

# NUCLEAR ENERGY

## THE BETTER ENERGY

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*Nuclear Energy - The Better Energy is an initiative to create awareness about the applications of peaceful Nuclear Energy. We proudly present our August newsletter.*

### **NUCLEAR 101**

Nuclear 101 is a section where we will bring to you some of the most basic concepts of Nuclear Physics explained in a non-specialist way



**Uranium** was discovered in the 1789, shortly after the discovery of Uranus, the planet that it draws its name from. Uranium is Earth's heaviest naturally-occurring element and has also been detected in seawater in extremely low concentrations. Uranium is known for its bright yellow color, but is normally found as black ore when mined. Known for its radioactivity, Uranium has been used to produce electricity in the US since 1958.

**Thorium** was discovered in 1828 by Jons Jakob Berzelius. Its name derives from Thor, the Scandinavian god of weather and thunder. Its most abundant isotope has a half-life of approximately 14 billion years and is less radioactive than natural uranium. Thorium is also naturally occurring and can be found in minerals such as monazite. In fact, thorium is more abundant than uranium in the earth's crust. The most prominent use of Thorium is in nuclear energy.



*Source: <https://thebetterenergy.net/uranium> and <https://thebetterenergy.net/thorium>*

**Visit our website ([thebetterenergy.net](https://thebetterenergy.net)) for latest updates about Nuclear Energy**

## Highlighted Articles

### ***Municipal Sewage Sludge, Nuclear Irradiation Technology & Swachh Bharat Mission***



Written by Aditya Chincholkar, a Nuclear Engineering graduate from India, this article talks about how nuclear radiation can be used to treat sewage and convert it into a rich fertilizer. The author will introduce you to the Sludge Hygienisation Research Irradiator (SHRI) at Gujarat in

India, a sewage treatment plant that serves a population of 2 million. Contributing to the Swachh Bharat Mission, this one of a kind facility treats 100 tons of sludge per day!

Read on to find more about how nuclear radiation technology is progressing to deal with the problem of increasing waste generation and keep our society clean.

**READ FULL ARTICLE HERE: [HTTPS://THEBETTERENERGY.NET/SEWAGE\\_IRRADIATION](https://thebetterenergy.net/sewage_irradiation)**

### ***Let's have a date...***

Another absolutely essential application of Nuclear Science, Radioactive dating serves as a scientific tool to determine age in the fields of archaeology, geology, geophysics, and other branches of science. Written by our member, Nilormi Das, this article describes different radioactive dating techniques to estimate the ages of earthly elements and forecast atmospheric conditions.

**RADIOACTIVE  
DATIng**

**READ FULL ARTICLE HERE: [HTTPS://THEBETTERENERGY.NET/RADIOACTIVE-DATING](https://thebetterenergy.net/radioactive-dating)**

## DID YOU KNOW?

### **Nuclear energy powers the Mars rovers.**

Prior Mars expeditions relied on solar panels, but the exploration process was slowed down by dust build-up on the solar panels or days with little sunlight. To solve this, NASA devised the Multi-Mission Radioisotope Thermoelectric Generator (MMRTP). The MMRTP is an energy source that relies on the heat generated by decaying plutonium dioxide to power the Curiosity rover.

Source: <https://facts.net/science/technology/nuclear-energy-facts>