Sandia National Laboratories

Low Waste Method for Production of Radionuclides

BENEFITS

- Allows manufacturing of a specific isotope which significantly reduces radioactive waste
- Can meet commercial demands for large quantities of short-lived isotopes
- Can produce a wide variety of isotopes

APPLICATIONS

- Nuclear medicine & radiopharmaceuticals
- Nutrition studies
- Environmental
- Genetic research
- Industrial research
- Molecular biology
- Agriculture

U.S. PATENTS

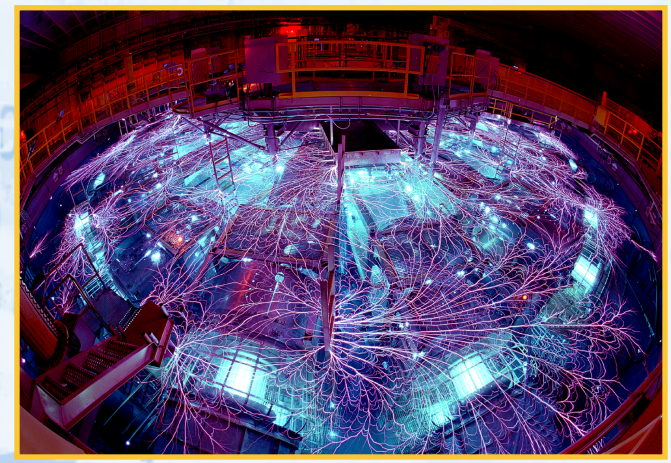
- 5,848,110
- 5,764,715

INTELLECTUAL PROPERTY & LICENSING CONTACT

Bianca K. Thayer
505.284.7766
bkthaye@sandia.gov

Summary

Insuring a constant supply of radioisotopes is of great importance to healthcare around the world. With the increase need for a stable US supply of medical isotopes, this technology can help alleviate this problem.



Sandia's patented method and design is a new apparatus for the transmutation of isotopes which enables swift and flexible production on demand by using repetitive high energy pulsed power to achieve transmutation. This invention is based on a combination of high repetition rate high energy pulsed power supply and a magnetically-injected anode plasma source diode. This is used to provide pulsed particle beams having intermediate energy and average power levels of hundreds of kilowatts to megawatts. This will increase the rate of isotopic production by 2-3 orders of magnitude over processes based on conventional accelerators.

Licensing & Partnering Status:

Various licensing and partnering options are available. Please contact the Intellectual Property Department to discuss.

National Nuclear Security Administration

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