

1. Record Nr.	UNINA9910826863903321
Titolo	Plasma diagnostics // editors, A.A. Ovsyannikov and M.F. Zhukov
Pubbl/distr/stampa	Cambridge, UK, : Cambridge International Science Pub., 2000
ISBN	1-280-36117-4 9786610361175 1-907343-61-X 1-904602-49-5
Descrizione fisica	1 online resource (590 p.)
Altri autori (Persone)	OvsyannikovA. A ZhukovMikhail Fedorovich
Disciplina	530.4/4 530.44
Soggetti	Plasma diagnostics Plasma (Ionized gases)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 548-575).
Nota di contenuto	Preliminaries; Contents; 1 SPECTRAL DIAGNOSTICS METHODS; 2 KINETIC ENERGY, TRANSLATIONAL RELAXATION AND DOPPLER BROADENING OF LINES IN NON-EQUILIBRIUM PLASMA SPECTRA; 3 OPTICAL ACTINOMETRY OF PLASMA; 4 LASER METHODS OF PLASMA DIAGNOSTICS; 5 SPECTROSCOPY OF GROUND ELECTRONIC STATES OF MOLECULES IN PLASMA USING TUNABLE LASERS; 6 DETERMINATION OF THE CONCENTRATION AND TEMPERATURE OF HEAVY PARTICLES FROM THE SPECTRA OF RAYLEIGH-SCATTERED LIGHT; 7 REFRACTOMETRIC PLASMA DIAGNOSTICS METHODS; 8 DIAGNOSTICS OF PLASMA FLOWS WITH A DISPERSED PHASE 9 MEASURING THE PLASMA FLOW VELOCITY BY THE TRACER PARTICLE METHOD 10 ELECTRIC PROBES IN NON-EQUILIBRIUM PLASMA; 11 ELECTRIC PROBES IN CONTINUUM REGIME; 12 PROBE METHODS OF DIAGNOSTICS OF CHEMICALLY REACTING DENSE PLASMA; 13 ELECTRIC AND THERMAL PROBES IN THE PRESENCE OF CHEMICAL REACTIONS IN NON-EQUILIBRIUM PLASMA; 14 MEASUREMENTS OF THE ENTHALPY OF HIGH-TEMPERATURE GAS FLOWS; 15 PROBE MEASUREMENTS OF HEAT FLOWS IN PLASMA JETS; 16 METHODS OF EXAMINING THE SPATIAL

STRUCTURE OF RADIO-FREQUENCY CAPACITANCE DISCHARGES; 17
WAVE BREAKDOWN IN DISTRIBUTED SYSTEMS
18 PROBE MEASUREMENTS OF POTENTIAL DISTRIBUTION IN DENSE
PLASMA 19 REDUCTION TO A UNIFORM LAYER IN AXISYMMETRIC
OBJECTS; 20 RECONSTRUCTION OF VELOCITY DISTRIBUTION
FUNCTIONS OF EMITTING PARTICLES FROM THE SHAPE OF THE
CONTOUR OF SPECTRAL LINES; 21 AUTOMATION OF MEASUREMENTS IN
PLASMA DIAGNOSTICS; REFERENCES; INDEX

Sommario/riassunto

The book contains the results of investigations of electro-physical, chemical, gas-dynamic and other processes in low-temperature plasma and their diagnostics. Both conventional spectral and optical methods of diagnostics and new and laser methods are examined, together with electrostatic probes for investigating rarefied and dense plasma, especially in the presence of chemical reactions. Problems of probe calorimetry of plasma flows are investigated and approaches to measuring the spatial and time characteristics of plasma outlined. Procedural problems of processing experimental data and auto
