

Link	Short Description	Year Published	Your Name
https://aip.scitation.org/doi/10.1063/1.1705883	The first paper to describe the concept of a Stellarator; written by Lyman Spitzer, a pioneer of Nuclear Fusion Research and one of the key researchers involved in the initial Stellarator design and experimentation done by the Princeton Plasma Physics Laboratory (PPPL).	1958	Kaustav Prasad
https://aip.scitation.org/doi/10.1063/1.1880013	Overview of the design and development of structural materials for fusion energy systems with a focus on the displacement damage effects associated with the deuterium-tritium fusion environment.	2005	Hiranmai Mohan
https://iopscience.iop.org/article/10.1088/1742-6596/208/1/012001	Materials for tokamak reactor walls to prevent damage due to high neutron energy and coatings to prevent corrosion, coolants etc. and combining all of them to build the reactor. It also deals with the problems faced with the currently available materials.	2010	Hiranmai Mohan
https://iopscience.iop.org/article/10.1088/0029-5515/47/11/025	Inter-machine comparison of intrinsic toroidal rotation in tokamaks: Parametric scalings of the intrinsic toroidal rotation were observed on a large number of tokamaks and analyzed, attempting to find the underlying mechanism and develop a universal scaling that can be used to extrapolate intrinsic rotation for ITER and other future devices.	2007	Srishti Badaya
https://iopscience.iop.org/article/10.1088/1741-4326/ac1654#artAbst	Exploration of burning-plasma regimes in high-field, compact tokamaks: The SPARC tokamak project aims to achieve breakeven and burning plasma conditions in reactor-relevant conditions, using high-temperature superconductor technology. This could be further scaled to a compact, high-field fusion power plant.	2022	Srishti Badaya
https://aip.scitation.org/doi/10.1063/1.1694232	Nonlinear growth of the tearing mode: Analyzes and applies a theory to the unstable tearing modes of a resistive tokamak in the nonlinear regime with a shrinking current channel, which closely matches observed values.	1973	Srishti Badaya
https://aip.scitation.org/doi/abs/10.1063/1.862088	Effect of transonic flow in the ablation cloud on the lifetime of a solid hydrogen pellet in a plasma: An experimentally-backed scaling law is given, which allows ablation rate and pellet lifetimes to be easily calculated for any pellet and plasma conditions. This is critical to the design of devices to refuel tokamak fusion reactors.	1978	Srishti Badaya
https://aip.scitation.org/doi/abs/10.1063/1.863445	Monte Carlo evaluation of transport coefficients: A method is developed for evaluating transport coefficients in asymmetric geometries using the Monte Carlo method. The method is applied to the stellarator, for local plasma transport coefficients in nonsymmetric toroidal confinement configurations. It sets the stage for more computationally effective methods.	1981	Srishti Badaya
https://www.nature.com/articles/s41586-021-04281-w	One of the scientific milestones in fusion research on the path to ignition is creating a burning plasma. A burning plasma occurs when the energy deposited by the fusion-produced alpha particles is the	2022	Mayank Agrawal
https://www.science.org/doi/epdf/10.1126/science.ada1089	The JET tokamak has achieved a first-ever sustained, high-confinement plasma using the same wall materials and fuel mix that ITER will use. The results aligned with prediction ... and this predictability is very good news for the ITER research program and for fusion in general.	2022	Mayank Agrawal

https://www.science.org/content/article/explosive-new-result-laser-power	Inertial confinement fusion (ICF) is a fusion energy research program that initiates nuclear fusion reactions by compressing and heating targets filled with thermonuclear fuel. In 2021, a test "shot" reached 70% of the energy put into it, slightly besting the best results for the magnetic machines set in the 1990s.	2021	Mayank Agrawal
https://iopscience.iop.org/article/10.1088/0029-5515/54/12/125001/pdf	Energetic particle physics in fusion research in preparation for burning plasma experiments	2014	Apoorv
https://journals.aps.org/prl/pdf/10.1103/PhysRevLett.49.1248	Nuclear fusion rates can be enhanced or suppressed by polarization of the reacting nuclei. In a magnetic fusion reactor, the depolarization time is estimated to be longer than the reaction time.	1982	Apoorv
https://journals.aps.org/prl/pdf/10.1103/PhysRevLett.26.1156	A toroidal plasma heated by an energetic neutral beam (thus consisting of an energetic ion component and a lower-energy bulk plasma) can produce net thermonuclear power under conditions far less restrictive than Lawson's criterion.	1971	Apoorv