

2027 可控核聚变能大会 暨核聚变产业展览会

Controlled Nuclear Fusion Energy Conference & Industry Exhibition 2027

2027年7月7日-9日

July 7-9, 2027

上海新国际博览中心

Shanghai New International Expo Center



■ 指导单位：

上海核能办公室

■ 主办单位：

中国能源研究会

上海核能学会

■ 承办单位：

上海励闻展览服务有限公司

■ 支持单位：

中国国际核聚变能源计划执行中心

核工业西南物理研究院

中国科学院等离子体物理研究所

中国工程物理研究院

长三角高温超导磁体技术创新联合体

上海张江高新技术产业园区管理委员会

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新的机遇

New opportunities

核聚变能被写入国家“十五五”规划纲要，被列入未来产业重点方向和前沿科技攻关重大工程项目。《中华人民共和国原子能法》首次将可控核聚变纳入法律保障体系。“十五五”规划纲要明确要求突破氘燃料制备循环、材料辐照考验、高性能激光、超导磁体制造等核聚变关键技术，加速推进核聚变研发工程化进程。当前，全球核聚变产业持续升温。据行业报告显示，聚变行业累计融资金额已逼近千亿规模。我国核聚变产业正形成“国家队引领、民企多元创新”的新格局，产业链已初具雏形。上海作为全国核聚变产业高地，累计融资额接近180亿元，已成为技术路线最全、融资氛围最浓、人才密度最高的核聚变能创新高地之一。2027年更是核聚变发展的里程碑之年，中国“人造太阳”环流三号计划于2027年首次实现燃烧实验；环流四号计划于2027年完成原型磁体研发；紧凑型聚变能实验装置计划于2027年建成。在这样一个历史性时刻，NFEC & NFE 2027的举办意义非凡。

Nuclear fusion energy has been included in the national "15th Five-Year Plan" and listed as a key direction for future industries and a major project for tackling frontier technologies. The "Atomic Energy Law of the People's Republic of China" has incorporated controllable nuclear fusion into the legal protection system for the first time. The "15th Five-Year Plan" clearly requires breakthroughs in key fusion technologies such as tritium fuel preparation and recycling, material irradiation testing, high-performance lasers, and superconducting magnet manufacturing, accelerating the process of engineering development for nuclear fusion research and development. Currently, the global nuclear fusion industry is continuously heating up. According to industry reports, the cumulative financing amount in the fusion industry has approached the scale of hundreds of billions. China's nuclear fusion industry is forming a new pattern of "national team leadership and diversified innovation by private enterprises," and the industrial chain has begun to take shape. As a national hub for the nuclear fusion industry, Shanghai has accumulated nearly 18 billion yuan in financing and has become one of the innovation highlands for nuclear fusion energy with the most comprehensive technical routes, the strongest financing atmosphere, and the highest talent density. The year 2027 marks a milestone for the development of nuclear fusion. China's "artificial sun" Circulation Three plan will achieve combustion experiments for the first time in 2027; Circulation Four plan will complete the research and development of prototype magnets in 2027; and the compact fusion energy experimental device plan is scheduled to be completed in 2027. At such a historic moment, the holding of the NFEC& NFE 2027 is of extraordinary significance.

大会介绍

Conference Introduction



为贯彻落实“十五五”规划关于核聚变能发展的战略部署，搭建产学研用协同创新平台，励闻展览联合相关行业主管机构，定于2027年7月7日-9日在上海新国际博览中心举办“2027可控核聚变能大会暨核聚变产业展览会”。展会以“聚力创新·聚变未来”为主题，集中展示我国核聚变领域的最新科研成果、工程进展与产业化应用，推动产业链上下游企业、科研院所、投资机构深度对接，加速核聚变技术工程化、产业化进程，巩固上海作为全球核聚变能创新高地的地位，助力上海打造世界级核聚变产业集群。

