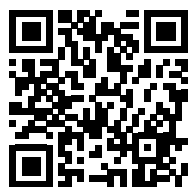




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The Technology of Fusion Energy (TOFE 2026)

May 31 – June 3, 2026 | Denver, CO | Sheraton Denver
Embedded in the 2026 ANS Annual Conference

General Chair
Brian Grierson
(General Atomics)

Program Chair
Lane Carasik
(Virginia Commonwealth University)

ABSTRACTS DUE: FRIDAY, JANUARY 23, 2026

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FRIDAY, JANUARY 23, 2026

**AUTHOR NOTIFICATION OF
ACCEPTANCE**
MONDAY, FEBRUARY 16, 2026

REVISED ABSTRACTS DUE
FRIDAY, FEBRUARY 27, 2026

ABOUT THE CONFERENCE

Recent progress toward fusion pilot plants and the rapid growth of the commercial fusion sector have brought new urgency to developing a robust and scalable fusion energy supply chain. TOFE 2026 invites scientists, engineers, manufacturers, and industry leaders from around the world to explore how research, technology innovation, and industrial partnerships are converging to enable deployment-ready fusion systems. A mix of invited and contributed talks will address topics including fusion pilot plant design, component and materials development, enabling technologies, manufacturing readiness and supply chain resilience. Attendees will also have opportunities to tour regional facilities that support fusion and advanced energy technologies. Denver, Colorado—a growing hub for high-technology manufacturing and energy innovation—will provide an inspiring setting for collaboration and discussion.

FORMATS, PRESENTATIONS, AND PUBLISHING

Abstracts will be accepted as presentations based on technical merit, novelty of methods, and impact on the advancement of fusion energy. Presentations will be in the format of talks or posters. Space permitting, abstracts not selected for talks will be considered as posters. The final session topics and tracks will be finalized once all abstracts are received. Authors of accepted, presented abstracts may submit a journal manuscript to the Fusion Science & Technology (FS&T) TOFE special issue after the meeting.

STUDENT PAPER COMPETITION

The ANS Fusion Energy Division sponsors a student paper competition that awards monetary prizes for outstanding submissions. Graduate & undergraduate students are encouraged to submit full-length journal manuscripts to the competition. To be eligible, a student must be the first author. When submitting an abstract, please be sure to indicate that it is a student first-authored submission. In addition to submitting an abstract, students who wish to participate in the competition should submit their full-length journal manuscripts to Lauren Garrison (lgarrison@cfs.energy) by Monday May 19, 2026. The paper format and style should conform to the FS&T journal standards. Additionally, Authors will need to separately submit their paper to FS&T for publication in the journal. Winners will be announced during the TOFE Conference.

TRACKS

1. FUSION PILOT PLANT STUDIES

- 1a. DOE FIRE collaboratives studies
- 1b. DOE milestone program studies
- 1c. Siting & social license of fusion pilot plants
- 1d. Safety and licensing of fusion pilot plants
- 1e. (P) Supply Chain Management for fusion pilot plants

2. FUSION FUEL CYCLE TECHNOLOGIES

- 2a. Fueling, exhaust, and vacuum system design and analysis
- 2b. Fuel breeding and neutron multipliers
- 2c. Fuel extraction technologies
- 2d. Fuel handling technologies
- 2e. Critical isotope production (e.g. tritium) using accelerator systems

3. FUSION ENABLING TECHNOLOGIES

- 3a. Diagnostics and instrumentation in fusion relevant environments
- 3b. Implementation and integration of power conversion technologies (e.g. thermal or direct-electricity conversion)
- 3c. Applications of Artificial Intelligence (e.g. Learning Language Model, Machine Learning, etc) for design, optimization and control of fusion systems
- 3d. Cryogenics of superconducting magnets, vacuum pumping and diagnostics systems
- 3e. Fabrication, assembly, and maintenance R&D of fusion components and systems
- 3f. Reliability, availability, maintainability, and inspectability (RAMI) in fusion systems
- 3g. (P) State-of-the-art fusion modeling and simulation code

4. FUSION MATERIALS

- 4a. Fusion Prototypic Neutron Source (FPNS) studies
- 4b. Specimen testing and post-irradiation examination
- 4c. Radiation effects & transmutation characterization
- 4d. Plasma material interactions
- 4e. High heat flux components/plasma facing components
- 4f. Material compatibility with coolants
- 4g. Tritium retention in structural materials
- 4h. Advanced manufacturing technologies

5. FUSION RESEARCH FACILITIES

- 5a. Tokamak and stellarator experimental facilities
- 5b. Inertial confinement experimental facilities
- 5c. High heat flux and plasma material interaction based materials test facilities
- 5d. Tritium based materials and handling test facilities
- 5e. Component and integrated test facilities for fuel cycle, heat removal, and power conversion technologies

6. PLASMA PHYSICS ENGINEERING

- 6a. Influence of plasma physics on systems integration
- 6b. Plasma operation and control
- 6c. Plasma edge studies
- 6d. Plasma confinement
- 6e. Disruption mitigation

7. MAGNETIC FUSION ENERGY TECHNOLOGY AND ENGINEERING

- 7a. Heating and current drive (RF, RH, NBI)
- 7b. Superconducting magnets technologies
- 7c. Divertor modeling and design

8. INERTIAL FUSION ENERGY TECHNOLOGY AND ENGINEERING

- 8a. Drivers technologies
- 8b. Target fabrication and modeling
- 8c. Chamber dynamics design and modeling

9. ALTERNATE CONCEPTS AND APPLICATIONS

- 9a. Alternate confinement concepts (e.g. magneto-inertial confinement fusion)
- 9b. Hybrid (fusion-fission) reactors studies
- 9c. Non-electric applications (e.g. seawater desalination, hydrogen production, district heating and various industrial applications) of fusion including space

10. SPECIAL SESSIONS

- 10a. DOE ARPA-E fusion programs
- 10b. Siting & social license
- 10d. Fission-fusion collaborations
- 10e. Environmental issues and waste management studies
- 10f. Workforce development and retrospective from recent workshops (invited talks)
- 10g. (P) Careers in Fusion Energy Engineering