

had, and her name was more renowned than those of any of the men who debated her legibility.

The prestige of the enormous accomplishments of Madame Curie was great, for she stood at the turning-point in science—the point where all fundamental theories of energy, light, and chemical reaction had to be discarded and remoulded. But the prestige of the Academy appeared greater than all this, for in the end Madame Curie was refused admittance, not because her accomplishments did not demand it, but because she was a woman—that is all!

In the light of the above controversy, it was a fitting recompense that this little Polish lady should receive the Nobel Prize for her work in the world of science.

The Discovery of Radium.

In 1909 the Curies discovered the element that takes the world back to Newton's corpuscular theory of light, the metal with the incomprehensible radiations which seem to burn for ever and are yet not fire, which have the weirdest medicinal qualities, and are poison to the flesh, which seem to contain the secrets of eternal youth, and have led scientists to doubt the usefulness of all their classifications of matter, and to wonder vaguely if the outcome of it all will be a proof of the proto-atomic theory.

Certainly this matter of two children who came to Paris a few years ago and lived in poverty in the Latin Quarter has been the greatest contributor to the chemical and physical sciences in this generation, and the Academy of Sciences hesitated and refused to admit to its ranks this woman, who all the time lectures, experiments, and cares for her children, indifferent to their decision. When one is solving universal problems, honours that will be forgotten long before one's name has ceased to be a thing to conjure with are lightly considered.

Madame Curie is a Polish woman. Her father was a professor of physics in a Warsaw college. He was exceedingly poor, and every spare shilling he could spare from his salary went in apparatus for his laboratory. He could not afford an assistant, and as he was all day in his laboratory preparing his work,

he stayed late every night to clean up and wash his implements. When his little daughter, Sklodowska, could scarcely read she was pressed into service as a test-tube washer, and spent long days with her father doing the rough work in his experiments, and scouring the tubes and crucibles, as the students finished with them.

An Unpaid Helper.

The time came when she exhausted the possibilities of her father's laboratory, and it was decided to send her to Paris. When she arrived there she found she did not have enough money to pay the tuition at the university, so she was forced to enter a cheap technical school. Her tutor was Professor Curie, a man of middle age; with some slight scientific distinction, but no salary to speak of, and no great recognition. Her instructor soon discovered that Sklodowska had a faculty for absorbing everything he propounded, and a keen sense of analysis, which amounted almost to intuition. She soon outstripped all her fellow-students, and Professor Pierre Curie appealed to his faculty for the power to make her his assistant. They would not grant her any salary, however, and so she served as a helper once more at no salary, working constantly with the Professor at his experiments.

Pierre Curie found new employment in the Mechanic's Institute, and his serious little helper went with him. Again she was unable to get a salaried position, and continued her work unpaid, and for Curie himself. Curie's income was small in itself, but they thought they could do better if they united their resources—so they were married. They went to live in the old Latin Quarter, and continued their work under better conditions. They did not live any better, however; that was not their object. But they were able to spend so much more on apparatus and chemicals.

Here Madame Curie secured a position as a lecturer in the Sevres normal schools. Again there was more money for scientific work. In 1896 Henri Becquerel discovered by accident the emanation of light from uranium. He made an exposure of a plate without sufficient sunlight

in the presence of uranium, and, believing the plate was still good because so little light had reached it, he put it away to be used at a later date. For some reason he developed it, and found to his astonishment that a clear impression had been made—as clear as it could have been done in bright sunlight. He remembered the circumstances under which his plate had been exposed, and immediately set to work on his study of the "Becquerel" rays.

Guided by Intuition.

When Madame Curie was first shown a bit of this uranium extracted from Bohemian pitchblende, she jumped to the conclusion that there were other substances in the compound which could better account for these emanations. She told her husband about it, and though her belief was founded on little more than intuition, he had come to have considerable faith in this scientific guessing of his wife, so they set to work on pitchblende—the waste from the Bohemian uranium mines. First of all they isolated "polonium," having the iridescent qualities of uranium: and so named because Mdme. Curie was a native of Poland. The next to come out of the melting-pot was actinium, and then radium—the metal which has revolutionised science.

At the Paris Exhibition of 1900, on a little shelf in the department of retrospective science, visitors found a substance marked "Radium—Pierre and Madame Curie." There was nothing in the catalogue about it, and no descriptive card. For the discovery had been made after the catalogue was printed, and so little was known about the discovery or the discoverers that it was almost impossible to say anything about it.

On this last discovery, the Curies had spent more than £200, which meant a great deal to them. They found few people who were curious to know what they were doing, and when a few real scientists found their way from the exposition to the little laboratory behind the Pantheon, Pierre Curie was immensely flattered, and thought it gracious of his callers that they should pay him so much attention. They did not realise that their discovery really amounted to anything. The honours