

Reduction of Nuclear Waste with Manufacturing Glass

Reduction of nuclear waste with manufacturing glass even though it might not sound like it nuclear power is generally a lot safer and produces rather small amounts of waste compared to fossil fuels. However the waste it does make is extremely hazardous and requires proper disposal, because it can cause a variety of negative impacts on its surrounding. Storing the waste was and is a biggest issue, because it takes hundreds of years before it becomes inert but the new disposal technique may eliminate radioactive waste by around 90%, studies that were led in Sheffield university's Department of Materials Science and Engineering.

They've combined plutonium waste with granulated blast furnace slag, product made from steel and iron, and as the result they've gotten a durable black silicate glass that stabilizes plutonium so it can be stored safely.

Best thing is melting process of glass does not produce any kinds of violent instructions and the process itself doesn't require too much steps. Scientists are hoping that it could eventually be used to clean up Fukushima plant that was damaged in 2010/11.

All around the earth nuclear operations each year generate about 200.000 cubic meters of radioactive waste, transforming it into a glass that can be safely buried/stored would not only make waste inert a lot faster but it would reduce cost of disposal as well.

References

Michio Kaku Sci Fi show.

Boki Vujan, Belgrade, New Belgrade, Serbia