

therefore, the key anti-Chinese measures in the 1879 constitution were those that allowed and encouraged state action against the Chinese. As scholars have argued, even if anti-Chinese legislation proved unenforceable by the state, its passage would encourage vigilante violence putatively condoned by an unfairly limited state.

The WPC's success in electing delegates to the constitutional convention, where they achieved little of what they championed, was mirrored on the city level in San Francisco with the election of WPC candidate Isaac Kallloch as mayor in 1879. Despite being shot by the editor and publisher of the *San Francisco Chronicle*, Charles De Young, a few days before the election, Kallloch along with other WPC candidates in key city positions swept the elections. The notable exception to WPC success, which has led scholars to speculate about a vote-counting scheme hatched to share power, was the board of supervisors. Thus, when Kallloch tried to push through WPC-backed policy such as the "abatement" of Chinatown, his efforts were blocked by the board of supervisors.

Beyond the WPC's work in advocating for a constitutional convention and spearheading the ratification of the 1879 constitution, their key contribution to California politics, and, as some have argued, by extension national politics, was their virulent anti-Chinese sentiment. Though this sentiment and the positions advocated by WPC leaders and rank and file remained and were realized, especially after the 1882 Exclusion Act, the WPC itself quickly faded from both national and local politics. Scholars debate whether this hasty exit was because of political naiveté, a misguided partnership with the Greenback Party, an agreement with the Democrats that saw most WPC voters return to their Democratic roots, or the accomplishment of its major goals that left no reason for the WPC to remain on the political stage. That its major goals were anti-Chinese underscores David Roedinger's assertion that in California "labor and anti-Chinese movements overlapped so thoroughly as to be indistinguishable."

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See also Chinese Exclusion Acts (1882–1943)

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## Wu, Chien-Shiung (1912–1997)

Chien-Shiung Wu was one of the leading experimental physicists of the twentieth century and a prominent leader of the Chinese American scientific community. As the first female and first Asian American president of the American Physical Society (APS), she fought for equal opportunities for women in science and promoted science and education in the United States and China.

Born in Shanghai, China, on May 31, 1912, Chien-Shiung Wu (Wu Jianxiong in *pinyin*) grew up in a turbulent time in modern Chinese history, but enjoyed a happy childhood primarily because of the encouragement and support of her enlightened father, Wu Zhongyi, who instilled in her a pride in Chinese culture, a love of science, and a belief in herself and in the equality for women. From 1923 to 1929, she attended the Suzhou Women's Normal School in Suzhou where, inspired by stories of Marie Curie, Wu became interested in physics. In 1930, Wu entered the National Central University in Nanjing to study physics and graduated four years later with a senior thesis on X-ray diffraction.

Wu worked as a teaching assistant in the Physics Department at Zhejiang University in Hangzhou for a year before taking up a research assistant position in the Academia Sinica's Institute of Physics in Shanghai in 1934. In 1936, she set sail for the United States and enrolled in the University of California at Berkeley to pursue a PhD in physics. She quickly impressed all her professors, which included Ernest Lawrence, J. Robert Oppenheimer, and Emilio Segré, with her

intellectual acumen, experimental talent, and personal charm. She thrived scientifically at Berkeley. By 1940 Wu had completed two separate experiments in nuclear physics for her PhD thesis, but, frustrated in her search for a tenure-track position, stayed at Lawrence's lab as a researcher for two more years, working on nuclear fission.

World War II brought more opportunities. In 1942, Wu married Luke Chia-Liu Yuan, a fellow Chinese American physicist, and together they moved to the East Coast, he working on radar for RCA at Princeton and she teaching physics first at Smith College and then at Princeton University. In 1944 Wu moved to Columbia University in New York to develop radiation detectors for the Manhattan Project. After the end of the war, she stayed at Columbia as a research scientist and gave birth in 1947 to a son, Vincent Wei-chen Yuan (later a physicist). Political uncertainties in China following the Communist revolution in 1949 led Wu and Yuan, like many others from China, to stay in the United States, and in 1954 they became naturalized American citizens.

Scientifically, Wu focused, from 1946 to 1952, on the problem of beta decay, an important area of nuclear physics, and her experiments gained her a reputation for accuracy and technical sophistication. Her achievements helped overcome resistance to women in Columbia's Physics Department and brought her a promotion to associate professor with tenure in 1952.

The most celebrated experiment of Wu's career started as a result of a conversation she had in the spring of 1956 with her Columbia colleague and fellow Chinese American physicist Tsung-Dao Lee. At the time, Lee and Chen Ning Yang, another Chinese American physicist at Princeton's Institute of Advanced Study, were investigating the possibility that particles involved in weak interactions—beta decay was one example—might not follow the long-established law of parity governing their spinning. Wu decided to test Lee and Yang's theory by lining up the spins of the  $^{60}\text{Co}$  nuclei and then detecting the spin directions of the beta particles (electrons) that were emitted from the nuclei. She conducted the difficult experiment in collaboration with scientists at the National Bureau of Standards in Washington, D.C. By late 1956 and early 1957, they found that indeed

the law of parity was violated in beta decay—more beta particles were emitted in the direction opposite that of the nuclear spin than along it—which was soon confirmed by other scientists.