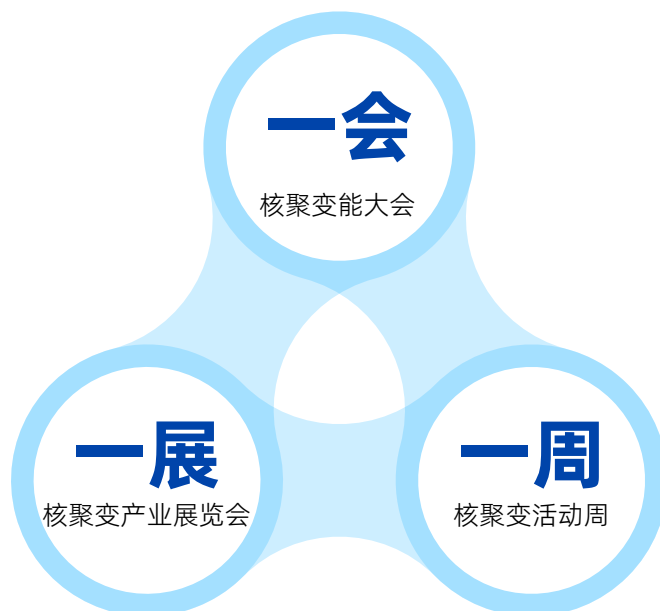
To implement the strategic deployment of the "15th Five-Year Plan" regarding the development of nuclear fusion energy and establish a collaborative innovation platform for industry, academia, research, and application, Shanghai Liwen Exhibition Service Co., Ltd, in collaboration with relevant industry authorities, has scheduled "Controlled Nuclear Fusion Energy Conference & Industry Exhibition 2027" to be held at the Shanghai New International Expo Center from July 7 to 9, 2027. Themed "Innovation Gathers Strength, Fusion Shapes the Future", the exhibition will focus on showcasing the latest scientific research achievements, engineering progress, and industrial applications in China's nuclear fusion field. It aims to facilitate in-depth connections between upstream and downstream enterprises, research institutes, and investment institutions in the industry chain, accelerate the engineering and industrialization process of nuclear fusion technology, consolidate Shanghai's position as a global hub for nuclear fusion energy innovation, and assist Shanghai in building a world-class nuclear fusion industry cluster.

大会架构

Conference structure

大会分为“一会一展一周”三大核心板块，即核聚变能大会、核聚变产业展览会、核聚变活动周，同期举办、联动推进，预计规模：参会代表3000+人，参展企业350+家，展览面积25000+平方米

The conference is divided into three core components: the Fusion Energy Conference, the Fusion Industry Exhibition, and the Fusion Event Week, which are held concurrently and promoted in conjunction. Expected scale: Over 3,000 delegates, more than 350 exhibiting companies, and an exhibition area of over 25,000 square meters



展出大类

Exhibition Category

01

聚变装置与 核心系统

Fusion devices and
core systems

托卡马克 / 仿星器 / 紧凑型聚变装置模型与实物 (EAST、BEST、CRAFT、ITER) ; 真空室、真空杜瓦、磁体线圈、氦制冷系统、遥操作 / 机械手; 等离子体加热与电流驱动 (ECRH、ICRH、NBI) 、燃料加注 / 氚循环系统等;

Tokamaks / Stellarators / Compact fusion device models and prototypes (EAST, BEST, CRAFT, ITER); vacuum chambers, vacuum dewar, magnet coils, helium cooling systems, remote operation / robotic arms; plasma heating and current drive (ECRH, ICRH, NBI), fuel loading / tritium recycling systems, etc;

高温超导带材/线材、超导磁体、钨基偏滤器、第一壁材料、耐辐射绝缘件; 特种金属、真空密封件、核级阀门/泵、高精度传感器、诊断仪器 (光谱、激光、微波) ;

High-temperature superconducting tapes/wires, superconducting magnets, tungsten-based divertor, first wall materials, radiation-resistant insulation components; special metals, vacuum seals, nuclear-grade valves/pumps, high-precision sensors, diagnostic instruments (spectroscopy, laser, microwave);

02

关键材料与 核心部件

Key materials and
core components

03

聚变数字化 与智能装备

Fusion digitalization and
intelligent equipment

数字孪生、AI大模型、工业大数据在聚变装置运维中的应用; 核工业机器人、自动化检测/焊接设备、VR/AR沉浸式体验 (透明聚变堆) ; 智慧能源管控、聚变电网耦合、零碳园区解决方案等;

Applications of digital twins, AI large models, and industrial big data in the operation and maintenance of fusion devices; nuclear industrial robots, automated detection/welding equipment, VR/AR immersive experiences (transparent fusion reactor); smart energy management and control, fusion-grid coupling, zero-carbon park solutions, etc;

国内高校重点实验室、国家重点研发计划、ITER国内配套、CRAFT工程进展、EAST 最新实验成果、初创企业、颠覆性技术、专利与技术交易项目等;

Key laboratories of domestic universities, national key research and development plans, domestic supporting projects for ITER, progress of CRAFT project, latest experimental results of EAST, start-ups, disruptive technologies, patent and technology trading projects, etc;

04

科研院所与 创新成果

Research Institutes and
Innovation Achievements

05

产业配套与 综合服务

Industrial Support and
Comprehensive Services

金融机构 (聚变产业基金、创投、银行) 、产业园/招商平台、政策咨询、媒体、协会、检测认证与人才服务。

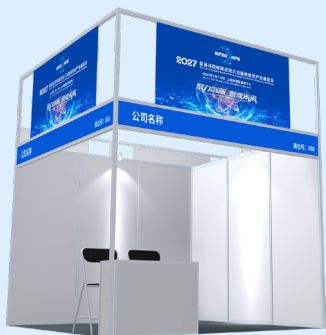
Financial institutions (fusion industry funds, venture capital, banks), industrial parks/investment attraction platforms, policy consultation, media, associations, testing and certification, and talent services.

