

Why is uranium the most common fuel in the nuclear industry?

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Uranium is the only element from the periodic table whose isotope – uranium-235 exists in nature, and easily splits under the impact of slow neutrons (which is an essential technical condition for initiating a controlled chain reaction in nuclear reactors). Other nuclear elements (like uranium-233 and plutonium-239) have identical properties but they do not occur in nature and can only be produced artificially (from thorium-233 and uranium-238 respectively) with unavoidable usage of nuclear reactors. This is why such nuclear materials are commonly called secondary fuel in comparison to uranium-235, which is primary - it cannot be replaced with anything else in the nuclear industry.