

# Generations of STEM: Stephanie Kwolek

## Kevlar Chemist

Stephanie was born to Polish immigrant parents in Pennsylvania. Despite her father's death when she was only ten, she acquired her love of science from him. She first intended to enter the field of medicine and earned a chemistry degree in college. With men overseas during World War II, she was offered a position at DuPont and planned to work there long enough to afford medical school.



Stephanie spent her entire career at DuPont, with her major discovery being the polymer Kevlar. While working to develop lightweight yet strong fibers to replace steel in tires, she happened upon a cloudy polymer solution. She was expecting a clear polymer, and the cloudy solutions were typically thrown away. However, she convinced a technician to convert it into fibers for testing, and Kevlar was discovered! Kevlar is used in many applications including bullet proof vests, boats, airplanes and even hockey sticks.

When she retired, Ms. Kwolek spent time tutoring in chemistry. She also created many classroom experiments still used in schools today, including one called the "Nylon Rope Trick," which demonstrates the formation of a polymer.

Image Source: [Wikipedia](#) Information Sources: [Science History Institute](#), [ACS](#), [FamousScientists.org](#)