Marie Curie: a passion for science, action and people

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Manya Salomea Sklodowska was born on 7 November 1867 at 16 Freta Street, Warsaw
The Sklodowski children in 1870
The Szczuki family house where Manya taught as a governess in 1883
Władysław Skłodowski with daughters Mania, Hela and Bronia in 1890
Marie at the Dluski’s apartment in Paris, early 1890’s
The Curie family: Jacques and Pierre with their parents
Marie Curie in 1895
Pierre and Marie after their marriage at the Curie’s house in Sceaux
X-ray photograph of Mrs Röntgen hand, probably 22 December 1895
The discovery of Henri Becquerel,
1st March 1896

Photographie dite "La Croix de Malte", impressionnée dans l'obscurité par les rayonnements provenant de l'uranium, et développée le 1er mars 1896 par Henri Becquerel.
Rebuilt instruments used by Pierre and Marie Curie
The three seminal notes to the Comptes Rendus de l’Académie des Sciences in 1898

- **12 April**: Search for substances other than uranium compounds render air conducting for electricity.
- **18 July**: On a new radio-active substance contained in pitchblende.
- **26 December**: « A very serious reason to believe that the new radio-active substance contains a new element to which we propose to give the name radium. »
First mention of Polonium in Pierre and Marie lab notebook, 13 July 1898
$^{238}\text{U}$ radioactive decay chain
232 Th radioactive decay chain
Marie measures radioactivity with a piezoelectric quartz balance, 1899
The famous « discovery shed » at the Ecole Municipale de Physique et de Chimie industrielle de Paris
Pierre and Marie in their Parisian laboratory in 1903
Dr Eugène Curie with Irène
Marie with Eve and Irène in 1905
Radium patches
Radium tampons used for the treatment of cervix cancer, early 1900’s
Marie and Paul Langevin with some of their students at the girls’ Ecole Normale de Sèvres
How does this foreign lady dare to want to become a member of the Science Academy, 11 January 1911!
The 1911 first Solvay Conference

Les participants au congrès Solvay de 1911

Assis (de g. à dr.) : Walther Nernst, Marcel Brillouin, Ernest Solvay, Hendrik Lorentz, Emil Warburg, Jean Baptiste Perrin, Wilhelm Wien, Marie Curie et Henri Poincaré.

Debout (de g. à dr.) : Robert Goldschmidt, Max Planck, Heinrich Rubens, Arnold Sommerfeld, Frederick Lindemann, Maurice de Broglie, Martin Knudsen, Friedrich Hasenöhrl, Georges Hostelet, Édouard Herzen, James Jeans, Ernest Rutherford, Heike Kamerlingh Onnes, Albert Einstein, et Paul Langevin.
Marie delivering her speech at the Nobel Academy banquet on 10 December 1911
Marie in her laboratory, Rue Cuvier, 1912-1913

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The Curies and the « little Curies » during World War I

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The Institut du Radium in the 20’s and today in the 5th district of Paris

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Curietherapy in the 20’s (left) and the 30’s (right)
Marie with Marie Mattingly Meloney (Missy), 1920, 1921?
Marie, Irène and Eve first trip to the United States in 1921

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Marie with President Hoover, second trip to the United States, 1929
The Radium Institute of Warsaw in 1930 and in 2001
The 1927 Solvay Conference

A. Piccard, E. Henriot, P. Ehrenfest, Ed. Herzen, Th. de Donder, E. Schrödinger, E. Verschaffelt, W. Pauli, W. Heisenberg,
R. H. Fowler, L. Brillouin,
P. Debye, M. Knudsen, W. L. Bragg, H. A. Kramers, P. A. M. Dirac, A. H. Compton, L. de Broglie, M. Born, N. Bohr,
I. Langmuir, M. Planck, M. Curie, H. A. Lorentz, A. Einstein, P. Langevin, Ch. E. Guye, C. T. R. Wilson, O.W. Richardson
The 1933 Solvay Conference

Irène and Frédéric Joliot in their laboratory, late 20’s
Marie at the Institut du Radium in 1932
Marie and Albert in 1922, Geneva Lake
Albert Einstein about Marie Curie

« She’s cold as a herring... »

Swiss Alps, Summer 1913

« Standing up wholeheartedly for justice and for progress in politics and in social matters »

Watch Hill, Rhode Island, not dated

« Marie Curie is, of all celebrated beings, the only one whom fame has not corrupted. »

Not dated

« Twenty years of sublime and unclouded relationship... Her strength, her purity of will, her austerity, her incorruptible judgement—all these were of the kind seldom found in a single individual... The greatest scientific deed of her life—proving the existence of radioactive elements and isolating them—owes in accomplishment not only to bold intuition but to a devotion and tenacity in execution under the most extreme hardships imaginable, such as the history of experimental science has not often witnessed. If but a small part of Mme Curie strength of character and devotion were alive in Europe’s intellectuals, Europe would face a brighter future. »

Memorial service, New York, 23 November, 1935

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Pierre and Marie bodies are laid to rest under the dome of the Panthéon, 29 April 1995
Irène and Frédéric Joliot receiving the Nobel Prize of Chemistry from King Gustav V of Sweden, 12 December 1935

\[ ^{27}\text{Al}(\alpha,n)^{30}\text{P} \]

\[ ^{30}\text{P}(e^+,\nu_e)^{30}\text{Si} \]
Irène and Frédéric Joliot with their children Hélène and Pierre in 1936
Frédéric Joliot receives his academician’s sword from Paul Langevin at the Sorbonne, 17 November 1945
Irène with Bertrand Russel in Stockholm, 1950
1 juillet 1899
20h aprèms 10 kgs d'acide nitrique
sur 100 kgs de carboxate de soude (la 1ère fois en janvier)
depôt, plaque que disparaît, beaucoup de carbonate de soude et une galée

Solutions chimiques

Solut i on avec:

1er deposit
p = 4,5
a = 0,7

2de deposit
p = 5
a = 0,5

Solut i on avec:

p = 13
a = 0,1

135kgs

Solut i on avec:

p = 1,3
a = 1,2

Solut i on avec:

p = 6,6
a = 0,5

Solut i on avec:

p = 14
a = 0,5

Solut i on avec:

p = 2
a = 0,5

Solut i on avec:

p = 19
a = 0,5

Solut i on avec:

p = 2,5
a = 0,5