基座光学
Oeabt Optics Technology
Optics Experiment and Basic Teaching

激光篇 基座光学专业文集

(内容来自网络,由基座光学搜集整理,仅供学习交流使用)

以激光惯性聚变为动力源制备氢的可行性研究

Feasibility of Hydrogen Production Using Laser Inertial Fusion as Power Source

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Revision 1

Key Words:
Electrolysis (HTE)
High Average Power Laser (HAPL)
High Temperature
Hybrid Sulfur (HyS)
Hydrogen
Laser Inertial Fusion Energy (IFE)
Sulfur-Iodine (SI)
Thermochemical
Water-splitting

Retention: Permanent

FEASIBILITY OF HYDROGEN PRODUCTION USING LASER INERTIAL FUSION AS THE PRIMARY ENERGY SOURCE (U)

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SRNL
SAVANNAH RIVER NATIONAL LABORATORY

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LIST OF ACRONYMS

Ca-Br	Calcium-Bromine (cycle)
DEMO	ITER experiemnt Demonstration Reactor
DT	Deuterium-Tritium
DOE	United States Department of Energy
DOE-NE	United States Department of Energy, Office of Nuclear Energy, Science & Technology
Flibe	34% BeF_2, 66% LiF salt mixture
FLiNaK	46.5% LiF, 11.5% NaF, 42% KF salt mixture
FS	Ferritic Steel
FTF	Fusion Test Facility
FW	First Wall
GA	General Atomics Corporation
H_2	Hydrogen
H2-MHR	Hydrogen Modular Helium Reactor
H_2O	Water
HAPL	High Average Power Laser
HCPB	Helium-Cooled Pebble Bed
HI	Hydrogen Iodide
HHV	Higher Heating Value
HTE	High Temperature Electrolysis
HyS	Hybrid Sulfur (cycle)
IFE	Inertial Fusion Energy
IHX	Intermediate Heat Exchanger
I-NERI	International Nuclear Energy Research Initiative
I_2	Iodine
ITER	International Thermonuclear Experimental Reactor
JAEA	Japanese Atomic Energy Agency
Li	Lithium
LLNL	Lawrence Livermore National Laboratory
NHI	Nuclear Hydrogen Initiative
NRC	National Research Council
NRL	Naval Research Laboratory
$O^{=}$	Oxide anion
O_2	Oxygen
ODS	Oxide Dispersion-Stabilized
Pb-17Li	83% lead, 17% lithium eutectic alloy
PEM	Proton Exchange Membrane
PPPL	Princeton Plasma Physics Laboratory
R&D	Research and Development
RWTH	Rheinisch-Westfälische Technische Hochschule (Rhine-Westphalian University of Technology)
SDE	SO_2-Depolarized Electrolysis
SI	Sulfur-Iodine (cycle)

SiC	Silicon Carbide
SiC_f/SiC	Silicon-Carbide-fiber-reinforced Silicon-Carbide-matrix composite
SNL	Sandia National Laboratories
SO_2	Sulfur Dioxide
SRNL	Savannah River National Laboratory
UCSD	University of California, San Diego
UT-3	University of Tokyo – 3
WNA	World Nuclear Association

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