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Mu*star: A new paradigm for nuclear reactors

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Commercial Nuclear Reactors have been licensed for construction and operation by the US Nuclear Regulatory Commission based on ensuring that criticality accidents and accidental releases of radioactive isotopes are acceptably unlikely. The process to get these licenses is long and expensive, involving extensive calculations and demonstrations, with explicit requirements on all reactor components that cannot be changed for the several decades that the reactor operates. The process can be replaced by 1) using accelerator-driven sub-critical reactors that never contain a critical mass and 2) continuously removing volatile fission products from the molten salt reactors so that any accidental releases are insignificant. Mu*STAR Nuclear Power plants, composed of upgradable modular accelerators and reactors, can then be continuously improved using Deming's principles of Total Quality Management.

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Footnotes

I have read and accept the Privacy Policy Statement

Yes

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