http://www.ornl.gov/sci/nuclear_science_technology/

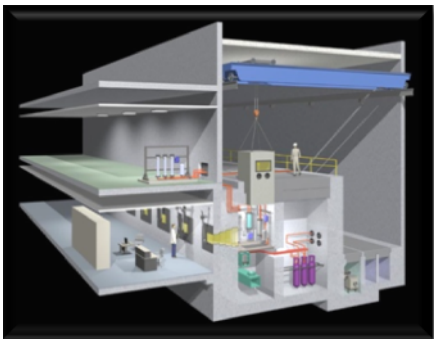
EES
Energy and Engineering Sciences

Nuclear Science and Technology Division

The Nuclear Science and Technology Division (NSTD) is committed to leadership class research and development that integrates the division's comprehensive staff expertise, strategic resources, and facility capabilities to address the needs and interests of a diverse set of sponsors.

Servomanipulator

Irradiation Experiment Capsule



REDC

Capabilities

Key facilities used in research include the following:

Materials Irradiation Facility

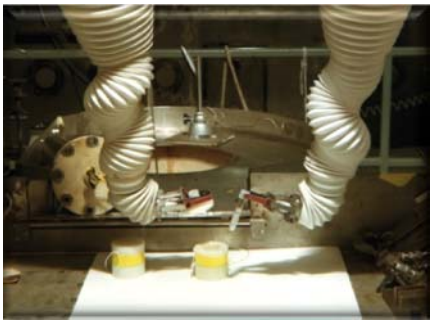
- Californium User Facility for Neutron Science
- Capsule Assembly Laboratory
- High Flux Isotope Reactor (HFIR)
- Materials Irradiation Facility
- Oak Ridge Electron Linear Accelerator (ORELA)
- Radiochemical Engineering Development Center (REDC)

ORELA

NSTD

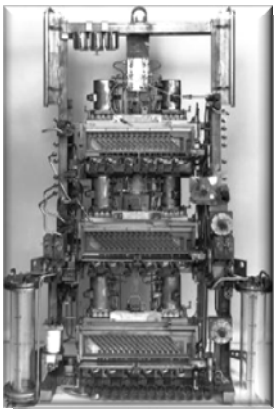
OAK RIDGE NATIONAL LABORATORY
MANAGED BY UT-BATTELLE FOR THE DEPARTMENT OF ENERGY

Fuels, Isotopes, and Nuclear Materials



Our research teams are advancing the applications of medical, industrial, and research isotopes; developing separation sciences for the processing of isotopes and nuclear materials, including spent fuel recycling; and designing robotic systems and unique facilities for the safe handling of nuclear materials. Some examples are the following:

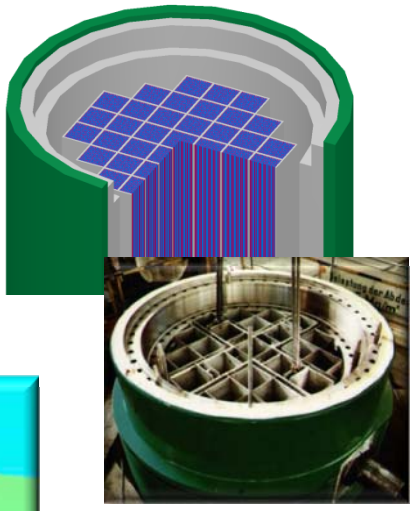
- Spent Fuel Recycling
- Nuclear materials processing and equipment design
- Robotics and remote handling
- Separation science and technology
- Medical isotope development
- Stable and radioactive isotopes
- Heavy element production
- Nuclear fuels

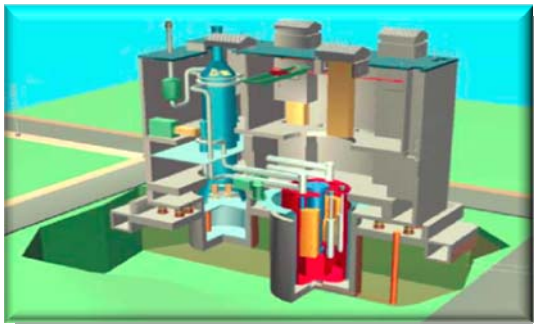


Nuclear Systems Analysis, Design, and Safety

ORNL is solving a wide range of critical problems in nuclear science and engineering technology through application of computational modeling, experiment design, and staff expertise with operating nuclear systems. State-of-the-art solutions are developed through integrated capabilities in these areas.

- Nuclear computational methods and data
- Advanced reactor systems and controls
- Reactor and facility safety
- Radiation transport and reactor physics
- Criticality safety
- Nuclear software and data distribution
- Material irradiation experiments
- Thermal hydraulic analysis and experiments





SCALE

RSICC

NSTD

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