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Nota di contenuto	CONTENTS; ATOMIC AND PLASMA PHYSICS SOFTWARE AND DATABASES FOR THE SIMULATION OF SHORT WAVELENGTH SOURCES ; MODELLING OF PLASMA-BASED SEEDED SOFT X-RAY LASERS ; FIELD COHERENCE OF EUV SOURCES ; REACHABLE EXTREME ULTRAVIOLET WAVELENGTHS ACCORDING TO ELEMENTS/ATOMIC DATA ; ABSORPTION OF SHORT PUMPING PULSES FOR GRAZING INCIDENCE PUMPED X-RAY LASERS ; THEORETICAL ANALYSIS AND EXPERIMENTAL APPLICATIONS OF X-RAY WAVEGUIDES ; TABLE-TOP SOFT X-RAY Ar+8 LASERS EXCITED BY CAPILLARY Z-PINCHES ; NANOMETRE SCALE TAPERED PLANAR WAVEGUIDES FOR FOCUSING X-RAY FEMTOSECOND PULSES EXTREME ULTRAVIOLET EMISSION FROM MULTI-CHARGED STATE IONS IN POTASSIUM PLASMAS LASER PRODUCED PLASMA X-RAY AND EUV SOURCES FOR LITHOGRAPHY ; PRACTICAL ASPECTS OF XUV GENERATION BY NON-LINEAR FREQUENCY CONVERSION ; ELECTRON TRAJECTORIES IN HIGH HARMONIC GENERATION ; MODIFIED CATHODE TUBE: X-RAY AND XUV RADIATION FOR NANO-INSPECTION ; CHARACTERISTICS OF A SUB-PICOSECOND TITANIUM K SOURCE USING RELATIVISTICALLY INTENSE LASERS ; BREMSSTRAHLUNG X-RAY EMISSION IN ELECTRON-BEAM-PUMPED K8F LASERS ; THE BERN ADVANCED GLASS LASER FOR EXPERIMENT (BEAGLE) X-RAY LASER

FACILITY

ENEA EXTREME ULTRAVIOLET LITHOGRAPHY MICRO-EXPOSURE TOOL: MAIN FEATURES CHARACTERISATION AND MITIGATION OF IONS AND PARTICULATE EMITTED BY SOURCES FOR EXTREME ULTRAVIOLET LITHOGRAPHY ; EUV MULTILAYER OPTICS: DESIGN, DEVELOPMENT AND METROLOGY ; APPLICATIONS OF KrF LASERS FOR GENERATING COHERENT EUV RADIATION ; BROADBAND MULTILAYERS: TAILOR MADE MIRRORS FOR LINEARLY POLARIZED X-RAYS FROM A LASER PLASMA SOURCE ; SHORT WAVELENGTH LABORATORY SOURCES FOR SEMICONDUCTOR INSPECTION AND FABRICATION ; CARBON-NANOTUBES FIELD EMITTER TO BE USED IN ADVANCED X-RAY SOURCE LASER - PLASMA EUV SOURCE FOR MODIFICATION OF POLYMER SURFACES A SUB-PICO SECOND PLASMA SOURCE FOR TIME-RESOLVED X-RAY MEASUREMENTS ; APPLICATION OF FOCUSED X-RAY BEAMS IN RADIATION BIOLOGY; TIME-RESOLVED X-RAY DIFFRACTION OF CRYOGENIC SAMPLES USING A LASER BASED PLASMA SOURCE ; NEAR-EDGE X-RAY ABSORPTION FINE STRUCTURE MEASUREMENTS USING A LABORATORY-SCALE XUV SOURCE ; NANOMETER SCALE IMAGING USING A DESK-TOP LASER PLASMA EUV SOURCE ; LASER-PLASMA EUV AND SOFT X-RAY SOURCES FOR MICROSCOPY APPLICATIONS ; NANOMETER SCALE IMAGING WITH TABLE-TOP EXTREME ULTRAVIOLET LASER DEVELOPMENT AND OPTIMIZATION OF LASER-PLASMA EXTREME ULTRAVIOLET AND SOFT X-RAY SOURCES FOR MICROSCOPY APPLICATIONS SUBJECT INDEX

Sommario/riassunto

Our ability to manipulate short wavelength radiation (0.01-100nm, equivalent to 120keV-12eV) has increased significantly over the last three decades. This has lead to major advances in applications in a wide range of disciplines such as: the life and medical sciences, including cancer-related studies; environmental science, including studies of pollution and its effects; archaeology and other cultural heritage disciplines; and materials science. Although expansion in application areas is due largely to modern synchrotron sources, many applications will not become widespread, and therefore rout