

## Topic Page: [Wigner, Eugene Paul, 1902–1995](https://search.credoreference.com/content/topic/wigner_eugene_1902_1995)

Summary Article: **Wigner, Eugene P(aul) (1902–1995)**

From *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

Hungarian-born US physicist who shared the Nobel Prize for Physics in 1963 for his work which introduced the notion of parity, or symmetry theory, into nuclear physics, showing that all nuclear processes should be indistinguishable from their mirror images.

While his earlier research concentrated on rates of chemical reactions, the theory of metallic cohesion, and group theory in quantum mechanics, he later focused on nuclear structure, including studies of nuclear resonance, electron spin, and the mirror nuclides, now known as **Wigner nuclides**. He also gave his name to several other atomic phenomena, such as the **Wigner effect**, a rapid rise in temperature in a nuclear reactor pile when, under particle bombardment, such materials as graphite deform, swell, then suddenly release large amounts of energy. This was the cause of the fire at the British Windscale plant in 1957.

Wigner was one of the scientists who persuaded President Roosevelt to commit the USA to developing the atom bomb. He took leave from Princeton University 1942–45, to join Enrico Fermi in Chicago, Illinois, where his calculations were essential to the design of the first atomic bomb, although he later said: 'Making a great weapon is not something to be proud of'. After World War II Wigner became an advocate of nuclear arms control and, in 1960, was awarded the Atoms for Peace Award in recognition of his vigorous support for the peaceful use of atomic energy.

Born in Budapest, Hungary, Wigner was educated at the city's Lutheran Gymnasium. In the 1920s he took up postgraduate studies in Berlin where he was present at Albert Einstein's seminars. In 1930 he emigrated to the USA (becoming a US citizen in 1937), and taught at Princeton University 1930–36 and the University of Wisconsin in 1937, before returning to Princeton as a professor of mathematics 1938–71. He won the 1963 Nobel Prize for his many contributions to nuclear physics and elementary particles; the prize was shared with Maria Goeppert-Mayer and Hans Jensen who worked separately. After retiring in 1971, he continued his interest in the effect of nuclear technology on society.

### **weblinks**

Wigner, Eugene Paul

#### **APA**

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Wigner, Eugene P(aul) (1902–1995). (2018). In Helicon (Ed.), *The Hutchinson unabridged encyclopedia with atlas and weather guide*. Abington, UK: Helicon. Retrieved from [https://search.credoreference.com/content/topic/wigner\\_eugene\\_1902\\_1995](https://search.credoreference.com/content/topic/wigner_eugene_1902_1995)

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## Chicago

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## Harvard

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## MLA

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