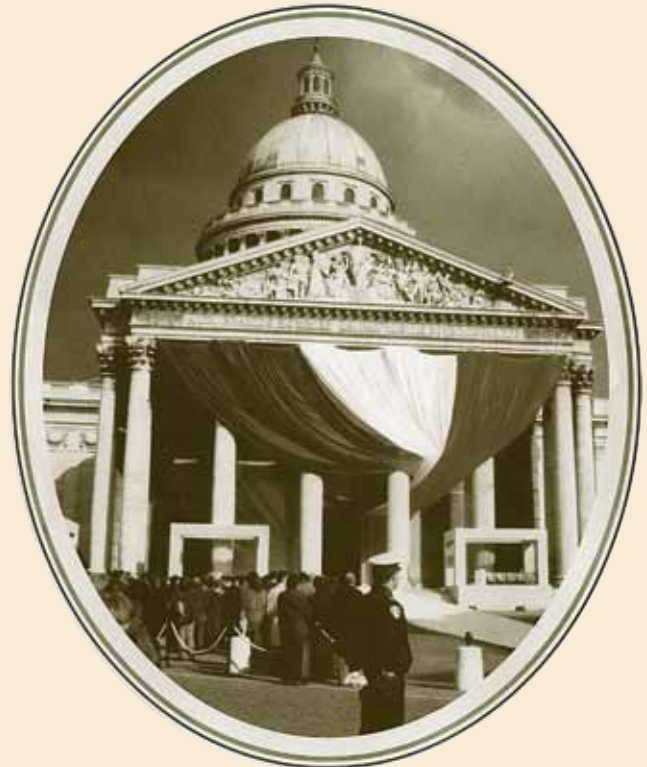
**„Mme Pierre Curie died at Sancellemoz on July 4, 1934. The disease was an aplastic pernicious anaemia of rapid, feverish development. The bone marrow did not react, probably because it had been injured by a long accumulation of radiation.“**

**„Now when the life of such an outstanding personality as Mrs Curie was ended we mustn't only limit our memories about her to that what the fruits of her work have given to the humanity. The moral values of the exceptional personality have perhaps a deeper meaning for the given generation and for the whole course of the history than the intellectual achievements only.“**

*Albert Einstein*

# PANTHEON

On 20 April, 1995 the ashes of Maria and Pierre Curie have been laid to rest in the Paris Pantheon, among other famous Frenchmen. Maria is the first person born outside France and the first woman to be honoured in this way for her achievements in science.



Pantheon in Paris



Coffins being brought to the Pantheon.



Crypt's of the scientists



Presidents of the Republic of Poland and France during the celebrations

# DAUGHTERS



Eve



Eve Curie-Labouisse with her husband in Wilanów



Eve as a young woman

## THE DISCOVERY OF ARTIFICIAL RADIOACTIVITY

In January 1934, Irene Curie and Frederic Joliot discovered artificial radioactivity. By bombarding a sheet of Aluminium-27 with a particles, they observed the creation of a new radioactive isotope, or radioisotope, Phosphorus-30. They received the Nobel Prize in Chemistry for this discovery in 1935.

This experiment showed that, by bombarding stable nuclei, it is possible to fabricate radioisotopes that do not exist in nature. Today, it is known how to create hundreds of artificial radioisotopes for a broad range of uses.



Irene



Irene receives the Nobel Prize, 1935



Irene and Frederic in Poland, at a congress in Wrocław



Irene and Frederic in their laboratory

# THE SCIENTIST'S FAME



The Cuproskłodovskite mineral



The phone card



Banknotes



Postcards



Poststamps



Monument of the scientists by Maria Kwietniewska in front of the Curie Institute in Paris



Medals



Commemorating board on the building of the former Museum of Industry and Agriculture in Warsaw



Monument of the scientist chiselled by Ludwika Nitschowa in front of the Institute of Oncology in Warsaw



Monument of the scientist in front of the St. Lawrence University in America



Commemorating board on the building of the former Museum of Maria Skłodowska Curie in Warsaw

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# Maria Skłodowska-Curie

## The Greatest Female Scientist of All Times

This exhibition is a tribute to Maria Skłodowska-Curie who was born and raised in Poland and emigrated to France to become the greatest female scientist of all time. She was twice awarded the Nobel Prize. She is buried in the Paris Pantheon, among other famous French people.

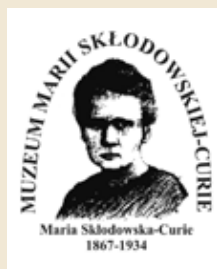
### Acknowledgements

The Polish Canadian Business and Professional Association of Windsor is very grateful to the Maria Skłodowska-Curie Museum in Warsaw for allowing this exhibition to be presented on the North American continent and to our generous sponsors. This opening panel was added by our Association to the original exhibition. The portrait of Maria Skłodowska-Curie was painted by Piotr Bednarski and is from a private collection in Canada.

Jerry (Jerzy) Barycki, President

March 15, 2015. Windsor, Canada

### Exhibition prepared by:



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