

Wishing you all a very Happy and Successful New Year 2025!

FYI - Fusion News/Alerts

Department of Atomic Energy Year End Review 2024

<https://pib.gov.in/PressReleaseDetailm.aspx?PRID=2087501®=3&lang=1>

..."Institute for Plasma Research (IPR) has set up and is operating an accelerator-based 14 MeV neutron facility, which can have a maximum output of 5×10^{12} n/sec. The facility has been used for the first time for two kinds of neutron irradiation studies: neutron generators for producing medical radioisotopes (Mo-99, Cu-64, Cu-67 etc.) and radiation induced damage for near-reactor components from fusion reactors."...

How Los Alamos is Helping Ready Nuclear Fusion Power for the Grid by 2030

<https://www.lanl.gov/media/publications/1663/fall-2024/nuclear-fusion-power-by-2030>

F4E and EUROfusion reinforce collaboration

<https://fusionforenergy.europa.eu/news/f4e-eurofusion-collaboration-memorandum-of-understanding/>

Fusion industry body predicts £31 trillion opportunity

<https://www.theengineer.co.uk/content/news/fusion-industry-body-predicts-31-trillion-opportunity>

Research project into laser-based inertial fusion begins in Germany

<https://optics.org/news/15/12/32>

US falling behind China in race to nuclear fusion

<https://asiatimes.com/2024/12/us-falling-behind-china-in-race-to-nuclear-fusion/>

A look back at the first inertial confinement fusion experiment in 1974

<https://www.llnl.gov/article/52196/look-back-first-inertial-confinement-fusion-experiment-1974>

Transforming fusion from a scientific curiosity into a powerful clean energy source

<https://climate.mit.edu/posts/transforming-fusion-scientific-curiosity-powerful-clean-energy-source>

Milestone 10-GeV Experiment Shines Light on Laser-Plasma Interactions

<https://newscenter.lbl.gov/2024/12/11/milestone-10-gev-experiment-shines-light-on-laser-plasma-interactions/>

Cautious optimism surrounds plans for the world's first nuclear fusion power plant

<https://theweek.com/science/world-first-fusion-power-plant>

The Top 10 Energy Stories of 2024 Power beaming, nuclear fusion, and powerful geothermal drilling topped readers' favorites

<https://spectrum.ieee.org/top-ten-energy-2024>

Novatron launches plasma confinement project

<https://www.neimagazine.com/news/novatron-launches-plasma-confinement-project/>

Mystery of supra-thermal ions in fusion plasmas solved by advanced collision models

https://www.spacedaily.com/reports/Mystery_of_supra_thermal_ions_in_fusion_plasmas_solved_by_advanced_collision_models_999.html

U.S. Department of Energy Announces New Research, Technology, and Economic Security Framework

<https://www.energy.gov/eere/bioenergy/articles/us-department-energy-announces-new-research-technology-and-economic>

Hydrogen underfoot – a more than 200-year supply

<https://www.powerengineeringint.com/hydrogen/hydrogen-underfoot-a-more-than-200-year-supply/>

AI enters the nuclear age

<https://www.thestandard.com.hk/section-news/section/7/268959/AI-enters-the-nuclear-age>

Celebrating the Contributions of Emeritus Professor Robert (Bob) Dewar

<https://pubs.aip.org/pop/collection/524389/Celebrating-the-Contributions-of-Emeritus>

Taking a cue from lightning, eco-friendly reactor converts air and water into ammonia

<https://www.eurekalert.org/news-releases/1068874>

Periodic Safety Review for Nuclear Fuel Cycle Facilities

<https://www.iaea.org/publications/15377/periodic-safety-review-for-nuclear-fuel-cycle-facilities>

[Of Interest] U.S. science funding agencies roll out policies on free access to journal articles

<https://www.science.org/content/article/u-s-science-funding-agencies-roll-out-policies-free-access-journal-articles>

Recent Peer-Reviewed Articles of Interest

Physics-regularized neural networks for predictive modeling of silicon carbide swelling with limited experimental data

<https://www.nature.com/articles/s41598-024-78037-7>

A review on irradiated beryllium and beryllium alloy for fusion reactor application: Microstructure evolution, properties changes, and fabrication

<https://www.sciencedirect.com/science/article/pii/S0920379624006306>

Upgrades to x-ray microcalorimeter fusion diagnostic to improve calibration, spectral bandwidth selection, and count rate adjustment

<https://pubs.aip.org/aip/rsi/article/95/12/123516/3328717/Upgrades-to-x-ray-microcalorimeter-fusion>

A structural optimized method and verification of fusion converter for high current sharing performance

<https://www.sciencedirect.com/science/article/pii/S0920379624006434>