Quarterly Publication - April 2019

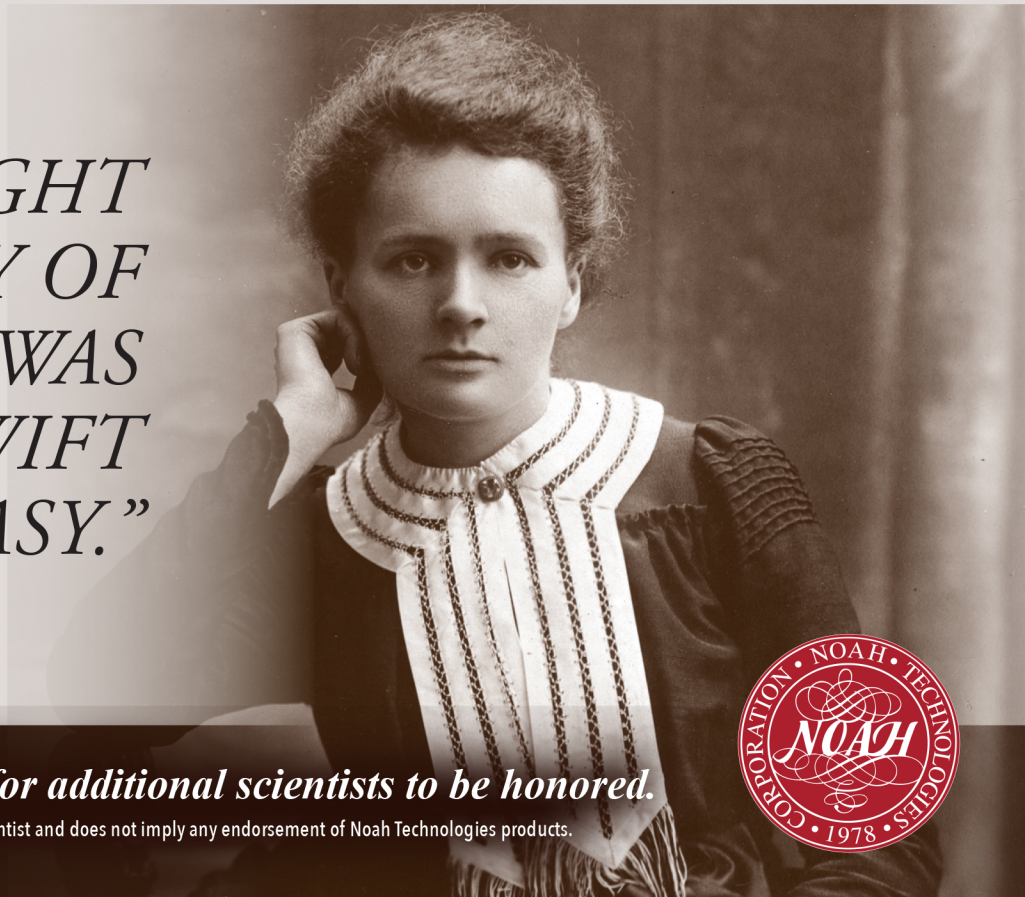
Number 2 in a Series

NOAH TECHNOLOGIES HONORS *in memory of*

MADAME *chemist and physicist* CURIE

PIONEERING RESEARCH ON RADIOACTIVITY.

"I WAS TAUGHT THAT THE WAY OF PROGRESS WAS NEITHER SWIFT NOR EASY."

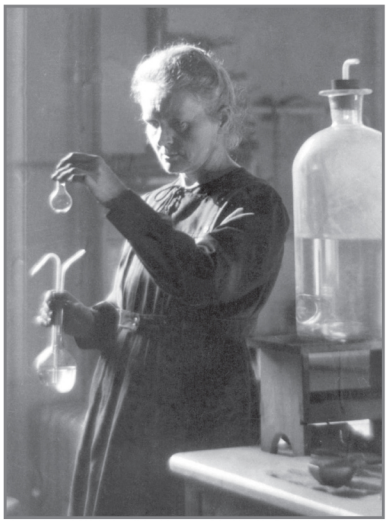


Contact us to cast your vote for additional scientists to be honored.

Madame Curie (Marie Curie)

Madame Curie was born November 7, 1867 (152 years ago) as Maria Salomea Skłodowska in Warsaw, Poland. Her contributions to science and society can be measured in the minds she changed and the cultural advancements of women that she helped pioneer. Curie's impact and change go beyond what can be listed in a biography.

In order to truly capture what she meant to the world, one must take everything into account, because she not only changed the world, she changed how the world thought. This is not to downplay or minimize her scientific achievements. If she was simply known for what she contributed to the fields of science, she would still be one of the most famous and impactful people to ever live.



A Scientific Trailblazer

Marie Curie changed the world through her work – her discoveries and research paved the way not only for her own breakthroughs, but laid a foundation for countless other scientists to bring new and revolutionary work to life.

While still a student, Curie showed an innate understanding of previously undiscovered and unexplored areas of science. She chose to write her thesis on topics related to x-rays and uranium salt observations, later convincing her husband to join her in her quest to find and isolate radioactive substances – coining the term "radioactive" in the process.

Curie was the first woman to win the Nobel Prize, the first person (and so far the only woman) to win the award twice, and the only person to ever win a Nobel Prize in two different scientific categories. Curie was first honored in 1903 when she shared the award in physics with her husband Pierre and fellow scientist Henri Becquerel for their discovery of radioactivity. Madame Curie was originally excluded from the 1903 award. Her husband Pierre agreed to accept only on the condition of her inclusion. She was then given the 1911 Nobel Prize in chemistry for the discovery of two new elements, radium and polonium.

