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Date: 14 Aug 2024

Fusion power might be 30 years away but we will reap its benefits well before
https://www.theguardian.com/science/article/2024/aug/11/nuclear-fusion-research-tae-power-solutions-cancer-propulsion

PPPL wins Edison Patent Award for invention that simplifies a promising fusion energy device
https://www.pppl.gov/news/2024/pppl-wins-edison-patent-award-invention-simplifies-promising-fusion-energy-device

UKAEA's JET fusion site set to be opened up for AI data centres
https://www.powerengineeringint.com/nuclear/ukaeas-jet-fusion-site-set-to-be-opened-up-for-ai-data-centres/

The path to fusion energy: Collaborative intern-scientist research at INL
https://inl.gov/feature-story/the-path-to-fusion-energy-collaborative-intern-scientist-research-at-inl/

Fusion propulsion for exploring the solar system and beyond
https://www.openaccessgovernment.org/article/fusion-propulsion-for-exploring-the-solar-system-and-beyond/180583/

Lehigh University researchers dig deeper into stability challenges of nuclear fusion—with mayonnaise
https://www.eurekalert.org/news-releases/1053724

A new approach to fine-tuning quantum materials
https://news.mit.edu/2024/new-approach-fine-tuning-quantum-materials-0812

North American investments in fusion energy
https://www.world-nuclear-news.org/Articles/North-American-investments-in-fusion-energy

Research Confirms Importance of Symmetry in Pre-Ignition Fusion Experiments
https://lasers.llnl.gov/news/research-confirms-importance-symmetry-pre-ignition-fusion-experiments

Tokamak Energy Inc. receives fusion breeder blanket INFUSE award by Department of Energy
https://tokamakenergy.com/2024/08/12/tokamak-energy-inc-receives-fusion-breeder-blanket-infuse-award-by-department-of-energy/

Canada invests in General Fusion
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European X-ray laser explores a poorly understood state of matter
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ALICE measures interference pattern akin to the double-slit experiment
https://phys.org/news/2024-08-alice-pattern-akin.html

San Diego's General Atomics Wins Award for First Controlled Fusion 'Ignition'
https://timesofsandiego.com/tech/2024/08/08/san-diego-general-atomics-wins-award-for-first-controlled-fusion-ignition/

Research confirms importance of symmetry in pre-ignition fusion experiments
https://phys.org/news/2024-08-importance-symmetry-pre-ignition-fusion.html

More durable metals for fusion power reactors
https://energy.mit.edu/news/more-durable-metals-for-fusion-power-reactors/

Nonlinear absorption of an X-ray pulse during the formation of warm dense matter
https://www.nature.com/articles/s41567-024-02594-x

Space-Based Solar Power Gets Practical
https://spectrum.ieee.org/space-based-solar-power-2668897407

Total investment in fusion industry tops $7.1bn shows FIA
https://www.powerengineeringint.com/nuclear/total-investment-in-fusion-industry-tops-7-1bn-shows-fia/

General Atomics Inertial Fusion R&D Team Wins Coveted Award
https://www.ga.com/ga-inertial-fusion-r-d-team-wins-coveted-award

DARPA wants to bypass the thermal middleman in nuclear power systems
https://www.ans.org/news/article-6276/darpa-wants-to-bypass-the-thermal-middleman-in-nuclear-power-systems/

Tetris, AI and radiation mapping
https://www.neimagazine.com/analysis/tetris-ai-and-radiation-mapping/

Trailblazing Tech Leader Helps Shape U.S. AI Strategy
https://spectrum.ieee.org/tech-leader-us-ai-strategy

Recent Peer-Reviewed Articles of Interest

Simulation study on the influence of initial density distribution of laser ionized plasma on the ion extraction characteristics
https://pubs.aip.org/aip/adv/article/14/8/085212/3307286/Simulation-study-on-the-influence-of-initial

Baseline design of laser fusion research reactor with MW class laser facility
https://iopscience.iop.org/article/10.1088/1741-4326/ad573d

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Results from a synthetic model of the ITER XRCS-Core diagnostic based on high-fidelity x-ray ray tracing
https://pubs.aip.org/aip/rsi/article/95/8/083517/3306678/Results-from-a-synthetic-model-of-the-ITER-XRCS

Non-invasive detection of hazardous materials with a thermal-to-epithermal neutron station: a feasibility study towards practical application
https://www.nature.com/articles/s41598-024-69290-x

X-ray imaging and electron temperature evolution in laser-driven magnetic reconnection experiments at the national ignition facility
https://pubs.aip.org/aip/pop/article/31/8/082106/3307580/X-ray-imaging-and-electron-temperature-evolution

Plasma-induced damage on the tungsten surface using a kilojoule plasma focus device: Applicable to study the damages on nuclear fusion reactor related materials
https://pubs.aip.org/aip/pop/article/31/8/083510/3307564/Plasma-induced-damage-on-the-tungsten-surface

Monitoring of nanoplasmonics-assisted deuterium production in a polymer seeded with resonant Au nanorods using in situ femtosecond laser induced breakdown spectroscopy
https://www.nature.com/articles/s41598-024-69289-4