同期活动 Concurrent Events

大会围绕我国核聚变能科技发展总体情况、国际热核聚变实验堆（ITER）计划执行进展、环流四号建设进展与展望、全球核聚变产业发展趋势等话题作主旨报告。期间还将举办8个学术平行论坛，涵盖聚变实验与理论模拟、聚变堆工程与技术、惯性约束聚变、聚变堆材料、氚技术、超导材料与磁体技术、聚变堆安全与环境评估、聚变能多路径探索等前沿领域。同时设置7场专题圆桌论坛，包括人工智能赋能核聚变、社会资本助力核聚变开发、核聚变大科学装置开放共享、聚变人才培养与引进、核聚变能国际合作等主题。大会同期还将举办新品发布会、投融资对接会、项目签约仪式、人才招聘会等系列活动，搭建政产学研用金一体化对接平台。

The conference will deliver keynote reports on topics such as the overall development of China's nuclear fusion energy technology, the progress of the International Thermonuclear Experimental Reactor (ITER) program, the construction progress and outlook of the Huangliu-4 reactor, and the development trends of the global nuclear fusion industry. During the conference, eight academic parallel forums will be held, covering frontier fields such as fusion experiments and theoretical simulations, fusion reactor engineering and technology, inertial confinement fusion, fusion reactor materials, tritium technology, superconducting materials and magnet technology, fusion reactor safety and environmental assessment, and multi-path exploration of fusion energy. Additionally, seven thematic roundtable forums will be set up, covering topics such as artificial intelligence empowering nuclear fusion, social capital supporting nuclear fusion development, open sharing of large-scale nuclear fusion scientific facilities, fusion talent cultivation and introduction, and international cooperation in nuclear fusion energy. During the same period, a series of activities such as new product launches, investment and financing matchmaking meetings, project signing ceremonies, and talent recruitment fairs will be held, building an integrated platform for government, industry, academia, research, application, and finance.

展位选择 Booth Selection



标准展位 Standard Booth

国内企业 Domestic enterprises	19800.00 (RMB) /展期
国外企业 foreign companies	4800.00 (USD) /展期

配置：三面白色壁板、中（英）文楣牌制作、咨询桌一张、折椅二张、地毯满铺、展位照明、220V/5A电源插座一个、废纸篓一个。

Each standard booth consists of 3-sided white partitions, bilingual fascia board, 1 information counter, 2 folding chairs, fully-floored carpet, 2 arm spotlights, 1220V/5A power socket and 1 wastebasket.



光地展位 Indoor Raw Space

国内企业 Domestic enterprises	2000.00 (RMB) /m ² /展期
国外企业 foreign companies	480.00 (USD) /m ² /展期

注：(36m²起租)只提供参展空间，不包括展架、展具、地毯、电源等。

Note: The raw space (minimum 36 sq.m.) only supplies a show space excluding stand frames, show equipment, carpet and power supply, etc.

目标观众

Target Audience

组委会定向邀约全产业链精准观众，杜绝无效流量，保障参展企业成交转化：

The organizing committee will specifically invite targeted audiences from the entire industry chain, eliminating ineffective traffic and ensuring transaction conversion for exhibiting companies:

▶ 国家及省市发改委、能源局、科技局、工信部门、产业园区管委会等政府主管单位；

Government authorities such as the National, Provincial, and Municipal Development and Reform Commissions, Energy Bureaus, Science and Technology Bureaus, Industry and Information Technology Departments, and Industrial Park Management Committees;

▶ 中核、国电投、中广核、东方电气、国机重装等央企国企，能源装备、新材料、精密制造等产业端上下游企业；

Central and state-owned enterprises such as China National Nuclear Corporation (CNNC), State Power Investment Corporation (SPIC), China General Nuclear Power Corporation (CGNPC), Dongfang Electric Corporation (DEC), and Sinomach Heavy Industry Co., Ltd., as well as upstream and downstream enterprises in industries such as energy equipment, new materials, and precision manufacturing;

▶ 中科院各院所、全国重点高校、聚变重点实验室、工程技术研究中心等科研单位；

Scientific research institutions such as institutes of the Chinese Academy of Sciences, key universities nationwide, fusion key laboratories, and engineering technology research centers;

▶ 国家级产业基金、创投机构、券商、银行、投融资平台等金融机构；

Financial institutions such as national-level industrial funds, venture capital institutions, securities firms, banks, and investment and financing platforms;

▶ ITER组织、欧美日韩聚变机构、海外配套企业、跨境贸易商等国际组织。

International organizations such as the ITER Organization, fusion institutions in Europe, America, Japan, and South Korea, overseas supporting enterprises, and cross-border traders.

▶ 参观时间： Visiting Hours:

第一天	2027/07/07	09:00--17:00
第二天	2027/07/08	09:00--17:00
第三天	2027/07/09	09:00--14:00

▶ 参观地点： Visiting Sites: Shanghai New International Expo Center

上海新国际博览中心

Shanghai New International Expo Center

地址：上海浦东新区龙阳路2345号

No. 2345, Longyang Road, Pudong New Area, Shanghai