A surprise to most physicists, the breaking of parity led to new advances in many directions in physics and eventually paved the way for the unification of the weak and electromagnetic forces. Yet, when the Nobel Prize in Physics for 1957 was announced, it went only to Lee and Yang, not Wu, who felt happy for her friends but was clearly disappointed by her exclusion, a feeling shared by the laureates and many other physicists. Nevertheless, Wu received, over the years, just about every other award for a scientist, as she continued to conduct influential experiments after her parity triumph. She was promoted to full professor and elected a member of the National Academy of Sciences in 1958. In 1972 she was made the first Michael I. Pupin Professor of Physics at Columbia and elected a member of the American Academy of Arts and Sciences. Three years later she was elected APS president and received the National Medal of Science. Then, in 1978, she received the prestigious Wolf Prize in physics from the Wolf Foundation of Israel.

Taking advantage of her increasing prominence, Wu began to speak out on social and political issues, especially on equality for women in science. At a symposium in 1964, for example, she lamented the lack of women in science because of both cultural biases and professional discrimination. Counting proudly the achievements of women nuclear physicists such as Marie Curie and Lise Meitner, she declared that “never before have so few contributed so much under such trying circumstances!” (Mattfeld and Van Aken 1965: 47). In 1975, from the platform of the APS presidency, she urged the federal government to increase funding for education and basic research.

During the later stage of Wu's life, her Chinese heritage and connections began to take on growing importance for her. She had always maintained contact with the scientific community in Taiwan, urging the Nationalist government that had fled there in 1949 to carry out democratic reforms and to resist temptation to make atomic bombs. The reopening of U.S.-China relations in the early 1970s made possible her first

return to the mainland with her husband in 1973, where they were received by Premier Zhou Enlai. Following retirement from Columbia in 1981, Wu traveled more frequently to both sides of the Taiwan Strait to advise on science policy, to promote education and science, and to receive honors and awards. A household name among Chinese all over the world, Wu, as the “Chinese Curie,” became a role model for many Chinese students, especially girls and women, with scientific aspirations.

When Wu died on February 16, 1997, in New York, her ashes were buried, according to her will, in the courtyard of Mingde school in her hometown that was founded by her father, and were joined several years later by those of her husband.

Zuoyue Wang

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## Wu, David (1955–)

David Wu was a Taiwan-born American politician representing the Democratic Party and was the congressional representative for Oregon’s 1st District. An attorney by trade, Wu held his congressional seat between 1999 and 2011. He was the first Chinese American from Taiwan who served as a member of the House of Representatives.

Wu is what one would consider a 1.5-generation American. He was born in Hsinchu, Taiwan and immigrated to the United States in 1961, after President

John F. Kennedy’s executive orders lifted the ban on unfair immigration quotas. Wu was six years old at that time. And upon arrival in the United States, Wu and his family initially settled in the town of Latham, New York for two years where they were the only Asian American family in town.

After graduating from high school, Wu went to Stanford University as an undergraduate and earned a Bachelor of Science degree in biology in 1977. He later went on to pursue medical studies at Harvard Medical School but decided to drop out before completing his degree. Although his family was displeased at Wu’s decision to leave medical school, he left Harvard in pursuit of a law degree. In 1982, Wu graduated with a *Juris Doctor* from the Yale Law School.

In the beginning of his legal career, David Wu worked as a clerk for a federal judge in Portland, Oregon. He later joined the Miller Nash law firm and also cofounded the law firm of Cohen & Wu in 1988. For more than a decade, Cohen & Wu served as the legal consultant for many high-technology industries and small businesses in the northwest Oregon area. Wu sees his work at his law firm as one of the most important accomplishments in his life. He believed that Cohen & Wu helped to build new businesses and, in turn, provided many well-paying jobs for his fellow Oregonians. His credentials from working at Cohen & Wu gave Wu many of the qualifications he needed to represent his high-tech, so-called “Silicon Forest” district.

In 1998, when former Democratic Congresswoman Elizabeth Furse declined to seek reelection in Oregon’s 1st District, David Wu stepped in, won the election, and started his first congressional term in January 1999. He won seven reelection bids for his congressional seat until resigning in August 2011 following accusations that he had made unwanted sexual advances on the teenage daughter of a campaign donor and friend.

When in Congress, Wu served on the Committee on Education and Labor and the Committee on Science and Technology. He was the chairman of the Subcommittee on Technology and Innovation. Wu was also a member of the New Democrat Coalition (NDC), a group of moderate House Democrats that supported moderate and progrowth policies.