

CFS/MIT/SPARC/ARC Papers

By Glenn Weinreb

Fusion Strategy

Long-Term Research & Design Strategies for Fusion Energy Materials, 2024

<https://arxiv.org/abs/2311.12187>

Preface to special issue: Private fusion research: Opportunities and challenges in plasma science

<https://pubs.aip.org/aip/pop/article/31/9/090401/3312274/Preface-to-special-issue-Private-fusion-research>

Progress toward fusion energy breakeven and gain as measured against the Lawson criterion, 2022

<https://pubs.aip.org/aip/pop/article/29/6/062103/2847827/Progress-toward-fusion-energy-breakeven-and-gain>

A facility for cryogenic ion irradiation and in situ characterization of rare-earth barium copper oxide superconducting tapes, 2024

<https://pubs.aip.org/aip/rsi/article/95/6/063907/3299376/A-facility-for-cryogenic-ion-irradiation-and-in>

Unlocking maintenance—architecting STEP for maintenance and realizing remountable magnet joints, 2024

<https://scientific-publications.ukaea.uk/papers/unlocking-maintenance-architecting-the-step-prototype-powerplant-for-maintenance-and-realising-re-mountable-magnet-joints/>

SPARC Fusion Machine

Design, Fabrication, and Assembly of the SPARC Toroidal Field Model Coil, 2024

<https://ieeexplore.ieee.org/document/10411128>

Experimental assessment and model validation of the SPARC Toroidal Field Model Coil, 2024

<https://ieeexplore.ieee.org/document/10316632>

Modeling of HTS high-current stacked conductors with defective tapes in different locations, 2023

<https://www.sciencedirect.com/science/article/pii/S0921453423000163>

Overview of the SPARC tokamak, 2020

https://www.researchgate.net/publication/344804145_Overview_of_the_SPARC_tokamak

The SPARC Toroidal Field Model Coil Program

<https://ieeexplore.ieee.org/document/10316582>

Future Fusion Pilot Plant

MANTA: A Negative-Triangularity NASEM-Compliant Fusion Pilot Plant, 2024

<https://iopscience.iop.org/article/10.1088/1361-6587/ad6708>

Power handling in a highly-radiative negative triangularity pilot plant, 2024
<https://iopscience.iop.org/article/10.1088/1361-6587/ad867a>