

## RADIOCHEMISTRY 101:

Basic Concepts and Terminology,  
Historical Perspective  
and Dispelling a Few Myths

Robert J. Artz,  
ACS Emeritus Member

Lehigh Valley ACS Webinar  
Thursday, January 14, 2021; 7:00 p.m.



Zoom link: <https://american-chemical-society.zoom.com/j/86579276535?pwd=dTgzbnRaTXZUM0ZpUVJJdzU1VVovZz09>

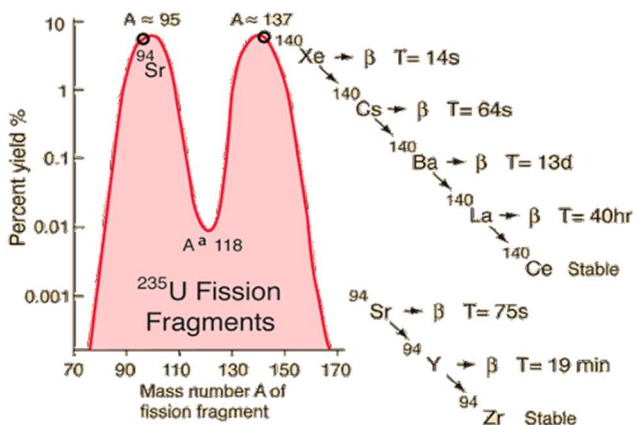
Can you answer the following questions (no fair consulting the internet) ...

“What does ‘S.C.R.A.M’ stand for?”

“You have four relatively low-level radioactive cookies: one is an alpha particle, the second is a beta particle, the third is a gamma ray, and the fourth is a neutron. You must eat one, put one in your pocket, keep one in your hand, and throw one away. Which is which?”

If not (or even if you can!), join our January webinar as Bob Artz takes us on a fascinating journey through the development of the fundamental science behind radioactivity, nuclear reactions and nuclear energy production! We’ll learn about the early contributions of Marie Skłodowska Curie and many others in the early 20<sup>th</sup> century to the new sciences of radiochemistry, nuclear particles and nuclear stability; then see how those basic concepts were applied to controlling nuclear fission reactions and to the construction of nuclear reactors by Enrico Fermi and colleagues. Along the way, we’ll uncover the roots of some common terminology (and a few misconceptions) about nuclear energy and, finally, look at a very powerful tool called gamma spectroscopy and how it is used to safeguard operation of today’s nuclear power plants. A short LVACS section business meeting will follow the webinar.

LVACS Emeritus Member Robert Artz graduated from Kutztown University of Pennsylvania and received a master’s degree from Bowling Green State University. In addition to working in the energy field with Met Ed and then as Senior Nuclear Chemist at Oyster Creek Nuclear Station, he has taught science at LCCC and at Ocean County College, Toms River, New Jersey.



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