ADAM: Destroy transuranics and generate power from spent nuclear fuel for green nuclear energy

PETER MCINTYRE, Texas A&M University, ADAM COLLABORATION — The ADAM collaboration is developing a method to use accelerator-driven subcritical fission in a molten salt core to destroy the transuranic elements in spent nuclear fuel and drive breed-and-burn fission of the uranium in spent nuclear fuel. The method can be used to generate electric power at the same rate the plant operates today for the next century, and at the same time destroy the hazardous long-lived components of that fuel. Advances in the design and first steps to implementation will be presented.