

The Inspiring Story of Lise Meitner

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In the exciting world of science, where discoveries are made and mysteries are solved, there are many amazing women who have made significant contributions whom we seem to forget.

One such remarkable woman is Lise Meitner, whose story is both inspiring and impactful.

On November 7, 1878, Lise Meitner was born in Vienna, Austria. She was the third of a Jewish family's eight children when she enrolled in the University of Vienna in 1901 to study physics under Ludwig Boltzmann. Following her doctorate in 1906, she studied with Max Planck and Otto Hahn, a chemist, in Berlin in 1907.

For thirty years, she and Hahn co-lead a department at Berlin's Kaiser Wilhelm Institute for Chemistry. Meitner and Hahn worked closely together to research radioactivity using her chemistry expertise and his physics knowledge. They identified protactinium as an element in 1918.



In 1923, Meitner discovered the radiationless transition known as the Auger effect, which is named for Pierre Victor Auger, a French scientist who discovered the effect two years later.

Austria was annexed by Germany in 1938 at this time. Due to the hatred Nazi Germany had for Jews and Lisa's Jewish roots she was forced to flee to Stockholm, Sweden. She continued her work at Manne Siegbahn's institute in Stockholm, but with little support, partially due to Siegbahn's prejudice against women in science. Hahn and Meitner met secretly in Copenhagen in November to plan a new round of experiments. The experiments that provided the evidence for nuclear fission were done at Hahn's laboratory in Berlin and published in January 1939 without Lisa Meitner being mentioned even though she came up with the theory. Thus, she wasn't credited for the discovery of nuclear fission.

In February 1939, Meitner published the physical explanation for the observations and, with her nephew, physicist Otto Frisch, named the process nuclear fission. The discovery led other

scientists to prompt Albert Einstein to write President Franklin D. Roosevelt a warning letter, which led to the Manhattan Project.

In 1944, Hahn was awarded the Nobel Prize for Chemistry for his research into fission, but Meitner was ignored, because Hahn downplayed her role ever since she left Germany and left her off the published paper.

Meitner's colleagues at the time, including physicist Niels Bohr, absolutely felt she was instrumental in the discovery of nuclear fission, But since her name wasn't on that initial paper with Hahn, so she was left off the Nobel Prize recognizing the discovery.

The Nobel mistake, never acknowledged, was in a way rectified in 1966, when Hahn, Meitner, and Strassman were awarded the Enrico Fermi Award.

She was also known as one the most significant women in science during the 20th century. To honor her they even named element 109 on the periodic table Meitnerium(Mt).



Despite the challenges she faced and the discrimination to her race and gender she still overcame them all to pursue science. Especially during World War Two being a Jew must have been difficult, her story tells us that whatever race or gender we are only we make the choice of what we want to be.