Radium and Polonium Discoveries and Impact on Today's Society

Her work on radioactivity and the expansion of its application in everyday life have become some of her most lasting legacies. While working with her husband as a researcher in Paris, they began studying the invisible rays that seemed to emit from uranium. Curie's further research uncovered that a mineral called pitchblende, which contained uranium, contained much higher levels of radiation than the pure element alone. Something, she believed, was hiding within the pitchblende – something nobody had ever found before.

She and Pierre worked tirelessly to uncover the source, eventually discovering a new element. She decided to name it Polonium – atomic number 84 on the periodic table, in honor of her native Poland. But that wasn't the end of their discoveries. The liquid left behind after they had extracted polonium from the pitchblende was extremely radioactive, suggesting the existence of yet another new chemical element. After a long, tiring process, they uncovered and isolated Radium – their second new elemental discovery.

Radium's characteristics seem to come straight from science fiction – one million times more radioactive than uranium, the ability to glow in the dark and give off an almost unlimited supply of heat. While the element's everyday uses are limited due to its radioactivity, much like Polonium, their discoveries paved the way for an entirely new field of scientific study and expanded our knowledge about radiation all around us.

Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.

For instance, during World War I, Curie used her knowledge in the radiological field and her belief that wounded soldiers needed quicker medical attention to help bring X-ray and radiography units onto the battlefields of the war. These mobile radiography units were nicknamed "Petite Curies" or "Little Curies," and provided an estimated one million soldiers with lifesaving diagnoses and treatment options, while paving the way for modern mobile X-ray capabilities.

Radioactivity also helped open new avenues in the quest to study the structure of atoms and nuclear capabilities, further bridging physics and chemistry, her two main areas of study.

Curie's Other Contributions Outside of Science

Curie not only had to overcome the massive unknowns presented in her work, where she essentially created a new branch of scientific research, but she also had to overcome society's inherent disparagement of a woman's abilities and place in the world. On numerous occasions, she had to fight just to have a chance to present her discoveries, and even then, she didn't know how seriously she would be taken by the scientific community.

Not only did Marie Curie bring forth award-winning discoveries herself, but she did so while raising a family, who were impactful on their own. Her daughter, Irène Joliot-Curie, won her own Nobel Prize, when her work with her husband on the artificial creation of radioactive isotopes was honored with the prize in chemistry in 1935.

On top of all of this, she was well-known for being modest and understanding the widespread impact her work could have on the world. She donated much of the prize money won throughout her life to research causes, scientific organizations, and those close to her, while deciding not to patent her process for isolating radium in order to remove any roadblocks that would hinder further research on the topic.

Today, women are helping lead the way in scientific discovery and research, with countless women scientists bringing forth new breakthroughs seemingly every day. To be at this point is a testament to Curie's perseverance and talent.

NOAH TECHNOLOGIES HONORS

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- Aluminum Sulfate
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- Ammonium Molybdate
- Ammonium Nitrate
- Ammonium Oxalate
- Ammonium Phosphate
- Ammonium Sulfate
- Ammonium Thiocyanate
- Antimony Potassium Tartrate
- Arsenic Oxide
- Barium Acetate
- Barium Carbonate
- Barium Chloride
- Barium Hydroxide
- Barium Nitrate
- Bismuth (III) Nitrate
- Boric Acid
- Cadmium Chloride
- Cadmium Sulfate
- Calcium Carbonate
- Calcium Chloride
- Calcium Hydroxide
- Calcium Nitrate
- Calcium Sulfate
- Cerium Ammonium Nitrate
- Cerium Ammonium Sulfate
- Chromium Oxide
- Chromium Potassium Sulfate
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- Cobalt Acetate
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- Copper Nitrate
- Copper Oxide
- Copper Sulfate
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- Lead Acetate
- Lead Carbonate
- Lead Subacetate
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- Lithium Chloride
- Lithium Hydroxide
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- Magnesium Chloride
- Magnesium Nitrate
- Magnesium Oxide
- Magnesium Sulfate
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- Manganese Sulfate
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- Mercury Bromide
- Mercury Chloride
- Mercury Iodide
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- Mercury Oxide
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- Molybdic Acid
- Nickel Sulfate
- Oxalic Acid
- Phosphomolybdic Acid
- Phosphoric Acid
- Potassium Acetate
- Potassium Bicarbonate
- Potassium Bromate
- Potassium Bromide
- Potassium Carbonate
- Potassium Chlorate
- Potassium Chloride
- Potassium Chromate
- Potassium Ferricyanide
- Potassium Ferrocyanide
- Potassium Fluoride
- Potassium Hydrogen Sulfate
- Potassium Hydroxide
- Potassium Iodate
- Potassium Iodide
- Potassium Nitrate
- Potassium Nitrite
- Potassium Oxalate
- Potassium Permanganate
- Potassium Persulfate
- Potassium Phosphate
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- Potassium Sulfate
- Potassium Thiocyanate
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- Silver Sulfate
- Sodium Acetate
- Sodium Arsenate
- Sodium Bicarbonate
- Sodium Bromide
- Sodium Carbonate
- Sodium Chloride
- Sodium Citrate
- Sodium Cobaltinitrite
- Sodium Cyanide
- Sodium Diethyldithio-carbamate
- Sodium Fluoride
- Sodium Formate
- Sodium Hydroxide
- Sodium Iodide
- Sodium Metaperiodate
- Sodium Molybdate
- Sodium Nitrate
- Sodium Nitrite
- Sodium Oxalate
- Sodium Peroxide
- Sodium Phosphate
- Sodium Pyrophosphate
- Sodium Sulfate
- Sodium Sulfide
- Sodium Sulfite
- Sodium Tartrate
- Sodium Tetraborate
- Sodium Thiosulfate
- Sodium Tungstate
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- Strontium Nitrate
- Tin Chloride
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