

Editorial

Sesquicentennial Birth Anniversary of Marie Curie

The histories of many persons who have risen to eminence in some particular branch of science teach us that they have done so under the most unfavourable circumstances and in spite of the greatest obstacles thrown in their way by family conditions and by other sad incidents. Nobel Laureate Marie Curie belonged to this class of very great persons.

Marie Skłodowska Curie was born in Warsaw, in Poland on the 7th November 1867 in a family of teachers. Her parents were both teachers. Marie Skłodowska afterwards became world famous due to her outstanding achievement in science by winning Nobel prizes in Physics as well as in chemistry. Her father used to teach physics in a local school and her mother was head teacher of a girls' school. Marie had three sisters and one brother Marie being the youngest. Her father lost the service and mother also died of tuberculosis. The family had to face extreme hardship. Her sister died of typhoid. Marie was very intelligent and very fond of studies. She was determined in spite of obstacles to pursue her studies. Like her elder brother and sister she passed the school leaving examination with brilliant result at the age of 16. At that time it was not so easy to prosecute higher studies for girl students. Marie's elder sister went to Paris to study medicine. Marie used to send her money by toiling hard for years together. Marie's sister after obtaining degree in Medicine started practice and earning and called her youngest sister to come to Paris and



she obtained admission in Sorbonne University at the age of 24 years with Physics as the main subject in the year 1891 and passed M Sc examination securing the first position in Physics in 1893 and after one year in 1894 she passed MSc in Mathematics securing 1st position. She was planning to return to Warsaw but in 1894 she came to know Pierre Curie already famous as a research scientist. Pierre used to research on the generation of electricity and magnetism due to the influence of pressure and due to the influence of heat. This research work brought them still closer. Marie got an opportunity to conduct research on the characteristic of magnets on various types of steel with the Society for the Encouragement of National Industry. But she was not getting

a good laboratory of her choice to work in. At this time Pierre Curie was the director of the research of physics and chemistry laboratories in the University of Paris. Marie was permitted to join the research laboratory. The intimacy of Marie Sklodowska with Pierre Curie led to their marriage in the year 1895 on the 26th July. Marie became Madame Curie and deeply involved in research with her husband for the whole time.

In 1895, German scientist Röntgen discovered X-ray and thereafter 1896 French scientist Henry Becquerel discovered radioactivity from uranium salts. This encouraged Pierre and Marie Curie and they discovered a mineral from Pitchblende on 16th December 1897 an element, the radioactivity of which was much higher than uranium and they named the new element polonium and dedicated the element in the name of her country. They discovered another element and named it radium; the radioactivity of which is so many times higher than that of uranium. This discovery stirred the whole world. Marie Curie was then only 32 years old. Madame Curie earned D Sc for the discovery in 1903 from Sorbonne University. In 1903 on the 10th December. Royal Swedish Academy of Science awarded Pierre-Marie Curie and H Becquerel the Nobel Prize in Physics for their extraordinary activities in radiation research. In 1904 Pierre was appointed Professor of Physics in the Sorbonne University. In 1906 on 19th April Pierre was tragically killed in a road accident. After his death Marie succeeded to his chair. She was awarded a Nobel Prize for Chemistry in 1911. The terrible exposure to radioactivity made her incurably sick. Marie Curie was a noble-hearted benevolent scientist and did not want to make a commercial gain from her discovery. Much of her work at that time was carried out without proper safety measures. Her discovery brought immense

benefit to mankind in the treatment of cancer. She died on 4th July 1934 in France thus the world lost a great and a kind-hearted scientist.

She said “It is impossible. It would be contrary to the scientific spirit. If our discovery has a commercial future, that is an accident by which we must not profit. Radium is going to be of use in treating disease it seems to me impossible to take advantage of that.”

She also said “Like many a person I do believe that science has a great beauty. A scientist is not only a worker in the laboratory but also a child who is fascinated by the natural events like fairy tales. It is not proper to believe that all the advancements of science are the outcomes of instruments and technology, although the instruments too have their own beauty. I don't also believe that the feeling of thrill has any chance of disappearance from the earth. Whatever important things I see among the people around myself, is this inquisitive mind longing for thrilling sensation is not to be vanished from the earth.

On the occasion of the sesquicentennial birth anniversary of this great humane first female scientist, being the only person to have won it in two different sciences till now, we the members of the Institute of Science, Education and Culture pay our respectful homage and glowing tribute to her memory on the occasion of her sesquicentennial birth anniversary and pray that the young scientists continue to be inspired by her remarkable achievement and humane nature in spite of all obstacles as they venture forth in their career ahead.

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