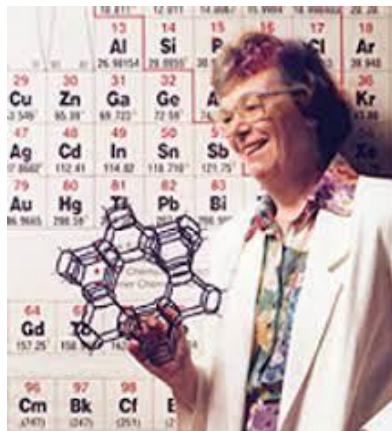


## EDITH MARIE FLANIGAN



**“You must love what you do because if there is any other reason for doing what you do, it just won’t work”.**

These words of Edith’s describe her enthusiasm her chemical career, and it all started in high school. She and her two sisters were first introduced to chemistry by Sister St. Mary, who emphasized hands-on activities and exciting demonstrations of chemical processes in her classes. All three went on to chemical careers at Union Carbide, but Edith was the

superstar.

In her 42-year career associated with Union Carbide, Edith Flanigan invented more than **200 different synthetic substances**, authored or co-authored over **36 publications**, and was awarded at least **109 patents**. She is best known for synthesizing Zeolite Y for molecular sieves and also artificial emeralds.

Molecular sieves (or zeolites) are made of microporous materials that trap only molecules small enough to fit into their cavities while excluding larger molecules. This characteristic makes zeolites ideal for use as catalysts in various industrial processes. Zeolite Y is a molecular sieve that enhances the amount of gasoline fractionated from petroleum, making production of gasoline in the U.S. and around the world greater, cleaner, and safer. Flanigan’s “sieves” are used in other processes, such as water purification and environmental clean-up.

The emeralds were used mainly in masers (predecessors to lasers) and were even used in jewelry for a time, in a line marketed as the “Quintessa Collection.”

### AWARDS INCLUDE:

- 1991 Chemical Pioneer Award from the American Institute of Chemists
- 1992 Perkin Medal - first female recipient
- 2004 National Inventors Hall of Fame
- 2012 National Medal of Technology and Innovation

[https://en.wikipedia.org/wiki/Edith\\_M.\\_Flanigen](https://en.wikipedia.org/wiki/Edith_M._Flanigen)

*Orna, Mary (2009). "Women Chemists in the National Inventors' Hall of Fame: Their remarkable lives and their award-winning research". Bulletin for the History of Chemistry. 34 (1).*

<https://www.engineering.com/story/edith-flanigen>