

# TOPICAL AREAS FOR NT/F ARTICLES

For the convenience of the reader and potential authors, the current listing of topical areas used to categorize articles submitted to *Nuclear Technology/Fusion (NT/F)* is summarized here. While some articles will cut across categories, this listing provides a reasonably complete view of areas covered in *NT/F*. However, it is the intent of the editorial staff to periodically update this listing, so comments by readers, authors, and reviewers are always welcome.

**Plasma Engineering**—Represents applied plasma physics, e.g., fusion burn analysis, alpha transport, impurity and neutral transport, and plasma dynamics and control.

**Blanket Engineering**—Includes thermal hydraulics, neutronics, mechanical features, performance evaluations, activation and maintenance considerations, tritium-breeding concepts and evaluation, and liquid-metal technology.

**Materials Engineering**—Includes traditional materials engineering and also radiation damage effects.

**Fusion Fuel Cycles**—Concepts and analysis of various fusion fuel cycles, including both deuterium-tritium and advanced fuels.

**Energy Storage, Switching, and Conversion**—Ranges from mechanical to electromagnetic energy storage and includes direct conversion of fusion energy.

**Shielding**—Includes both personnel and magnet shielding, streaming, and effects on subsystems such as neutral beam injectors.

**First-Wall Technology**—Design and evaluation of first wall, plasma-wall interactions, protective coatings, and thermal/mechanical performance.

**Inertial Confinement Fusion (ICF) Targets**—Target concepts and burn evaluation and driver-target coupling efficiency.

**ICF Driver Technology**—Drivers include lasers, electron and ion accelerators, and generation and transport of beams.

**ICF Chamber Engineering**—Includes first-wall protection schemes, shock and fatigue analysis, thermal hydraulics, and time-dependent neutronics.

**Divertor Systems**—Includes both divertor concepts and evaluation of divertor operation, e.g., plasma flows and impurity control.

**Magnet Systems**—Design, performance, and concepts for both conventional and superconducting coil systems; also associated cryogenic systems.

**Plasma Heating Systems**—Includes heating systems ranging from ohmic heating to radio frequency, neutral beams, relativistic electron beams, heavy ions, etc.

**Tritium Systems**—Breeding, separation, handling, and storage aspects.

**Vacuum Systems**—Both cryogenic panels and various mechanical/ion pumps; also system performance and requirements.

**Maintenance**—Operational features and remote handling considerations.

**Experimental Devices**—Engineering design and operation of fusion experiments, diagnostics.

**Fusion Reactors**—Conceptual design studies of reactors and new reactor concepts.

**Nonelectrical Applications**—Includes hybrids and fusion driven synthetic fuel factories.

**Economics**—Projections and comparisons for both subsystems and reactors, electrical and nonelectrical.

**Safety/Environmental Aspects**—Analysis of both subsystems (e.g., magnet safety) and overall plant safety.

**Instrumentation and Data Handling**—Control systems and automated methods for data collection, storage, and analysis.