Department of Energy Announces $49 Million for Laboratory Foundational Science Programs in Fusion Materials, Nuclear Science, and Enabling Technologies.

Annoucement Number: LAB-24-3295 *List Posted: 10/8/2024*

The foundational laboratory Fusion Materials, Fusion Nuclear Science, and Enabling R&D programs span functional and structural materials R&D for heating technology, magnet technology, blankets, fuel cycle, and first wall. Projects were selected by competitive peer review. Total funding is $49 million for projects lasting up to three (3) years in duration, with $7 million in Fiscal Year 2024 dollars and outyear funding contingent on congressional appropriations.

Selection for award negotiations is not a commitment by DOE to issue an award or provide funding.

Principal Investigator	Title	Institution	City	State	ZIP Code
Baylor, Larry	Fuel Cycle and Related Enabling Technology Research to Expand Fundamental Knowledge Needed to Proceed to a Fusion Pilot Plant	Oak Ridge National Laboratory (ORNL)	Oak Ridge	TN	37831-6118
Byun, Thak Sang	Development of High-Performance Materials for Enabling Fusion Energy	Oak Ridge National Laboratory (ORNL)	Oak Ridge	TN	37831-6118
Capolungo, Laurent	Extrapolating the lifetime of fusion materials	Los Alamos National Laboratory (LANL)	Los Alamos	NM	87544-0600
Cusentino, Mary Alice	Understanding the Effect of Radiation on Hydrogen Permeation Barrier Coatings for Blanket Structural Materials	Sandia National Laboratories, New Mexico (SNL-NM)	Albuquerque	NM	87185-0100
Duckworth, Robert	Advancement of Plasma Material Interactions and Advanced Manufacturing for First Wall and RF Launcher Plasma Facing Components	Oak Ridge National Laboratory (ORNL)	Oak Ridge	TN	37831-6118
Dumont, Joseph	A Comprehensive Approach to Fusion Fuel Cycle Readiness: Research, Technology, and Workforce Development	Los Alamos National Laboratory (LANL)	Los Alamos	NM	87544-0600
Fuerst, Thomas	Foundational Research on Tritium Transport Phenomena in Liquid Breeder Blankets	Idaho National Laboratory (INL)	Idaho Falls	ID	83415-0001
Glenzer, Siegfried	Benchmarking inter-atomic potentials to enable accurate modelling of fusion materials	SLAC National Accelerator Laboratory	Menlo Park	CA	94025-7015
Hitchcock, Dale	Non-Aqueous 2-D Material Based Hydrogen Isotope Separation	Savannah River National Laboratory (SRNL)	Aiken	SC	29808
Humrickhouse, Paul	Foundational Research on Tritium Breeding Blankets and Fusion Nuclear Science	Oak Ridge National Laboratory (ORNL)	Oak Ridge	TN	37831-6118
Kolasinski, Robert	Evaluating the mechanisms underlying surface degradation and hydrogen isotope transport for next-generation fusion materials development	Sandia National Laboratories, California (SNL-CA)	Livermore	CA	94551-0969
Olson, Luke	Development and De-risking of Li Electrolysis and CoRExt Process by Flow-Loop Integration	Savannah River National Laboratory (SRNL)	Aiken	SC	29808
Prestemon, Soren	Critical HTS Magnet Technology to Enable and De-Risk High-Field Compact Fusion Concepts	Lawrence Berkeley National Laboratory (LBNL)	Berkeley	CA	94720-8099
Riet, Adriaan	Foundational Research to Support Fusion Systems Safety Assessment	Idaho National Laboratory (INL)	Idaho Falls	ID	83415-0001
Setyawan, Wahyu	Novel Low-Activation DPT-W Composites and Ductile Refractory Multi-Principal-Element Alloys	Pacific Northwest National Laboratory (PNNL)	Richland	WA	99352-1793
Shimada, Masashi	Integrating Advanced Characterization into Modeling and Simulations to Predict Irradiation and Tritium Effects in Fusion Materials	Idaho National Laboratory (INL)	Idaho Falls	ID	83415-0001
Sizyuk, Tatyana	Integration of collisional and thermal effects for predictive modeling of plasma-induced material degradation and dynamics of D/T retention, permeation, and recycling	Argonne National Laboratory (ANL)	Lemont	IL	60439-4803
Taylor, Chase	Transformational Research to Enable Reducing Tritium Inventory	Idaho National Laboratory (INL)	Idaho Falls	ID	83415-0001
Zhai, Yuhu	High Current Density HTS Cables and High Field Fast Ramp Solenoids in Compact Fusion	Princeton Plasma Physics Laboratory (PPPL)	Princeton	NJ	08542-0451